FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
ACADEMIC POLICY AND STUDENT AFFAIRS COMMITTEE

FIU, Modesto A. Maidique Campus, Graham Center Ballrooms
Due to room capacity limitations resulting from physical distancing mitigations, general public access via http://webcast.fiu.edu/

Wednesday, June 16, 2021
11:00 a.m.
or
Upon Adjournment of Previous Meeting

Chair: Natasha Lowell
Vice Chair: Donna J. Hrinak
Members: Cesar L. Alvarez, Jose J. Armas – *Health Affairs liaison*, Dean C. Colson, Joerg Reinhold, Chanel T. Rowe, Alexander Rubido, Marc D. Sarnoff, Roger Tovar – *Athletics liaison*

AGENDA

1. **Call to Order and Chair's Remarks** — **Natasha Lowell**
2. **Approval of Minutes** — **Natasha Lowell**
3. **Action Items**
   - **AP1. Tenure Nominations** — **Kenneth G. Furton**
   - **AP2. Tenure as a Condition of Employment Nominations** — **Kenneth G. Furton**
   - **AP3. Program Termination: Doctor of Education in Exceptional Student Education** — **Elizabeth M. Bejar**
   - **AP4. Florida International University Annual Accountability Plan, 2021 Revision** — **Kenneth G. Furton**
4. **Information and Discussion Items**

   Academic Affairs Regular Reports

   - Academic and Career Success — **Valerie Johnsen**
   - Engagement — **Saif Y. Ishoof**
   - Enrollment Management and Services — **Kevin B. Coughlin**
   - Information Technology — **Robert Grillo**

Academic Affairs Regular Reports *(Continued…)*

- Research and Economic Development/ University Graduate — **Andres G. Gil**
- Academic and Student Affairs — **Elizabeth M. Bejar**

5. **Student Government Updates** — **Alexander Rubido**
6. **Faculty Senate Updates** — **Joerg Reinhold**
7. **New Business** *(If Any)* — **Natasha Lowell**
8. **Concluding Remarks and Adjournment** — **Natasha Lowell**

The next Academic Policy and Student Affairs Committee Meeting is scheduled for Tuesday, September 14, 2021

FIU Board of Trustees, Academic Policy and Student Affairs Committee Meeting

Time: June 16, 2021 11:00 AM - 12:00 PM EDT

Location: FIU, Modesto A. Maidique Campus, Graham Center Ballrooms, To help prevent the spread of COVID-19, general public access via http://webcast.fiu.edu/

Section	Agenda Item	Presenter	Page
	FIU's Annual Accountability Plan, 2021, Revised		**208**
4.	**Information and Discussion Items**		
4.1	**Academic Affairs Regular Reports**		**241**
	• Academic and Career Success	**Valerie Johnsen**	
	• Engagement	**Saif Y. Ishoof**	
	• Enrollment Management and Services	**Kevin B. Coughlin**	
	• Information Technology	**Robert Grillo**	
	• Research and Economic Development/ University Graduate School	**Andres G. Gil**	
	• Academic and Student Affairs	**Elizabeth M. Bejar**	
5.	**Student Government Updates**	**Alexander Rubido**	
6.	**Faculty Senate Updates**	**Joerg Reinhold**	
7.	**New Business** *(If Any)*	**Natasha Lowell**	
8.	**Concluding Remarks and Adjournment**	**Natasha Lowell**	

FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
ACADEMIC POLICY AND STUDENT AFFAIRS COMMITTEE
MINUTES
FEBRUARY 23, 2021

1. Call to Order and Chair's Remarks

The Florida International University Board of Trustees' Academic Policy and Student Affairs Committee meeting was called to order by Committee Chair Natasha Lowell on Tuesday, February 23, 2021 at 10:33 a.m. at the FIU, Modesto A. Maidique Campus, Graham Center Ballrooms and via Zoom.

General Counsel Carlos B. Castillo conducted roll call of the Academic Policy and Student Affairs Committee members and verified a quorum. Present were Trustees Natasha Lowell, *Committee Chair*; Donna J Hrinak, *Committee Vice Chair (via Zoom)*; Cesar L. Alvarez *(via Zoom)*; Jose J. Armas, *Health Affairs Liaison (joined after roll call)*; Dean C. Colson, *Board Chair*; Joerg Reinhold; Marc D. Sarnoff; Roger Tovar, *Board Vice Chair and Athletics Liaison*; and Alexandra Valdes.

Trustees Leonard Boord, Gene Prescott, Claudia Puig, and Chanel T. Rowe and University President Mark B. Rosenberg were also in attendance.

Committee Chair Lowell welcomed all Trustees and members of the University administration. She also welcomed Trustees, University administrators, and staff attending via the virtual environment and the University community and general public accessing the meeting via the University's webcast.

Provost and Executive Vice President Kenneth G. Furton commented on the search for the next Dean of the Steven J. Green School of International and Public Affairs, adding that after six (6) years at the helm, Founding Dean John F. Stack Jr. is stepping down as the School's dean. Provost Furton indicated that the search and screen committee will be led by Brian Schriner, Dean of the College of Communication, Architecture + The Arts.

2. Approval of Minutes

Committee Chair Lowell asked that the Committee approve the minutes of the meetings held on October 28, 2020 and December 3, 2020. A motion was made and unanimously passed to approve the minutes of the Academic Policy and Student Affairs Committee meetings held on October 28, 2020 and December 3, 2020.

3. Action Items

AP1. Tenure as a Condition of Employment Nominations

Provost Furton presented the Tenure as a Condition of Employment (TACOE) nominations for Committee review, noting that TACOE is reserved for individuals that have achieved highly prestigious academic careers at comparable institutions. He explained that the TACOE candidates already have achieved tenure or are eligible for tenure at their respective institutions at the time of hire. Provost Furton pointed out that TACOE candidates understand that they will be hired with tenure pending a review by the department, the College, the Provost, the President, and finally, the Board of Trustees. He remarked that the respective departments and colleges have completed the tenure review process and have vetted the candidates' scholarly qualifications, stating that he and the President recommend Dr. Haiwei Gu, Dr. Mark Myring, and Dr. Tong Zhou for TACOE. Provost Furton briefly commented on each of the TACOE candidates.

A motion was made and unanimously passed that the FIU Board of Trustees Academic Policy and Student Affairs Committee recommend to the Florida International University Board of Trustees the approval of three (3) candidates for Tenure as a Condition of Employment (TACOE) as specified in the Board materials.

AP2. Approval of Notice of Change to Approved Revised Regulation FIU-105 Sexual Harassment (Title IX) and Sexual Misconduct

General Counsel Castillo presented the Notice of Change to the approved revised Regulation FIU-105 Sexual Harassment (Title IX) and Sexual Misconduct for Committee review. He explained that on August 12, 2020, the Board approved revisions to the regulation under the emergency rulemaking authority process. He pointed out that subsequently, on October 28, 2020, the Board of Trustees approved the revised regulation that is currently being presented and limited the approval through the current meeting with the purpose of allowing for further review. In terms of the due process concerns in relation to cross-examination mechanisms provided for in the regulation, General Counsel Castillo thanked Trustee Marc D. Sarnoff who worked with the administration in the review of the regulation. General Counsel Castillo remarked that Trustee Sarnoff confirmed at the Committee's December meeting that he was satisfied with the regulation as revised, adding that approval is now being requested to make the revised regulation effective without such date restriction.

Trustee Sarnoff commented on engaging with the administration on a robust review of the University's Title IX (105) and Student Code of Conduct (2501) Regulations, particularly as it pertained to due process inclusive of the ability to have some form of cross-examination for FIU 105. He commended and thanked Assistant Dean of Students Michelle Horvath, Dean of Students Bronwen Pelaez, and Associate General Counsel Iris A. Elijah, noting that only minor revisions are anticipated for FIU-2501.

A motion was made and unanimously passed that the FIU Board of Trustees Academic Policy and Student Affairs Committee recommend to the Florida International University Board of Trustees the approval of the amendment of Regulation FIU-105 Sexual Harassment (Title IX) and Sexual Misconduct without a date restriction and delegate authority to the University President to approve

any subsequent amendments that are based on comments to the Regulation received from the Florida Board of Governors and as a result of the regulation-making process.

AP3. Amendments to Regulation FIU-1103 Textbook Affordability
Senior Vice President for Academic and Student Affairs Elizabeth M. Bejar presented the amendments to Regulation FIU-1103 Textbook Affordability for Committee review. She explained that Regulation FIU-1103 was being updated to align with changes made by the Board of Governors (BOG) to BOG Regulation 8.003. She indicated that BOG Regulation 8.003 provides, in relevant part, that "Each university board of trustees shall adopt a regulation that establishes textbooks and instructional materials affordability policies to minimize the cost of required or recommended textbooks and instructional materials for students while maintaining the quality of education and academic freedom".

Sr. VP Bejar delineated the proposed amendments to FIU-1103. She specifically mentioned that the amendments omitted the requirement for state university boards of trustees to examine the cost of textbooks and instructional materials by course and course section for all general education courses; omitted the requirement for institutions to report the selection process for general education courses identified with a wide cost variance in the board of trustees' annual report that is submitted to the Chancellor in September; added a provision related to efforts to provide textbooks and instructional materials for students who cannot otherwise afford the required and recommended textbooks and instructional materials; and added the requirement that innovative pricing techniques and payment options for course materials include an opt-out provision in addition to the opt-in provision. She remarked that, at a subsequent meeting, she would apprise the Committee of the University's innovative pricing technique that this is being developed in partnership and collaboration with the Office of Business Services and Barnes & Noble.

A motion was made and unanimously passed that the FIU Board of Trustees Academic Policy and Student Affairs Committee recommend to the Florida International University Board of Trustees the approval of the amendments to Regulation FIU-1103 Textbook Affordability and delegate authority to the University President to approve any subsequent amendments that are based on comments to the Regulation received from the Florida Board of Governors and as a result of the regulation-making process.

AP4. New Program Proposal: Bachelor of Arts in Global Educational Studies (CIP 13.0701)
AP5. New Program Proposal: Bachelor of Arts in Global Sustainable Tourism (CIP: 30.3301)
AP6. New Program Proposal: Master of Science in Research Design and Analysis (CIP: 13.0603)
Sr. VP Bejar pointed out that the programs being proposed for Committee review[1] are considered strategic according to the BOG. She commented on the University's comprehensive process for developing new degrees and explained that as part of said process, a feasibility study is developed, and a concurrent process is initiated with BOG staff.

[1] Specifically, AP4 and AP5 are considered strategic according to the BOG.

AP4. New Program Proposal: Bachelor of Arts in Global Educational Studies (CIP 13.0701)
Sr. VP Bejar presented the Bachelor of Arts in Global Educational Studies new program proposal for Committee review. She remarked that the proposed BA will provide a degree for students who are interested in education-related careers in a global or local context, but not in teaching in the classroom. She indicated that the proposed BA will provide flexibility among several potential career opportunities, including international/intercultural education, educational policy, educational outreach in corporations, and national education and agencies. Sr. VP Bejar mentioned that the proposed BA will address the State of Florida's category of critical workforce and global competitiveness of economic development, adding that there are currently no other undergraduate degrees within the State University System (SUS) in this category. She commented that the proposed degree is an acknowledgment that employees who are sufficiently equipped with the foundational base of an American higher education are sought after by educational organizations around the globe.

Committee Vice Chair Donna J. Hrinak commended the work on the proposed degree, commenting on the emergence of professions in the areas of international education.

A motion was made and unanimously passed that the FIU Board of Trustees Academic Policy and Student Affairs Committee recommend to the Florida International University Board of Trustees approval of the Bachelor of Arts in Global Educational Studies (CIP 13.0701) new program proposal.

AP5. New Program Proposal: Bachelor of Arts in Global Sustainable Tourism (CIP: 30.3301)
Sr. VP Bejar presented the Bachelor of Arts in Global Sustainable Tourism new program proposal for Committee review. She explained that the primary purpose of the proposed program is to provide Florida's top industry with a new stream of candidates for employment who will understand the most current needs and demands of the traveling public, imbued with the appropriate content knowledge and critical-thinking skills needed to guide the industry into better, more sustainable stewardship of the natural environment, and operationalize with that a higher respect for and relationship with the communities where the industry operates. Sr. VP Bejar pointed out that the proposed degree provides graduates who can work as part of their industry to ensure that the tourism industry can flourish while not negatively impacting the natural environment. She mentioned that major hospitality and tourism corporations have adopted and aligned their sustainability programs to support such aims. She mentioned that, if approved by the Board of Trustees, there will be seven programs in the nation with this degree option.

A motion was made and unanimously passed that the FIU Board of Trustees Academic Policy and Student Affairs Committee recommend to the Florida International University Board of Trustees approval of the Bachelor of Arts in Global Sustainable Tourism (CIP: 30.3301) new program proposal.

AP6. New Program Proposal: Master of Science in Research Design and Analysis (CIP: 13.0603)
Sr. VP Bejar presented the Master of Science in Research Design and Analysis (RDA) new program proposal for Committee review. She explained that the RDA proposal is for a fully online degree

covering research design, statistics, measurement, qualitative research, and evaluation. She indicated that the RDA program places emphasis on building research knowledge, expertise, and practical experience to help RDA graduates fill a void to align relevant data with specific problems, design cutting edge data collection methods, analyze data for practical solutions, and suggest rigorous research techniques. She mentioned that RDA graduates will have an impact on both public and private sectors that deal with contemporary challenges regarding education, health, and technology issues. Sr. VP Bejar pointed out that the proposed program boasts a strong national demand, according to the U.S. Bureau of Labor Statistics, adding that Florida estimates growth above 30%.

A motion was made and unanimously passed that the FIU Board of Trustees Academic Policy and Student Affairs Committee recommend to the Florida International University Board of Trustees approval of the Master of Science in Research Design and Analysis (CIP: 13.0603) new program proposal.

AP7. Placing the Name "Knight Foundation School of Computing and Information Sciences" on a Portion of the Exterior of the Building Housing the FIU School of Computing and Information Sciences on the Modesto A. Maidique Campus

Provost Furton presented the request for the placing of the name "Knight Foundation School of Computing and Information Sciences" on a portion of the exterior of the building housing the FIU School of Computing and Information Sciences on the Modesto A. Maidique Campus for Committee review. He mentioned that the FIU community should anticipate a major announcement the next day pertaining to a generous grant from the Knight Foundation to fund additional faculty positions in the FIU College of Engineering building, to be constructed on the Modesto A. Maidique Campus. He mentioned that said investment will catalyze the development of the local tech ecosystem by attracting top faculty researchers in areas such as artificial intelligence, smart robotics, bioinformatics, biodevices, and digital forensics.

Provost Furton indicated that in light of this significant grant, the University proposes to (i) rename the FIU School of Computing and Information Sciences as the "Knight Foundation School of Computing and Information Sciences" and (ii) prominently display "Knight Foundation School of Computing and Information Sciences" on the exterior of the building housing the School.

A motion was made and unanimously passed that the FIU Board of Trustees Academic Policy and Student Affairs Committee recommend to the Florida International University Board of Trustees approval of placing the name "Knight Foundation School of Computing and Information Sciences" on a portion of the exterior of the building housing the FIU School of Computing and Information Sciences.

4. Information and Discussion Items

4.1 Academic Affairs Regular Reports

There were no questions from the Committee members in terms of the Academic Affairs regular reports included as part of the agenda materials.

4.2 SACSCOC Reaffirmation of Accreditation

Sr. VP Bejar commented that the University is currently undergoing the comprehensive 10-year review of accreditation with the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC). She remarked that there are two (2) components to reaffirmation, compliance certification and quality enhancement. She mentioned that the University's Compliance Certification Report is a comprehensive report that demonstrates the extent of FIU's compliance with each core requirement and standards as set forth by SACSCOC, adding that said report was submitted as part of the off-site review. She pointed out that the off-site review process resulted in three (3) preliminary findings of initial concern, stating that the audit-related finding pertained to a timing issue that resulted in the State of Florida accelerating the review of FIU's Financial Statement Audit. Sr. VP Bejar explained that the review process culminates with an on-site review that is scheduled for March 2021, noting that in anticipation of said review, the University provided additional documentation and responded to the findings. She stated that while the on-site review will take place virtually due to COVID-19 precautions, an on-site visit is required to take place within the next 12 months.

Sr. VP Bejar remarked on the quality enhancement component of the review process, adding that SACSCOC requires that universities identify an initiative that can significantly impact student learning. She referred to the University's prior QEP, Global Learning for Global Citizenship, noting that said QEP led to a sustained office at FIU, launched a number of careers, resulted in a published book, and caused FIU to be the recipient of numerous awards for the related outcomes. She explained that Critical Skills for the 21st Century is the proposed QEP, adding that the proposed QEP aims to enhance student preparation for the 21st century workforce by certifying through microcredentials, the student's attainment of knowledge, skills, abilities, and values around and related to artificial intelligence, data science, and emotional intelligence. Sr. VP Bejar explained that the proposed QEP is an academically focused and research-designed five-year project, which will culminate in an impact report that will be submitted to SACSCOC in 2026. She presented a table that summarizes five-year scaling projections for increasing faculty development to support the calculated range of total student enrollment. She commented that FIU's proposed QEP will be reviewed during the virtual site visit in March, noting that with SACSCOC approval after the March on-site visit, the University will then be ready to launch the QEP in fall 2021.

Committee Chair Lowell welcomed Mr. Alberto Ibargüen, CEO of the John S. and James L. Knight Foundation. Mr. Ibargüen commented that Miami is emerging as an international tech hub, adding that the demand for technical talent is rising and that the investment *(referring to AP7. Placing the Name "Knight Foundation School of Computing and Information Sciences" on a Portion of the Exterior of the Building Housing the FIU School of Computing and Information Sciences on the Modesto A. Maidique Campus)* will assure that there will be a deep pool of talent for Miami's growing tech sector.

4.3 Student Conduct and Honor Code

Sr. VP Bejar referred to Trustee Sarnoff's earlier comments *(referring to AP2. Approval of Notice of Change to Approved Revised Regulation FIU-105 Sexual Harassment (Title IX) and Sexual Misconduct)*, adding that minor improvements will be presented for review at the Committee's next regularly scheduled meeting.

5. Student Government Updates

Trustee Alexandra Valdes, Student Government President, commented on the approval of new governing documents, which, as of February 1, 2021, unified student government into one (1) University-wide government for the student body. She mentioned that the Student Government Budget Committee met over the past several weeks to review Activity and Service Fee (A & S) budget requests and as a result, a final budget detailing A & S fee allocations has been presented to Sr. VP Bejar. Trustee Valdes mentioned that the University-wide alumni association mentorship program is now open to all students. She remarked on repopulating FIU campuses, specifically opening dining tables around the campuses and eliminating the Recreation Center's reservation system. She mentioned the mid-term study break event currently taking place in the Graham Center, adding that student government continues its efforts to increase on-campus engagement while also increasing student presence at University athletic events.

In response to Trustee Sarnoff, Trustee Valdes remarked that physical distancing requirements and the unavailability of numerous on-campus dining establishments serve as deterrents for students who wish to spend time on campus. In response to Board Vice Chair Roger Tovar, Senior Vice President for Administration and Chief Financial Officer Kenneth A. Jessell pointed out that there are approximately 10 available on-campus food venues, and he commented on plans being developed with Chartwells to expand the number of available on-campus food venues, as this would provide for increased variety and options. Sr. VP and CFO Jessell further commented that the university will likely have to cover the losses of the expanded venues and that the university is prepared to do so. Board Vice Chair Tovar asked Trustee Valdes for additional recommendations that can help to further repopulation efforts. Trustee Valdes remarked that traditional on-campus, in-person learning should be an option for students that prefer said modality. In response to Committee Chair Lowell, Trustee Valdes mentioned that outdoor student events have been taking place but with limited attendance.

6. Faculty Senate Updates

Trustee Reinhold, Faculty Senate Chair, reflected on the prior 11 months that began with the directive to transition to remote instruction. He commented that while in-person instruction does not require certification, prior to being considered for hybrid course instruction, certification is required. He added that during said certification training, faculty members are exposed to evidence-based teaching practices, curriculum development, and assessment planning. He remarked that due to the transition to remote, training courses were oversubscribed, which resulted in additional sections being offered and ultimately, three times as much faculty becoming certified. Trustee Reinhold indicated that, in addition to the hybrid teaching certification, faculty members engaged in other available training opportunities such as the remote readiness certification. He stated that while not necessarily an indicator of student learning outcomes, passing rates for remote courses are comparable to that of online or in-person courses. He referenced a controlled comparison that analyzed a specific math course over the last three spring semesters, adding that student learning outcomes were generally consistent.

Trustee Reinhold commented on the fall student poll, pointing out that approximately half of respondents indicated that they preferred remote instruction for the spring semester. Trustee Reinhold mentioned that most students are electing to participate remotely for classes that have an

in-person option, despite the availability of space in the classroom. He remarked on increased student satisfaction rates as they relate to remote instruction. He referred to the recent Miami Herald article, commenting on faculty concerns regarding the related push to repopulate FIU campuses in the spring semester. He added that faculty are more receptive to returning to pre-COVID conditions in the fall semester.

Trustee Valdes remarked that remote learning incentivizes academic dishonesty and added that while there may be a section of the student population that is satisfied with remote instruction, an even greater number is dissatisfied. She commented that remote instruction was borne out of necessity and the circumstances of the moment and that moving forward, students should continue to have the same learning options as they did prior to COVID-19 conditions, specifically, in-person, online, and hybrid.

Trustee Reinhold reiterated that students are opting for remote learning despite having the option of attending class in-person. Trustee Valdes commented that there is increased comfort in attending classes remotely and added that removing remote instruction as an option helps to ensure that students have a presence on campus, thereby allowing them to benefit from the available on-campus resources.

Board Chair Dean C. Colson suggested to Committee Chair Lowell that the discussion be continued at the Full Board Meeting that is scheduled later in the day. There were no objections.

7. New Business
No new business was raised.

8. Concluding Remarks and Adjournment
With no other business, Committee Chair Natasha Lowell adjourned the meeting of the Florida International University Board of Trustees Academic Policy and Student Affairs Committee on Tuesday, February 23, 2021 at 11:54 a.m.

THE FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
Academic Policy and Student Affairs Committee
June 16, 2021

Subject: Tenure Nominations

Proposed Committee Action:

Recommend to The Florida International University Board of Trustees approval of the Tenure Nominations as specified in the Board materials.

Background Information:

Pursuant to Florida Board of Governors Regulation 1.001(5)(a), each board of trustees shall provide for the establishment of the personnel program for all the employees of the university, including but not limited to tenure.

The University President is recommending the granting of Tenure for twenty-one (21) nominees as specified in the Board materials.

Supporting Documentation: Tenure Flowchart
Tenure Nominations
Tenure Nominees' Biographies

Facilitator/Presenter: Kenneth G. Furton

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FIU FLORIDA INTERNATIONAL UNIVERSITY

Tenure Review Process

A new tenure earning Assistant Professor is appointed to a tenure track position

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Third-Year Review is conducted to review progress toward tenure. Reviews are completed by:
- Department or School Committee
- Department Chair or School Director
- College Committee
- Dean
- Provost

→ *Upon determination of insufficient progress towards the tenure goal, the application is denied and a letter of non-renewal is issued*

↓

In the sixth year of continuous service:

→ *If no application is submitted, a letter of non-renewal is issued*

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Tenure application is submitted and reviewed by:
- External Reviewers (minimum of 5)
- Department or School Committee
- Department Chair or School Director
- College Committee
- Dean
- Provost
- President

→ *Upon determination of insufficient progress towards the tenure goal, the application is denied and a letter of non-renewal is issued*

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Tenure application is submitted and reviewed by the Academic Policy & Student Affairs Committee of the Board of Trustees

→ *Upon determination of insufficient progress towards the tenure goal, the application is denied and a letter of non-renewal is issued*

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Tenure application is submitted and reviewed by the Board of Trustees for final decision

→ *Upon determination of insufficient progress towards the tenure goal, the application is denied and a letter of non-renewal is issued*

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The Board of Trustees awards tenure

2020-2021 Tenure Candidates		
Name	**Department**	**Proposed Rank**
College of Arts, Sciences and Education		
Elizabeth Anderson	Earth and Environment	Associate Professor
James Burns	Teaching and Learning	Associate Professor
Emily Dare	Teaching and Learning	Associate Professor
Joshua Ellis	Teaching and Learning	Associate Professor
Matthew DeGennaro	Biology	Associate Professor
Laura Serbus	Biology	Associate Professor
Glenn Hutchinson Jr	English	Associate Professor
Fabian Soto Caro	Psychology	Associate Professor
Timothy Allen	Psychology	Associate Professor
College of Engineering and Computing		
Arturo Leon	Civil and Environ Engineering	tenure only
College of Business		
Manjul Gupta	Info Sys and Bus Analytic	Associate Professor
Xiao Chuan Huang	School of Accounting	Associate Professor
Hemang Subramanian	Info Sys and Bus Analytic	Associate Professor
Steven J. Green School of International and Public Affairs		
Can Chen	Public Policy and Administration	Associate Professor
Robert Stempel College of Public Health & Social Work		
Shanna Burke	School of Social Work	Associate Professor
Gladys Ibanez	Epidemiology	Associate Professor
Nicole Wertheim College of Nursing & Health Sciences		
Maria Olenick	Undergraduate Nursing	tenure only
Jaclyn Schwartz	Occupational Therapy	Associate Professor
Chaplin School of Hospitality and Tourism Management		
Lisa Cain		Associate Professor
Howook Sean Chang		Associate Professor
Carolin Lusby		Associate Professor

Elizabeth Anderson
Earth and Environment
College of Arts, Sciences, & Education

Dr. Anderson received her PhD in Ecology from the University of Georgia in 2004 and joined the faculty in Earth and Environment as an Assistant Professor in January of 2017 (with two years' credit towards tenure), having served at several prestigious external institutions including the Field Museum of Natural History.

Dr. Anderson's area of research is tropical ecology, conservation and management, with a focus on tropical freshwater systems and how tropical freshwater systems and water allocation impact humans and nature. Her work examines freshwater systems in the Amazon, East Africa, and South Florida, the results of which have directly impacted policies and practices related to environmental water allocations.

She has published a total of 29 articles in her discipline, 18 of which were published and an additional three are "in press" since the tenure-earning period began. She has also published a book, four book chapters, and several other significant works during that period. Her peer-reviewed articles appear in top tier journals. Dr. Anderson has secured a significant amount of funding during her time at FIU. She has over $1.1 million in active grants (she is Principal Investigator (PI) for $742,000 of this). During her tenure-earning period, she has received an impressive total of $2.5 million in funding as PI and Co-PI. Her projects have been funded by major governmental institutions such as National Science Foundation and USAID.

Her teaching is exemplary, having taught both undergraduate and graduate level courses, and her teaching evaluations are considered excellent. Dr. Anderson has also been successful in student recruitment as well as supporting her students in obtaining fellowships and scholarships. In addition, she has mentored two postdoctoral scientists, five Ph.D. students, and four M.S. students.

Dr. Anderson's service includes Department, College, and University as well as to her field. Of note, she has served as journal editor on top-tier journals, external reviewer on federal grant panels, and Co-Chair and a member of the Awards Committee for the Society for Freshwater Science. She is a member of the Diversity and Conservation Committees for the Association for Tropical Biology and Conservation.

James Burns
Teaching & Learning
College of Arts, Sciences, & Education

Dr. James Burns received an Ed.D. in Curriculum and Instruction at The George Washington University in 2011. Dr. Burns joined FIU in 2016 with one year of credit toward tenure from his time at South Dakota State University.

His research focuses on curriculum theory, exploring issues of social justice, masculinities, historically underrepresented groups, and participatory qualitative research methods. His work has proven pertinent to discourse surrounding the roles of various stakeholders in education.

Dr. Burns has published nine peer-reviewed articles and four book chapters over the tenure-earning period. Importantly, he has published two books, for one of which he received the prestigious American Educational Research Association's 2019 Outstanding Book Award for Curriculum Studies. Additionally, since 2015 he has delivered 16 presentations across the United States and in Canada. His peer-reviewed articles have been published in high-quality journals such as *Journal of Curriculum Theorizing*, *Peace Review: A Journal of Social Justice*, and *Journal of Critical Education Policy Studies.* Dr. Burns has been active in his attempts to secure external funding. He developed five submissions during his time at FIU.

His teaching and mentoring are exemplary, having taught at both the undergraduate and graduate levels, with student evaluations consistently Very Good to Excellent. As a mentor, he is currently the chair of nine dissertation committees, and has served on 31 dissertation committees.

In addition to his research and teaching, Dr. Burns's service has been exemplary to the Department, College, University and to his field. contributions to his field as a reviewer for ten professional journals and publishers, as well as a frequent invited panelist. At FIU, he has served on 22 committees at the university, college, and department levels. In addition, he has actively participated in governance for UFF-FIU and the Faculty Senate.

Emily Dare
Teaching and Learning
College of Arts, Sciences and Education

Dr. Emily Dare completed a Ph.D. in Curriculum and Instruction with concentration in STEM Education at the University of Minnesota in 2015. Dr. Dare joined FIU in 2018 with three years of credit toward tenure.

Dr. Dare's central area of research is K-12 STEM education. In particular, she examines the use of integrated STEM activities in K-12 science classrooms, drawing particular attention to students' and teachers' perspectives on instruction. She looks to promote methods of instruction that will create a more inclusive trajectory toward STEM careers in which women are underrepresented.

She has published 12 journal articles, a book chapter, and four government reports since her tenure-earning period began in 2015. Furthermore, she has participated in over 70 conference presentations, with the majority of her presentations taking place since becoming an FIU faculty member. Her articles have been published in high quality journals including *International Journal of Science Education*, *Journal of Research in Science Teaching*, and *Journal of Women and Minorities in Science and Engineering*.Dr. Dare has a strong record of external funding. She has received funding for five grants, totaling $2.5 million. She also has two grant proposals currently under review, including an NSF CAREER grant submission.

Dr. Dare's teaching is exemplary, having taught both undergraduate and graduate level courses, and her teaching evaluations are considered excellent. Dr. Dare is the Disciplinary Lead in Science Education and works closely with the Elementary Education Program. As part of this work, she is the lead professor of the Science Methods. At the graduate level, she was largely responsible for the development of a new course that is now required for all STEM Education Ph.D. students. She is currently chairing two doctoral committees, has co-authored several papers, and co-presented at numerous national and international conferences with graduate students.

In addition to the service-related teaching activities, Dr. Dare's service includes several committees in her Department, College, and University, as well as her field, and the community. In her field, Dr. Dare contributes to various associations as member or board member, and she has reviewed conference proposals for NARST. Notably, she has worked directly with over 35 secondary teachers to engage them in learning about engineering and integrated STEM education.

Joshua Ellis
Teaching and Learning
College of Arts, Sciences and Education

Dr. Joshua Ellis received his Ph.D. in STEM Education at the University of Minnesota in 2015. He joined FIU in 2018 with three years of credit toward tenure.

Dr. Ellis' primary area of research is STEM education at the K-12 level. His research examines educator preparation for STEM instruction, both before and during their careers. He works closely with other scholars as well as local schools in order to improve implementation of best practices. Dr. Ellis has published 13 peer-reviewed articles, of which ten were published since the tenure-earning period began. Additionally, since 2015 he has published a book chapter and five proceedings papers. He has given over 50 conference presentations nationally and internationally. Professor Ellis' peer-reviewed articles are published in high-quality journals. He has secured five grants that total nearly $4.5 million in funding. Dr. Ellis has an additional $300,000 proposal currently under review with NSF, for which he is the proposed Principal Investigator.

His teaching is exemplary, having taught both undergraduate and graduate level courses. He has been instrumental in enhancing the quality of K–12 Science, Technology, Engineering, and Mathematics (STEM) education in the Department, and his teaching evaluations are considered excellent.

Dr. Ellis's service includes several committees in his Department, College, and the University. In is field, Dr. Ellis has been active in the National Board for Professional Teaching Standards (NBPTS), Society for Information Technology and Teacher Education (SITE), Association for Science Teacher Education (ASTE), and National Association for Research in Science Teaching (NARST). In addition, he has been a conference proposal reviewer for SITE, ASTE, and NARST, a reviewer of numerous journals in his discipline, and a member of several editorial review boards.

Matthew DeGennaro
Biology
College of Arts, Sciences and Education

Dr. Matthew DeGennaro received his Ph.D. from New York University School of Medicine in 2008. After spending six years as a post-doctoral fellow at Rockefeller University, he joined FIU as an Assistant Professor in 2014.

Dr. DeGennaro is a neurogeneticist who studies the behavior of mosquitoes and other organisms. His research examines how mosquitoes identify and pursue (or avoid) hosts. He analyzes their olfactory receptors and odors in order to determine how to influence mosquito behaviors. Dr. DeGennaro's research has proven relevant to events such as the Zika outbreak in recent years. He has published six peer-reviewed papers and three invited literature reviews since joining FIU. While at FIU, he has received approximately $3 million in grants with other submissions pending. Major sources of funding are National Science Foundation (NSF), National Institutes of Health/ National Institute of Allergy and Infectious Diseases (NIH/NIAID), and National Institute of Justice (NIJ).

Dr. DeGennaro's teaching is exemplary, having taught both undergraduate and graduate level courses, and his teaching evaluations are considered excellent. Dr. DeGennaro also has mentored nine graduate students, four post-doctoral fellows, and 42 undergraduate students in his lab. He has also served on dissertation advisory committees for 12 students in other labs.

Dr. DeGennaro's service includes several committees in the Department, College, University, his field, and the community. He organized a symposium at the International Congress of Entomology on Mosquito Host Detection in Orlando in 2016, reviewed over 40 manuscripts for various top-tier journals, and serves on the editorial board of Scientific Reports. His community service has been tied to mosquito-borne disease outbreaks, becoming a member of Miami Dade County's 'Fight the Bite Initiative' and serving as Chair of the Environmental Committee.

Laura Serbus
Biology
College of Arts, Sciences and Education

Dr. Laura Serbus earned a Ph.D. in Genetics/Molecular Biology at the University of Indiana in 2005. She joined FIU as an Assistant Professor in 2013 after completed a six-year postdoctoral fellowship in the Department of Molecular, Cell, and Developmental Biology at the University of California, Santa Cruz.

Dr. Serbus's research focuses on a model system of endosymbiosis, the parasitic bacteria Wolbachia cohabiting within arthropods, especially insects, with a focus on mechanisms used by Wolbachia to colonize and persist in Drosophila lines. Dr. Serbus' discovery of the role of the host's diet in the relationship is groundbreaking, and she is considered a foremost authority on the subject. Dr. Serbus has a total 19 journal articles and book chapters published or in press, and she received a $650,000 research grant from the NSF in 2017. She and her students have also presented at scientific conferences.

Dr. Serbus has taught both undergraduate and graduate level courses, and her student perceptions of teaching evaluations are considered very good to excellent. Professor Serbus mentors a postdoctoral associate and three Ph.D. students, and she has mentored more than 30 undergraduates and high school students. Dr. Serbus received awards for research and teaching from her College in 2017 and 2018 respectively.

Dr. Serbus's service includes several committees in the Department, College, and the University. She is also a mentor for various student-centered programs such as the McNair Program. In her field, she is a peer reviewer for numerous publications and has served as a grant reviewer for the NSF and other organizations. For the community, Dr. Serbus has contributed with presentations at Somerset Academy Prep and by serving as a judge for Miami-Dade STEM Expos.

Glenn Hutchinson Jr
English
College of Arts, Sciences and Education

Dr. Glenn Hutchinson Jr. completed a Ph.D. in Rhetoric and Composition/American Literature at the University of North Carolina-Greensboro in 2002. Dr. Hutchinson joined FIU in 2011 as Assistant Director of the Center for Excellence in Writing. He was promoted to Director of the Center in 2017. Dr. Hutchinson was named Assistant Professor of English in 2018, receiving three years of credit toward tenure.

Dr. Hutchinson's research focuses on social justice, equity, and community engagement, and the study and practice of community literacy. Importantly, he embraces the fluid nature of the instructor's role in the process of instruction. In addition to a monograph and the recently published book *Writing Accomplices with Student Immigrant Rights Organizers*, Dr. Hutchinson has published seven peer-reviewed journal articles, numerous reviews, and op-ed pieces. In addition, Dr. Hutchinson has participated in over 40 conferences and presentations and received two University grants for the Writing Center.

Dr. Hutchinson has taught both undergraduate and graduate level courses, and his teaching is considered excellent by his students, peers, and Chair. As the director for the Center for Excellence in Writing, Dr. Hutchinson oversees the work and progress of over 75 tutors and writing assistants. He also serves as mentor to undergraduate and graduate students.

Dr. Hutchinson's service includes several committees in his Department, College, and University, as well as Faculty Senator. His work in the community is selfless, impactful, and extensive. His work with the nonprofit organization "Exchange for Change," for example, facilitates college teaching at correctional facilities in the State of Florida.

Fabian Aurelio Soto Caro
Psychology
College of Arts, Sciences and Education

Dr. Soto received his Ph.D. from the University of Iowa in 2011 and joined FIU as an Assistant Professor in 2015 after serving as a Postdoctoral Researcher at the University of California, Santa Barbara.

His research focuses on how human minds process visual objects and how during human development knowledge about objects is encoded in the brain. His research has important implications for our understanding of the human mind. He has 38 refereed publications, including 34 refereed journal articles and 19 publications since 2015, most of which have appeared in top journals in his field. He also has 60 invited talks and presentations at national and international conferences, and has been PI on two federal grants totaling close to $1 million.

Dr. Soto Caro has taught both undergraduate and graduate level courses, and his teaching is considered excellent. He actively mentors both undergraduate and graduate students as well: as primary mentor of three doctoral students and co-mentor of one additional doctoral student and serving on five masters' and six dissertation committees. In addition, he has co-authored a number of manuscripts with both undergraduate and graduate students.

In addition, Dr. Soto Caro has contributed to the Department, College, and University. In terms of service to his field, Dr. Soto is active in several professional societies and he has served as reviewer for approximately 30 top journals across a wide variety of disciplines. For his field and professional community, he is also actively engaged in developing scientific software, which he generously makes available through open source.

Timothy A. Allen
Psychology
College of Arts, Sciences, & Education

Dr. Allen received a Ph.D. in Behavioral Neuroscience at Yale University in 2008. He served as an Instructor at California State University, Long Beach, and later as an Instructor and Associate Project Scientist at the University of California, Irvine. He joined FIU as an Assistant Professor in 2015.

Dr. Allen's area of research is behavioral neuroscience, and in particular, the role of the hippocampus in learning and memory. Professor Allen has become an emerging leader in this field, with his research providing crucial insight into the ways medicine might approach these disorders. Dr. Allen has an excellent publication record consisting of 22 peer-reviewed articles. Of these, eight have been published since arriving at FIU, with one more accepted for publication. Additionally, he has given 22 invited lectures and more than 60 presentations at neuroscience and psychology conferences. His peer-reviewed articles have been published in high-quality journals. Dr. Allen has received over $5 million in external grant support, serving as Principal Investigator for $2 million of this funding. His current flagship grant is a five-year nearly $2M NIH R01.

His teaching, primarily in two senior-level undergraduate classes, has very strong evaluation scores. Dr. Allen currently mentors three post-doctoral associates, is the chair or co-chair of four Ph.D. committees, and has mentored 26 undergraduates in his lab at FIU. He serves on 11 Ph.D. committees and six Masters' committees.

Dr. Allen's service is also exceptional. He is a member of FIU's COVID-19 Research Review Group and of the Institutional Animal Care and Use Committee. In addition, he is the Chair of the Institutional Biosafety Committee. He served on a faculty search committee, is on the editorial board of three Journals, and is a mentor in the Women in Learning (WIL) program. He also organized the Annual Meeting of the Florida Consortium on the Neurobiology of Cognition, co-organized the Winter Conference on the Neurobiology of Learning and Memory, and serves as a Science Advisor to students at the MAST Academy.

Arturo Leon
Civil and Environmental Engineering
College of Engineering and Computing

Dr. Aruro Leon received his Ph.D. in Civil Engineering from the University of Illinois – Urban-Champaign in 2007 and joined FIU in Fall 2018 as Associate Professor.

Dr. Leon's research is on optimal control of reservoir systems, numerical modeling and experimentation of multi-phase flows, resilient flood control, computational fluid dynamics, and physical modeling of hydraulic structures. Dr. Leon lists 14 journal articles and 8 conference proceedings published since joining FIU. He has active funding as Principal Investigator (PI) and Co-Investigator and has been awarded over $830k as of January 2020.

Dr. Leon regularly teaches both graduate and undergraduate courses receiving Very Good SPOTS evaluations. Dr. Leon is supervising 5 PhD students and has already graduated one PhD student.

Dr. León's service includes several committees in his Department, College, and the University, as well serving as Alternate Faculty Senator. He also serves as faculty advisor for the FIU Chapter of Engineers Without Borders, and has been the Lead Faculty Advisor for the national 2018 EPA Campus RainWorks Challenge in which FIU students placed 2nd, and in the 2019 EPA Campus RainWorks Challenge in which FIU was awarded the 1st place. At the national level, he has been member of several ASCE Committees including serving as Vice-Chair, Task Committee on Two-Phase Flow in Urban Water Systems, and the American Society of Civil Engineers-Environmental & Water Resources Institute (EWRI).

Manjul Gupta
Information Systems and Business Analytics
College of Business

Dr. Manjul Gupta earned his Ph.D. in Management Information Systems from Iowa State University in 2015, and joined the faculty in the Department of Information Systems and Business Analytics (ISBA) as an Assistant Professor that same year.

Dr. Gupta's research focuses on individual, organizational, and national cultural studies. He has published 12 journal articles in peer-reviewed journals in the areas of information systems, communications, operations, health, and hospitality.

Dr. Gupta's teaching is exemplary, having taught both undergraduate and graduate level courses across all teaching modalities, with consistently high student perceptions of teaching. He currently serves on three dissertation committees and as a working chair for four DBA students.

Dr. Gupta's service is outstanding, contributing to the Department, College, and University. Dr. Gupta is a member of the Master of International Business Program taskforce at the college level. Service to his field includes serving as reviewer for premier journals and for prestigious conferences.

Xiao Chuan Huang
School of Accounting
College of Business

Dr. Xiao Chuan Huang earned her Ph.D. in Accounting from Georgia State University in 2011. Dr. Huang joined FIU as a Visiting Assistant Professor in 2013 and was hired on the tenure track the following year.

Dr. Huang's research focuses on the information provided to capital markets by various groups, including analysts, employees, and managers. Dr. Huang has eight journal publications in peer-reviewed journals.

Since joining FIU Business in 2013, Dr. Huang has taught both undergraduate and graduate courses. She also participated in various teaching modalities, including face-to-face and online. Dr. Huang's teaching is well above average, having taught both undergraduate and graduate level courses, with consistently above average student perceptions of teaching. She also served on two doctoral dissertation committees and regularly participates in the School of Accounting's research seminars.

Dr. Huang's service contributes service to the Department, College, University, and her field. Service to her field includes serving as a reviewer for top accounting and finance journals and major international conferences, such as The Accounting Review, Journal of Corporate Finance, and the Journal of Financial Markets and Management Science.

Hemang Subramanian
Information Systems and Business Analytics
College of Business

Dr. Hemang Subramanian earned his Ph.D. in Information Technology Management from the Georgia Institute of Technology in 2015 and joined the Department of Information Systems and Business Analytics (ISBA) as an Assistant Professor that same year.

Dr. Subramanian's research focuses on the areas of Blockchain, business analytics, cybersecurity, and electronic marketplaces. He has published 10 articles in premier information systems discipline journals, in addition to several conference proceedings. In 2019 he was a recipient of the Landon Undergraduate Teaching Grant, which he used to enhance the Blockchain and business analytics technical infrastructure and to develop PantherChain, a proprietary Blockchain at FIU.

Dr. Subramanian's teaching is exemplary, having taught both undergraduate and graduate level courses, with consistently high student perceptions of teaching. He mentored students who won the AIS Blockchain Hackathon Challenge in 2020 and he is actively engaged in the Department's Ph.D. program, serving as a mentor to students and as a committee member on several dissertation committees.

Dr. Subramanian's service is outstanding as well, having served the Department and College on various committees. Service to his field includes Associate Editor for the flagship conference in information systems, ICIS, participation in the Conf-IRM, and as an editor for the Journal of Database Management's special issue on Blockchain and Smart Contracts. Service to the community includes his participation in the Analytics, Technology, and Operations Management (ATOM) Think Tank.

Chen Can
Public Policy and Administration
Steven J. Green School of International and Public Affairs

Dr. Can Chen received a Ph.D. in Public Administration from the University of Nebraska in 2015 and joined FIU as an Assistant Professor that same year.

Dr. Chen's research focuses on public budgeting, financial management, and fiscal transparency, with a particular focus on infrastructure financing. His current research also includes disaster finance. He has 21 refereed journal publications, a conference proceeding, 5 book chapters, and 4 articles under review. He is also a PI or Co-PI on 9 external grants totaling $240,000.

His teaching is exemplary, having taught both undergraduate and graduate level courses across all teaching modalities. Dr. Chen is currently co-chairing a Ph.D. student's dissertation committee and serves on four other dissertation committees. Additionally, he has served on the committee of two recent graduates and has published three articles with Ph.D. students.

Additionally, Dr. Chen is actively involved in service to the Department, College, University and his field. He has served on multiple committees at all levels of FIU, and his professional service includes organizing and chairing multiple research panels at conferences and serving as Board Member for organizations and journals in his field. In addition, he has reviewed 38 manuscripts for various journals and chaired a number of ASPA Best Student Award committees. For the community, Dr. Chen has served as a consultant to the Florida League of Cities and the Citizens' Independent Transportation Trust, Miami-Dade County. He is currently working as well with the FL League of Cities to forecast the revenue impact of COVID-19 among Florida cities.

Shanna Burke
School of Social Work
Robert Stempel College of Public Health & Social Work

Dr. Shanna Burke completed her Ph.D. in Social Work at Simmons University in 2015 and her MSW degree at Springfield College in 2007. In 2015, she joined FIU as an Assistant Professor in the School of Social Work Since joining FIU, she completed her MPH in FIU's Department of Environmental Health Sciences in 2018.

Dr. Burke's research focuses on neurodevelopmental disabilities and neurodegenerative conditions, including Alzheimer's disease. Her current research efforts focus on cognitive impairment throughout the life course. Since joining FIU, Dr. Burke has published 45 peer-reviewed journal articles. She is the first author on 22 of these peer-reviewed articles and has included student co-authors on 28 papers. She has received as principal investigator (PI) $1.5 million in federal, state, foundation, and internal research funding and was a coinvestigator (co-I) on additional grants totaling $3.6 million. Dr. Burke is currently serving as PI on three funded studies, co-PI on three studies, and as a co-I on three other awards. In addition, she has five grant applications under review, as well as twelve completed grant-funded projects. Dr. Burke has presented and co-authored more than 50 conference presentations.

Dr. Burke's teaching is exemplary, having taught across the BSSW, MSW, and PhD academic programs. She has supervised a dissertation seminar for doctoral students, overseen four supervised research semesters, and four independent studies. Her student evaluations are consistently excellent. She has also led course sessions on "Addressing the Socio-economic and Cultural Aspects of Health" for FIU's Herbert Wertheim College of Medicine and "Appreciating the Role of Stigma about Mental Illness in the Delivery of Behavioral Health Care" for FIU's HRSA-funded Behavioral Health Workforce Education and Training Fellowship.

Dr. Burke's service includes department, college, university, community service, as well as service to her field. She has served on numerous committees at all levels of FIU. Within the community, she has served as a member of the Consortium for a Healthier Miami-Dade and the Elders Issues/Mayor's Initiative on Aging Committee. For her profession, she served as the Co-Chair of the Health Track at the Council on Social Work Education, and as a frequent peer reviewer for scholarly journals.

Gladys Ibañez
School of Social Work
Robert Stempel College of Public Health & Social Work

Dr. Ibañez completed her Ph.D. in Psychology from Georgia State University in 2002 and served as a postdoctoral fellow for two years in the Centers for Disease Control and Prevention (CDC) in the Division of HIV/AIDS Prevention. She joined FIU as an Assistant Professor in the Department of Epidemiology in 2014.

Dr. Ibañez's research focuses on HIV-related intervention development, Latino health, and issues facing people living with HIV. She has published 46 journal articles, 15 of which are first-authored. She has been successful in receiving approximately $1.2M worth of funding. She served as site PI for three NIH funded grants, one contract, and one Supplement. In addition, she has served as Co-I in four NIH funded grants.

Her teaching and mentorship are considered very good to excellent. She has taught several different courses across the curriculum. She has served as a major professor for three Ph.D. students and as a member of nine dissertation committees. Her mentees have received funding and awards for research presentations. In addition, Dr. Ibañez has helped students publish 11 peer-reviewed journals and 15 presentations.

Dr. Ibañez contributes service to her Department, College, the University, community and her field. She has served on numerous committees at the department and college level. She also collaborated with FIU's Herbert Wertheim College of Medicine to provide an interactive experience for K-12 students to learn about different healthcare professions. In her field, she served as a reviewer on two CDC grant review panels, for the American Public Health Association (APHA) conference, and the National HIV Prevention Conference. At the community and professional levels, she served as a member of the Miami-Dade County HIV/AIDS Partnership's Strategic Planning Committee, the Transgender Workgroup, Miami-Dade HIV/AIDS Partnership, and the Getting to Zero Mayor's Task Force as a Subject Matter Expert.

Maria Olenick
Undergraduate Nursing
Nicole Wertheim College of Nursing & Health Sciences

Dr. Maria Olenick received her PhD in Nursing from Widener University, Chester, PA in 2012. Dr. Olenick joined the faculty as a Clinical Assistant Instructor in the Nicole Wertheim College of Nursing and Health Science in 2011, and in 2017 was promoted to Clinical Associate Professor. In 2018, Dr. Olenick was hired as an Associate Professor with three years toward tenure. This same year, she was appointed Chairperson of the Undergraduate Nursing Department.

Dr. Olenick's research focuses on improving the health outcomes for veterans and their families. Since 2011, she has published or has in press 18 peer reviewed manuscripts. In addition, Dr. Olenick has one manuscript under review and an additional manuscript in progress. For veteran specific health conditions, and to test interventions to improve veteran specific health conditions, Dr. Olenick was awarded $8M in program funding.

Her teaching is considered very good to excellent, having taught a number of courses across the curriculum. She also has been instrumental in developing and implementing the undergraduate curriculum, and currently serves as Chair of Undergraduate Nursing. As a mentor, she has guided hundreds of FIU BSN graduates. Dr. Olenick is recognized in her field as an effective pedagogue, and in 2018 she received the FNA South Region Award for Nursing Leader Administration/Academia.

She has contributed exemplary service to her Department, College, the University, community, and to her field. in addition to serving as Chair of Undergraduate Nursing, she was recently elected as Vice Chair of the Chairs' Advisory Council (CAC). For the community, she facilitates an evidence-based practice at the Miami VA Healthcare System (MVAHS), which has improved veteran outcomes. In 2018, Dr. Olenick was inducted as a Fellow in the American Academy of Nursing (FAAN), one of the highest international honors in nursing. In addition, through the American Academy of Nursing, she serves on the Expert Panel on Military and Veterans Health.

Jaclyn Schwartz
Occupational Therapy
Nicole Wertheim College of Nursing & Health Sciences

Dr. Jaclyn Schwartz completed her PhD in Health Sciences at the University of Wisconsin-Milwaukee in 2015, and joined FIU as an Assistant Professor in the Department of Occupational Therapy that same year. She is a licensed Occupational Therapist in the State of Florida.

Dr. Schwartz's research focuses on medication adherence in the population with disabilities, for improved health and productivity. She has 21 peer reviewed articles and 6 book chapters. In addition, Dr. Schwartz has been the recipient of five funded research studies, including an NIH RO3 grant, for a total of approximately $400,000. She has co-authored a number of publications and presentations with her students as well.

Her teaching is considered excellent, having taught several courses across the curriculum. As a mentor, Dr. Schwartz serves as an academic advisor for approximately 20 Masters of Occupational Therapy students each year, approximately five undergraduate volunteer research assistants, 60 occupational therapy master's students, and three doctoral students. She also has served as a research preceptor for six Doctor of Nursing Practice students, and as advisor for four Biomedical Engineering undergraduate students, as part of their senior design project course.

Dr. Schwartz contributes service to her Department, College, the University, the community and to her field. She currently works with the Herbert Wertheim College of Medicine's Interprofessional Education workshop and as a judge for Undergraduate research across FIU. For her community, she supports the Primary Health Advisory Committee of the Live Healthy Miami Gardens initiative and was elected to the Board of Directors of the Center for Independent Living of South Florida (CILSF). Service to her field includes a leadership role at the *American Occupational Therapy Association (AOTA)* and she served as the national chair of the VLDC for 2019-22.

Lisa Cain
Chaplin School of Hospitality and Tourism Management

Dr. Lisa Cain received her PhD from the University of Nevada, Las Vegas in Hospitality Administration in 2015, and joined FIU's Chaplin School of Hospitality & Tourism Management as Assistant Professor in that same year.

Dr. Cain's research focuses on organizational behavior and marketing. With a foundation and track-record of successful investigation in the area of employee and customer experiences. She earned a $300,000 grant award on Internet of Things (IoT) and hospitality to drive her future research plans to focus on how technology currently influences and will continue to shape employee and customer experiences. Including this grant, Dr. Cain has been awarded two grants and has applied for seven other grants. Dr. Cain has 32 peer-reviewed manuscripts and trade articles in publication or in press, 6 manuscripts in review, 5 manuscripts being prepared for submission, and 50 peer-reviewed conference proceedings. Dr. Cain has authored one book chapter and has two additional chapters in progress, as well as a co-authored industry report.

Her teaching is exemplary, teaching at both the undergraduate and graduate level. Student comments are excellent, with positive observations for course content, faculty engagement, and communication. She has also engaged in ongoing professional development, including the Center for the Advancement of Teaching workshops, certified hybrid training, Global Learning certification, and a certified graduate course based on the Quality Matters rubric. She is active as a mentor and recently mentored and co-authored 12 graduate student presentations for the 26th Annual Graduate Education and Graduate Student Chaplin School of Hospitality and Tourism Management.

Dr. Cain's service includes nine school and university committees. She serves as the Assistant Editor for the International Hospitality Review, in addition to other journals and conferences. She also has served as the chairperson of the CSHTM undergraduate curriculum committee for multiple terms and has been involved in the Evaluating Teaching Project.

Howook Chang
Chaplin School of Hospitality and Tourism Management

Dr. Howook Chang received his Doctorate in Hospitality Management from Sejong University, Seoul, Korea in 2015, and joined FIU's Chaplin School of Hospitality & Tourism Management as Assistant Professor that same year.

Dr. Chang's research focuses on air quality and consumer perceptions and behavior. He has work in progress regarding indoor air quality of restaurants and passenger cabins that is expected to make a significant contribution to the field given the COVID-19 pandemic. Dr. Chang's research activity includes eight peer-reviewed manuscripts published, two more accepted, and two more in (re)submission. If the last two are accepted, he will have a total of 12 manuscripts. Of the 12 manuscripts, Dr. Chang is the lead author in five. Dr. Chang also has conducted research with seven students, each of which presented at Graduate Student Research Conferences.

He is a dedicated and student-centered teacher, as noted by his students in annual student perceptions of teaching effectiveness, and he has also mentored five graduate students. He has also shown a willingness to seek support from the Center for the Advancement of Teaching. His Dean considers his teaching to be excellent.

Dr. Chang has contributed service to the School, University and the field. He has served on several School and University committees and having served on various ad-hoc committees. He has also served the international community and profession as a keynote speaker, and he was recently asked to join the editorial board of IJCHM, a top tier journal in his field.

Carolin Lusby
Chaplin School of Hospitality and Tourism Management

Dr. Carolin Lusby received her PhD in Sport and Fitness Administration from the University of Florida in 2007. She joined FIU's Chaplin School of Hospitality & Tourism Management in 2013 and as an Assistant Professor on the tenure track in 2014.

Dr. Lusby's research focuses on tourism and sustainability and psychological aspects of travel. She has 12 Peer-reviewed publications, 19 peer reviewed presentations, and five book chapters, in addition to serving as editor of a special issue of an international tourism journal. She also has a book chapter and journal article in preparation for submission. Dr. Lusby has also been successful in securing grants, and was awarded US Department of Agriculture-Cochran, UK Department for Environment, Food and Rural Affairs- Darwin Initiative, US Department of State-Young Leaders of America Fellowship, and a US Department of State Citizen Diplomacy Rapid Response Grant, for a total of over $225,000. In addition, she was Fulbright Scholar to Brazil in 2019-2020.

Her teaching is very good to excellent and she has taught various undergraduate courses across the curriculum. She is also affiliated with LACC and the Honors College and was instrumental in achieving Global Learning designation for courses in her School. She also has been active in developing the new joint program in Global Sustainable Tourism. Her annual teaching evaluations rank her within the top two quartiles of CSHTM faculty. She is active as a mentor as well and has co-authored articles with her students.

Dr. Lusby contributes excellent service to her School and the University. She has served on several committees at both levels. She contributes to her field as a reviewer for numerous academic journals. Additionally, she has engaged in sharing her research with communities within South Florida and around the world in media interviews and serving on expert panels.

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THE FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
Academic Policy and Student Affairs Committee
June 16, 2021

Subject: Tenure as a Condition of Employment Nominations

Proposed Committee Action:
Recommend to the Florida International University Board of Trustees the approval of nine (9) candidates for Tenure as a Condition of Employment (TACOE).

Background Information:
Pursuant to Florida Board of Governors Regulation 1.001(5)(a), each board of trustees shall provide for the establishment of the personnel program for all the employees of the university, including but not limited to tenure.

The TACOE nominees hold tenure at their previous institutions and have been selected to receive TACOE based on the caliber of their work.

Supporting Documentation: Tenure as a Condition of Employment Nominee Overview

Tenure as a Condition of Employment Nominee Bios

Tenure as a Condition of Employment Nominees Curriculum Vitas

Facilitator/Presenter: Kenneth G. Furton

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Florida International University
Tenure as a Condition of Employment Nominations - June 2021

Name	College	Department	Proposed Rank
Qi Lin Cao	Stempel College of Public Health & Social Work	Environmental Health Sciences	Professor
Monica Cardella	College of Engineering and Computing	SUCCEED	Professor
Bryan Dewsbury	College of Arts, Sciences and Education	Biology	Associate Professor
Kirsten Edwards	College of Arts, Sciences and Education	Educational Policy Studies	Associate Professor
John Hackett	College of Arts, Sciences and Education	SISH	Professor
Deidra Hodges	College of Engineering and Computing	Electrical and Computer Engineering	Associate Professor
Ying Liu	Stempel College of Public Health & Social Work	Environmental Health Sciences	Associate Professor
Christian Poellabauer	College of Engineering and Computing	KFSCIS	Professor
Ting Wang	Stempel College of Public Health & Social Work	Environmental Health Sciences	Professor

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Qi Lin Cao
Environmental Health Sciences
Robert Stempel College of Public Health & Social Work

Dr. Cao received his doctoral degree (MD) from Human Medical University (China) in 1990. He is currently a tenured Professor at the University of Texas Health Science Center at Houston.

Dr. Cao is a principal investigator and associate professor with the Vivian L. Smith Department of Neurosurgery and the Center for Stem Cell and Regenerative Medicine. He has discovered that transplanted adult stem cells (oligodendrocyte precursor cells or OPC) from the spinal cord could become oligodendrocytes. The new cells helped restore electrical pathways of the spinal cord and, therefore, function, in a process called remyelination. He has presented invited talks and lectures at international conferences and many academic institutions. Dr. Cao has developed a patent, contributed to a few books, and co-authored many articles that have appeared in Stem cells, the Journal of Neuroscience, Plos Genetics, Plos One, Glia, and Experimental Neurology, among others.

Dr. Cao's teaching includes courses at the graduate and post-graduate levels at his current and previous institutions on the topic of stem cell biology. Dr. Cao has also mentored graduate students and post-doctoral fellows.

Dr. Cao has a good record of service to his university. In addition, he has provided substantial professional service by working as a reviewer for numerous journals and grant review panels and he is a member of editorial boards on multiple scientific journals. He has been serving as a grant reviewer for NIH, DoD, VA and many other agencies and as a manuscript-reviewer for many international journals.

Monica Cardella
School of Universal Computing, Construction and Engineering Education
College of Engineering and Computer Science

Dr. Cardella received her Ph.D. in Industrial Engineering from the University of Washington in 2006. She currently serves on the faculty at Purdue University, where she received the rank of Full Professor in 2019.

Dr. Cardella has focused her research interests on engineering design, mathematical, and computational thinking across formal and informal settings, with a focus on human-centered approaches for design. She has 27 peer-reviewed journal articles in print and 142 articles in refereed conference proceedings, and an additional 11 book chapters. In addition, she has been PI or co-PI on 19 externally-funded research projects, with over $27,500,000 in funds. Most recently she is PI on an NIH award focusing on STEM elementary level education and co-PI on an NSF award studying computational thinking in Biological Engineering. Dr. Cardella is a fellow of ASEE and the recipient of an NSF CAREER Award.

Dr. Cardella's teaching includes undergraduate and graduate courses, and she is supervising and/or has graduated a number of Ph.D. students. She is highly respected in her field of engineering education.

Dr. Cardella has an impressive history of service to her department, college, community, and her field. In addition, she served as a Director of Engineering and Workforce Development for a Purdue-led ERC, as Editor in Chief of the Journal of Pre-College Engineering Education Research, and is currently a rotating program officer at NSF. She participated as well in two different year-long academic leadership programs, where she received formal training: the Executive Leadership Program for Academic Technology and Engineering (ELATE) offered by Drexel University, and the Big Ten Academic Alliance Academic Leadership Program.

Bryan Dewsbury
Biological Sciences
College of Arts, Sciences, & Education

Dr. Dewsbury received his Ph.D. in Biology from Florida International University (FIU) in 2014. Shortly after, he joined the University of Rhode Island (URI) as an Assistant Professor in the Department of Biological Sciences.

Professor Dewsbury's principal research interest is an examination of identity constructs and biases as they relate to K-Ph.D. learning. The results of his research inform his pedagogical approach. Dr. Dewsbury has been productive in securing external funding. A key project for which he served as Principal Investigator is the Science Education and Society (SEAS) research program. His MARC U*STAR Training Program is funded by a $1.2 million grant from the National Institutes of Health (NIH). Other projects are supported by key agencies such as the National Science Foundation (NSF), where his contributions have resulted in over $750,000 in funding. His research, importantly, explores areas of science as well those associated with best practices in effective instruction.

Professor Dewsbury has led several courses that are essential to student success in STEM. He has taught a large undergraduate Principles of Biology I course as well as a medium-sized Principles of Biology I Honors. Additionally, Dr. Dewsbury has taught a more specialized smaller course entitled What's the big idea: A No Boundary Thinking approach to solving complex social challenges and STEM Course Design in Higher Education at the graduate level. Dr. Dewsbury has supervised one Ph.D. student and two M.S. students in addition to mentoring 11 undergraduates and serving on numerous advisory committees.

Dr. Dewsbury was a contributing scholar to the Columbia University Massive Open Online Course (MOOC) on Inclusive Teaching, a Board Member for the American Talent Initiative's Equity Institute, and an Advisory Board Member for the Quantifying the Undergraduate Biology Education and Synthesis (QUBES) program. He is a Section Editor for the Journal of Microbiology and Biology Education and has worked on inclusion efforts that include URI's Inclusive Science Communication Symposium Planning Committee and a workshop series entitled Deep Teaching URI.

Kirsten Edwards
Leadership & Professional Studies
College of Arts, Sciences, & Education

Dr. Edwards received her Ph.D. in Educational Leadership, Research, and Counseling from Louisiana State University in 2012, and currently serves in the Department of Educational Leadership and Policy Studies at the University of Oklahoma. She has held core affiliate faculty appointments in African & African American Studies, Women's & Gender Studies, and the Center for Social Justice.

Dr. Edward's research interests are in the philosophies of higher education, college curriculum, and pedagogy. More specifically, Dr. Edwards is interested in the ways that socio-cultural identity and context influence teaching and learning in post-secondary education. She is author or co-author of 12 peer-reviewed publications, 16 book chapters, and 4 books including, "Black Women Theorizing Curriculum Studies in Colour and Curves."

Her teaching includes Gender, Society, and Higher Education, Critical Literature in Adult and Higher Education, Foundations of Doctoral Research in Adult and Higher Education, History of U.S. Higher Education, Spirituality & Religious Diversity in Higher Education, The Adult Learner, Unlearning Racism. and Women Creating Social Change. Her teaching presentation during her on-campus visit was also considered to be excellent.

Dr. Edwards has a long history of service to her program, her department, her college, her community, and her field. For instance, she has worked with the Women and Girls Across Gender (W&GAG) Initiative which catalyzed collaboration among faculty, students, educators, and community leaders committed to the eradication of gender-based violence in schools. Along with department and university-level administrative appointments, she has also served the Adult and Higher Education program as emphasis area coordinator for Higher Education Administration and Student Affairs.

John Hackett
Department of Chemistry and Biochemistry
College of Arts, Sciences, and Education

Dr. John Hackett received his PhD in Medicinal Chemistry from The Ohio State University in 2004. In 2006, he joined Virginia Commonwealth University (VCU) as an Assistant Professor in the School of Pharmacy's Department of Medicinal Chemistry. He later transitioned to VCU's Department of Physiology and Biophysics in the School of Medicine in 2013, earning tenure as an Associate Professor in 2015.

Dr. John Hackett's main research area is the composition and behavior of cytochrome P450 enzymes using computational and biophysical approaches. With an academic background that combines experience from several disciplines, Dr. Hackett offers a wealth of scholarship regarding enzyme analysis. He has published over thirty papers, many of which are well-cited. Dr. Hackett has a proven grant support track record from agencies such as the National Institutes of Health (NIH) and the National Science Foundation (NSF). He has received over $6 million in funding as PI and in collaborative roles. He has received five R01 grants, with his most recent ($1.3M), "Dynamics and Interactions of Cytochrome P450 19A1", beginning a funding period less than a year ago. Additionally, Dr. Hackett has earned two patents as a member of collaborative efforts.

He has taught courses in VCU's School of Pharmacy that include a redesigned graduate course on drug metabolism titled Molecular Mechanisms of Xenobiotic Metabolism, and a graduate course on advanced enzymology. Dr. Hackett has graduated two Ph.D. students and an M.S. student. As a VCU School of Medicine member, he has lectured on areas of biophysics such as vibrational spectroscopy, cytochrome P450, and protein electron transfer.

Dr. Hackett has provided service at all levels. He served as founder and Director of the VCU Massey Cancer Center Shared Proteomics Resource. Professor Hackett also serves on the International Advisory Committee for International Symposia on Cytochrome P450. Dr. Hackett has served as a grant reviewer for the American Chemical Society-Petroleum Research Fund, NSF, NIH, and many other organizations. He is an Editorial Board Member for two major journals and has been a reviewer for more than 20 peer-reviewed journals.

Deidra Hodges
Electrical & Computer Engineering
College of Engineering and Computer Science

Dr. Hodges is currently a tenured Associate Professor of Electrical and Computer Engineering at the University of Texas at El Paso (since 2020). She received her PhD in 2009 from the University of South Florida in Electrical Engineering.

Her research is in the area of photovoltaics and high energy X- and γ-ray room temperature radiation detectors. During her 11 years as a faculty member, Dr. Hodges has received $172,330 as PI at UTEP, $4,639,954 as Co-PI and $899,046 as Key Personnel. She has significant dollars in pending grants from NSF as PI. Combined total research funding as PI at UTEP and Southern Polytechnic State University is $2,120,480. Dr. Hodges has published 15 regular journal articles and 16 conference proceedings.

Dr. Hodges has taught both graduate and undergraduate courses and has received excellent student evaluations. She has developed several new courses and appears to be active in curriculum development and instructional innovation. She has supervised 2 PhD students, one of whom graduated. She has supervised 10 MS students (4 on the thesis track and 6 on Non-thesis track).

She had a continued record of service at all levels. She is an Associate Editor of Materials Science in Semiconducting Processing and serves as a reviewer for multiple proposal panels and journals. She also serves as an advisor for the UTEP chapter of Tau Beta Pi Honor Society. She is actively engaged in her lab and even offers lab tours to UTEP students.

Ying Liu
Environmental Health Sciences
Robert Stempel College of Public Health & Social Work

Dr. Liu received her doctoral degree from the University of Utah School of Medicine in 2003. She is currently a tenured Associated Professor at University of Texas Health Science Center at Houston.

Dr. Liu's expertise and research interests are focused on stem cell and spinal cord injury. She has published 69 peer-reviewed papers and 8 book chapters. Her work has been funded by multiple funding agencies, including NIH and foundations. She is currently serving as either a principal investigator or co-investigator on multiple NIH grants. Dr. Liu is a productive researcher.

Dr. Liu has taught undergraduate, graduate, and post-graduate levels at her current and previous institutions on a wide range of subjects related to her expertise. Dr. Liu has also mentored numerous graduate students and post-doctoral fellows.

Dr. Liu has provided extensive services to her institution and external agencies. For example, she has provided substantial professional service by working as a reviewer for numerous journals and grant review panels. She is a member of editorial boards on multiple scientific journals. She also serves on many university committees.

Christian Poellabauer
Computer and Information Sciences
College of Engineering and Computer Science

Dr. Poellabauer is currently a Professor of Computer Science and Engineering at the University of Notre Dame (since 2019). He received his PhD in 2004 from the Georgia Institute of Technology in Computer Science.

His research deals broadly with challenges and opportunities in the systems domain and more specifically focuses on topics such as smart health, mobile computing, wireless networks, vehicular systems, and the Internet-of-Things. A central research focus for the last ten years has been the use of mobile and wearable technologies for a variety of healthcare challenges and his research has involved patients with traumatic brain injuries, stroke, amputations, autism spectrum disorder, mental disorders, and various neurodegenerative conditions.

Dr Poellabauer has taught both graduate and undergraduate courses. In addition to teaching various courses in the systems area, he has supervised 18 Ph.D. students and mentored over 300 undergraduate students in various research projects. He has also served as a mentor for female and minority students through a variety of outreach programs and activities.

Dr. Poellabauer has an excellent professional service record. He is on the editorial board of the Journal of Mobile Computing and Wireless Technology (JMCWT) and the International Journal of Embedded and Real-time Communication Systems (IJERTCS). He has taken an active role in organizing major conferences in his field, as Steering Committee Member, General Chair, Program Chair, or Track Chair. He has served on the Technical Program Committee for numerous conferences and workshops. For his contribution, Dr. Poellabauer received an IEEE Computer Society Meritorious Service Award (2014) and an IEEE ICCCN Leadership Award (2011).

Ting Wang
Environmental Health Sciences
Robert Stempel College of Public Health & Social Work

Dr. Wang received his PhD in Pharmaceutical Sciences from the University of South Carolina and is currently at Arizona State University, where he is a tenured Associated Professor.

Dr. Wang's research focuses on pulmonary diseases, and he has published 80+ peer-reviewed papers and 6 book chapters. His work has received consistent funding, including from the NIH, and he has several active grants as either PI or Co-PI. He is currently serving as either principal investigator or co-investigator on multiple active grants.

He has an excellent record of teaching and has taught post-graduate, graduate, and undergraduate courses. Dr. Wang also has mentored numerous post-doctoral fellows.

Dr. Wang's service is also extensive to his university and to his field. In addition to serving on several university committees, he serves as a reviewer for several journals in his field as well as for grants. He is also a member of various editorial boards of scientific journals.

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FORMAT FOR CURRICULUM VITAE AND BIBLIOGRAPHY

NAME: Qi Lin Cao, M.D.

PRESENT TITLE: Professor
Department of Neurosurgery

WORK ADDRESS: The University of Texas Health Science Center at Houston
McGovern Medical School at UTHealth
1825 Pressler Street, SRB 637D, Houston, TX 77030

BIRTHDATE: November 10, 1967

CITIZENSHIP: USA

UNDERGRADUATE EDUCATION:

GRADUATE EDUCATION:

Human Medical University, MD, Clinical Medicine, 1990

Human Medical University, MSc, Neurobiology, 1995

POSTGRADUATE TRAINING:

09/90-07/92 Instructor, Department of Anatomy, Hunan Medical University, China

05/96-12/96 Visiting Scholar (Dr. Robert Illing), Neurobiological Research Laboratory, Department of Otorhinolaryngology, University of Freiburg, Germany

03/97-03/99 Postdoctoral Fellow (Dr. Heywood H. Petry), Department of Psychology, University of Louisville

03/99-07/02 Postdoctoral Fellow (Dr. Scott R. Whitttemore), Kentucky Spinal Cord Injury Research Center, Department of Neurological Surgery, University of Louisville School of Medicine

07/02-07/04 Senior Research Associate (Dr. Scott R. Whittemore), Kentucky Spinal Cord Injury Research Center, Department of Neurological Surgery, University of Louisville School of Medicine

ACADEMIC & ADMINISTRATIVE APPOINTMENTS:

07/04-07/08 Assistant Professor, Kentucky Spinal Cord Injury Research Center, Department of Neurological Surgery, University of Louisville School of Medicine

08/08-Present: Associate Professor, Department of Neurosurgery, University of Texas Health Science Center at Houston, McGovern Medical School at UTHealth

08/18-Present: Professor, Department of Neurosurgery, University of Texas Health Science Center at Houston, McGovern Medical School at UTHealth

CERTIFICATIONS:

USMLE step 1	10/2001
USMLE step 2 CK	10/2003
ECFMG CSA	02/2004
ECFMG Certification	12/2004

PROFESSIONAL ORGANIZATIONS:

NATIONAL: Member of Society of Neuroscience since 2000
Member of Society of Neurotrauma since 2008

HONORS AND AWARDS:

1996 Visiting scholar Fellowship, University of Freiburg, Germany

1997 Post-doctoral Fellowship, Developmental and Molecular Neurobiology Program, University of Louisville School of Medicine

2002 Outstanding science and technology award in Hunan Province, Level II, China

EDITORIAL POSITIONS:

Editorial board: Gavin Journal of Stem Cell Research and Therapy

Reviewer for:
Brain Research
Cell Transplanation
Experimental Neurology
Glia
International Journal of Biological Science
International Stem Cell
Journal of Neurotrauma
Journal of Comparative Neurology
Journal of Neuroscience
Neural Regeneration Research
Scientific reports
Stem Cells
Cell Stem Cell
Cerebral Cortex
Molecular Pain

SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:

Ad Hoc scientific reviewer in VA Regenerative Medicine Panel in 2009, 2010, 2012, 2013
Regular Scientific reviewer in VA Regenerative Medicine Panel in Feb. and Aug. 2015
Ad Hoc Scientific Reviewer in CDMRP SCIRP in 2011, 2013, 2015.
Ad Hoc Scientific Reviewer in NIH study section ZRG1 MSCN-T (06) S, 2013
Ad Hoc Scientific Reviewer in NIH study section ZRG1 GB-J (55) R, 2014
Regular Scientific reviewer in VA Regenerative Medicine Panel in Feb. and Aug. 2016
Ad Hoc Scientific Reviewer in CDMRP MSRP 2016
Ad Hoc Scientific Reviewer in NIH study section CNNT, Feb. 2017
Regular Scientific reviewer in VA Regenerative Medicine Panel in Feb. and Aug. 2017
Ad Hoc Scientific Reviewer in NIH study section BDCN-N, April 2018
Ad Hoc Scientific Reviewer in NIH study section CMBG, June 2018
Ad Hoc Scientific Reviewer in NIH study section ZNS1 SRB-M (07), December 2018
Ad Hoc Scientific Reviewer in VA-RRD0, August 2019

SERVICE ON THE UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON COMMITTEES:

Medical School admission committee since 2013
Faculty senate from 2010-2014

SPONSORSHIP OF POSTDOCTORAL FELLOWS:

Yaping Wang, 2005-2007

Xiaoxin Cheng, 2008-2012
Chunling Fan, 2008-2010
Junmei Wang, 2008-2010
Yamin Feng, 2009-2011
Yiyan Zheng, 2009-present
Ping Bu, 2010-2014
Qin Wang, 2014-2015
Jinlong Shi, 2016-2017
Xiuquan He, 2017-2018

CURRENT TEACHING RESPONSIBILITIES:

Teaching in graduate class “Principles in stem cell biology”.

MENTORING ACTIVITIES:

Current postdoctoral fellows: Yiyan Zheng and Xiuquan He
Current graduate student: Chrystine Gallegos

CURRENT GRANT SUPPORT:

1. NIH/NINDS /R01 NS099635 Cao QL (PI)
07/01/17-06/30/22 Direct cost: $217,500/Year
“In vivo reprogramming of reactive astrocyte and chemogenetic approach for SCI repair”
The goal of this grant is to examine whether reprogramming the astroglial scar into neurons will reconnect the injured supriospinal pathways with neurons in the caudal spinal cord and promote functional recovery after cervical SCI.
Role: PI

2. NIH/NINDS /R01 NS110707 Liu Ying (PI)
03/01/19-02/29/24 Direct cost: $217,500/Year
“Reconnecting the injured cervical spinal cord by transplanted human iPSC-derived neural progenitors”
The goal of this grant is to investigate whether transplanted hiPSC-derived glial- and neuronal-restricted precursor cells will form neuronal relay reconnecting the injured spinal cord and promoting functional recovery after cervical SCI in nude rats.
Role: Co-I

3. NIH/NINDS /R01 NS088353 Wu JQ (PI)
03/15/15-02/29/20 Direct cost: $217,500/year
“Identifying novel molecular targets for chronic SCI”
The goal of this grant is to investigate the mechanisms of chronic SCI and gliosis at the systems level using RNA-Seq, and identify and test the key genes via innovative

pathway and network analyses and functional assays. The advantage of the genome-wide analysis is that, as a de novo discovery approach, it can identify critical missing links in the disease processes that were not previously appreciated.
Role: Co-I

4. DoD W81XWH18C0344 Chin R/Cox CX (PI)
07/16/18-07/15/19 Direct cost: $150,000/year
“Injectable Bio-compatible gel composed of iPSC derived NSC for regeneration of brain tissue”
The goal of this grant is to develop a directly injectable gel composed of iPSC derived NSCs and porcine brain derived ECM for TBI.
Role: Co-I

PAST GRANT SUPPORT:

1. Craig H Neilsen Foundation Cao QL (PI)
09/01/16-02/28/19 Direct cost: $150,000/year
“Treating neuropathic pain by in vivo reprogramming of astrocytes after SCI”
The goal of this grant is to test whether reprogramming pronociceptive reactive astrocyte into antinociceptive GABAergic interneurons will attenuate SCI-neuropathic pain.
Role: PI

2. Olgivie Staman Fund Cao QL (PI)
09/01/14-08/31/18 Direct cost: $300,000/year
“Patient-specific induced neural stem cell for spinal cord injury repair”
The goal of this grant is to develop patients’ specific directly induced neural stem cells for spinal cord injury repairing.
Role: PI

3. Craig H Neilsen Foundation Yang Q (PI)
07/01/16-06/30/18 Direct cost: $150,000/year
“Manipulating SUR subunits to treat sensory and motor dysfuction after SCI”
The goal of this grant is to test whether a combinatorial effort of glibenclamide which suppresses the progress hemorrhagic necrosis and diazoxide which protects against neuronal excitation and inflammation will significantly enhance spinal tissue survival to promote more functional recovery after SCI.
Role: Co-I

4. Craig H Neilsen Foundation Liu Y (PI)
07/01/15-06/30/17 Direct cost: $150,000/year
“Direct conversion of reactive astrocytes into myelinogenic oligodendrocytes”
The goal of this grant is to test whether converting the glial scar-forming astrocytes into oligodendrocytes will promote remyelination and functional recovery after SCI.

Role: Co-I

4. Benson Stroke Foundation Smith-Callahan L(PI)
10/01/15-9/30/16 Direct cost: $125,000/year
“Advanced Artificial Extracellular Matrix for Treatment of Chronic Stroke”
This goal of this grant is to develop di-functionalized hyaluronic acid matrix containing optimized neuroligin and laminin concentration for axon extension and restoration of neurological function in rat models of stroke.
Role: Co-I

6. Mission Connect/TIRR Foundation Liu Y (PI)
10/01/14-09/30/16 Direct cost: $30,000/year
“Human iPSC derived astrocyte progenitors in treating acute and subacute spinal cord injury”
The major goals are to transplant purified ALDH1L1-expressing astrocyte progenitors derived from hiPSCs in both acute and chronic spinal cord animal models and test whether they will enhance neuronal survival, promote myelination and promote functional recovery in SCI.
Role: Co-I

7. Mission Connect/TIRR Foundation Smith-Callahan L (PI)
10/01/14-09/30/16 Direct cost: $30,000/year
“Optimization of tissue engineering matrices for SCI treatment”
The overall objective in this proposal is to optimize several cellular stimuli to promote the survival and maturation of human induced pluripotent stem cell (hiPSC) derived neural stem cells (NSC). The central hypothesis is that mimicking cell-extracellular matrix and cell-cell interactions through modulation of the mechanical properties and the concentration of bioactive peptide fragments from laminin and n-cadherin within polyethylene glycol (PEG) matrices will increase hiPSC derived NSC survival, axon extension and gene expression of mature neural markers.
Role: Co-I

8. NSF-CBET 1134449 Cao QL (Co-PI), Liu D (PI)
09/01/11-8/31/15 Direct cost: $100,000/year
“Magnetic Directed Alignment of Injectable Neural Stem Cell Scaffold for Regeneration after Spinal Cord Injury”
The goal of this grant is to test the self aligned neural stem cells scaffold for axonal growth after dorsal laceration.
Role: Co-PI

9. Benson Stroke Foundation Cao QL (PI)
01/01/13-12/31/15 Direct cost: $100,000/year
“Human ESC- and iPSC-derived neural precursors for stroke therapy”
The goal of this grant is to test the therapeutic potential of human ESC- and iPSC-derived neural precursor cells after ischemia stroke.
Role: PI

10. NIH/NINDS /R01 NS0619751 Cao QL (PI)
04/01/09-12/31/14 Direct cost: $250,000/year
“Combinatory strategies to functional remyelination after spinal cord injury”
The goal of this grant is to examine the roles of active astrocytes on remyelination and to identify the optimal strategies to genetically modify oligodendrocyte precursor cells prior to transplantation to promote its remyelination and functional recovery after SCI.
Role: PI

11. DoD/W81XWH-09-2-0139 Cao, QL (Co-PI), Liu, Dong (PI)
09/01/10-08/31/12 Direct cost: $70,000/year
“In Vivo Magnetic Self-Assembly of Aligned Chain Lattices of Neural Stem Cells Labeled with Magnetite Cationic Lipisome for Nerve Regeneration after Spinal Cord Injury”
The goal of this grant is to develop the self aligned neural stem cells scaffold for axonal growth in vitro.
Role: Co-PI

12. Mission Connect/TIRR Foundation Cao QL (PI)
12/15/08-12/14/12 Direct cost: $250,000/year
“Novel neuropreotective strategies for spinal cord injury”
The goal of this grant is to screen and test the novel neuroprotective agents after SCI.
Role: PI

13. SBIR 2R44NS058239, Cao, QL (Co-PI), Li, FQ (PI)
03/01/09-02/28/12 Total direct cost: $1,000,000
Novel restorative therapy for spinal cord injury
The goal of this grant is to examine the therapeutic potential of ApoE peptides for SCI repairing.
Role: co-PI

14. NIH/NCRR P20 RR015576-06 Cao (PI)
09/01/05-08/30/10 total direct cost: $750,000
Enhancing remyelination as a mechanism for spinal cord repair, Project 3 in: Mechanisms of plasticity and repair in SCI (Program Director: SR Whittemore)
Role: PI.

15. Kentucky Spinal Cord and Head Injury Research Trust 04-1 Cao (PI)
01/15/05-01/15/08 Total direct cost: $300,000
Endogenous remyelination and spinal cord injury repair
Role: PI

16. NIH/NCRR P20RR15576-05 Cao (PI)
07/01/04-06/30/05 Total direct cost: $100,000

Demyelination in spinal cord injury, Project 4 in: Central nervous system injury and repair (Program Director: SR Whittemore).
Role: PI.

PUBLICATIONS:

A. Abstracts
B. Refereed Original Articles in Journals

1. **Cao QL**, Luo XG, Liu ZH, and Yan XX (1996) Development of NPY-IR neurons in the subplate of visual cortex of human fetus. Chinese journal of Hitochemistry and immonocyotchemistry 5(1): 58-62.

2. **Cao QL**, Yan XX, Luo XG, and Gary LJ (1996) Prenatal development of parvalbumin immunoreactivity in human visual cortex. Cerebral Cortex. 6(4):620-630.

3. Yan XX, **Cao QL**, Luo XG, and Gary LJ (1997) Prenatal development of calbindin D-28K in human visual cortex. Cerebral Cortex 7(1): 57-62.

4. Lu DH, **Cao QL**, Wen XD, and Luo XG (1999) Calbindin-immunoreactive neurons in the lateral geniculate nucleus of cat. Chinese Anatomical Research 21(1): 25-26.

5. **Cao QL**. Murphy HA, and Petry HM (1999) Localization of nitric oxide synthase in the tree shrew retina. Visual Neuroscience.16(3):399-409.

6. Illing RB, **Cao QL**, Forster CR and Laszig R (1999) Auditory brainstem: development and plasticity of GAP-43 mRNA expression in the rat. Journal of Comparative Neurology. 412(2):353-72.

7. Lu DH, **Cao QL**, and Luo XG (2000) Distribution of Somotosin-immunoreactive neurons in the lateral geniculate nucleus of cat. Chinese journal of Hitochemistry and immonocyotchemistry 9(1): 9-11.

8. **Cao QL**, Zhang YP, Howard RM, Walters WM, Tsoulfas P, and Whittemore SR (2001) Pluripotent stem cells engrafted into the normal or lesioned adult rat spinal cord are restricted to a glial lineage. Exp Neurol 167: 48-58.

9. Magnuson DS, Zhang YP, **Cao QL**, Han Y, Burke DA, and Whittemore SR (2001) Embryonic brain precursors transplanted into kainate lesioned rat spinal cord. Neuroreport 12: 1015-1019.

10. **Cao QL**, Benton RL, and Whittemore SR (2002) Stem cell repair of central nervous system injury. J Neurosci Res 68: 501-510.

11. **Cao QL**, Howard RM, Dennison JB, and Whittemore SR (2002) Differentiation of engrafted neuronal-restricted precursor cells is inhibited in the traumatically injured spinal cord. Exp Neurol 177: 349-359.

12. **Cao QL,** Onifer SM, and Whittemore SR (2002) Labeling stem cells in vitro for identification of their differentiated phenotypes after grafting into the CNS. Methods Mol Biol 198: 307-318.

13. Loy DN, Magnuson DS, Zhang YP, Onifer SM, Mills MD, **Cao QL**, Darnall JB, Fajardo LC, Burke DA, and Whittemore SR (2002) Functional redundancy of ventral spinal locomotor pathways. J Neurosci 22: 315-323.

14. **Cao QL**, Zhang YP, Iannoti C, DeVries WH, Xu XM, Shields CB, and Whittemore SR (2005) Functional and electrophysiological changes after graded traumatic spinal cord injury in adult rats. Exp. Neurol 191: S3-16.15.

15. Loy DN, Seoufe AE, Pelt JL, Burke DA, **Cao QL**, Talbott JF, and Whittemore SR (2005) Serum biomarkers for acute spinal cord injury: rapid elevation of neuron-specific enolase and S-100, Neurosurgery 56: 391-397.

16. **Cao QL**, Xu XM, DeVries WH, Enzman GU, Ping P, Tsoulfas P, Wood PM, Bunge MB, and Whittemore SR (2005) Functional recovery after transplantation of multineurotrophin-expressing glial-restricted precursor cells into traumatically injured spinal cord. J. Neurosci. 25: 6947-6957.

17. Enzmann,G.U., Benton,R.L., Talbott,J.F., **Cao,Q**., and Whittemore,S.R. (2006). Functional considerations of stem cell transplantation therapy for spinal cord repair. J. Neurotrauma *23*, 479-495.

18. Talbott JF, **Cao QL**, Enzman GU, Benton RL, Achim V, Mills MD, Rao MS and Whittemore SR (2006) Schwann cell-like differentiation by adult oligodendrocyte precursor cells following engraftment into the demyelinated spinal cord is BMP-dependent. Glia 54: 147-159.

19. Talbott JF, **Cao QL,** Bertrame J, Nkansah M, Benton RL, Lavik E and Whittemore SR (2007) CNTF promotes the survival and differentiation of adult spinal cord-derived oligodendrocyte precursor cells in vitro but fails to promote remyelination in vivo. Exp Neurol 204: 485-489.

20. Cheng XX, Wang YP, He Q, Qiu MS, Whittemore SR and **Cao QL** (2007) BMP signaling and olig1/2 interact to regulate the differentiation and maturation of adult oligodendrocyte precursor cells. Stem Cells: 25: 3204-3214.

21. Titsworth WL, Cheng XX, Ke Y, Deng LX, Burckardt KA, Pendleton C, Liu NK, Shao H, **Cao QL,** and Xu XM (2009) Differential expression of $sPLA_2$ following spinal cord injury and a functional role for $sPLA_2$-IIA in mediating oligodendrocyte death. Glia 57(14):1521-37.

22. Ma ZW, **Cao QL,** Zhang LQ, Hu JG, Howard RM, Lu PH, Whittemore SR and Xu XM (2009) Oligodendrocyte precursor cells differentially expressing Nogo-A but not MAG are more permissive to neurite outgrowth than mature oligodendrocytes. Exp. Neurol 217(1):184-96.

23. Cai J, Zhu Q, Zheng K, Li H, Qi Y, **Cao QL**, Qiu M (2010) Co-localization of Nkx6.2 and Nkx2.2 homeodomain proteins in differentiated myelinating oligodendrocytes. Glia 58: 458-468.

24. **Cao QL,** He Q, Wang YP, Cheng XX, Howard RM, Zhang YP, DeVries WH, Shields CB, Magnuson DSK, Xu XM, Kim DH and Whittemore SR (2010) Transplantation of CNTF-expressing adult oligodendrocyte precursor cells promotes remyelination and functional recovery after spinal cord injury. J Neurosci 30: 2989-3001.

25. Zhu Y, Park J, Hu XM, Li H, **Cao QL,** Feng GS and Qiu MS (2010) Control of oligodendrocyte generation and proliferation by Shp2 protein tyrosine phosphatase. Glia 58: 1407-1414.

26. Wang YP, Cheng XX, He Q, Kim DH, Whittemore SR and **Cao QL** (2011) Astrocytes from the contused spinal cord inhibit oligodendrocyte differentiation of adult OPCs by increasing the expression of bone morphogenetic proteins. J Neurosci 31(16):6053– 6058.

27. **Cao QL** and Whittrmore SR (2012). Cell transplantatin: stem cells and precursor cells. Handb Clin Neurol. 109: 551-61.

28. Fan CL, Zheng YY, Cheng XX, Qi XB, Bu P, Luo XG, Kim DH and **Cao QL** (2013) Transplantation of D15A-expressing glial-restricted-precursor-derived astrocytes improves anatomical and locomotor recovery after spinal cord injury. Int J Biol Sci. 2013;9(1):78-93.

29. Chen KN, Deng SY, Lu HZ, Zheng YY, Yang GD, Kim DH, **Cao QL*** and Wu JQ* (2013). RNA-Seq characterization of spinal cord injury transcriptome in acute/subacute phases: a resource for understanding the pathology at the systems level. Plus One (in Press). * co-corresponding authors.

30. Fan CL, Wang H, Chen D, Cheng XX, Xiong K, Luo XG and **Cao QL** (2014) Effect of type-2 astrocytes on the viability of dorsal root ganglion neurons and length of neuronal processes. Neural Regen. Res. 9: 119-128.

31. Dong XM, Chen KN, Sloan S, Zhang Y, **Cao QL,** Barres B and Wu JQ (2015). Comprehensive Identification of Long Non-coding RNAs in Purified Cell Types from the Brain Reveals Functional LncRNA in OPC Fate Determination. Plos Genetics 11(12):e1005669. doi: 10.1371.

32. Yang J, Cheng X, Shen J, Xie B, Zhao X, Zhang Z, **Cao QL,** Shen Y and Qiu M (2016) A Novel Approach for Amplification and Purification of Mouse Oligodendrocyte Progenitor Cells. Front. Cell. Neurosci. 10:203. doi: 10.3389/fncel.2016.00203.

33. Liu Y, Zheng YY, Li SL, Xue HP, Schmitt K, Hergenroeder GW, Wu JQ, Zhang YY, Kim DH, and **Cao QL** (2017). Human neural progenitors derived from integration-free iPSCs for SCI therapy. Stem Cell Res. 9:55-64. doi: 10.1016. PMID: 28073086

34. Cuevas-Diaz Duran R, Yan H, Zheng YY, Huang XF, Grill R, Kim DH, **Cao QL*** and Wu JQ* (2017). The systematic analysis of coding and long non-coding RNAs in the sub-chronic and chronic stages of spinal cord injury. Sci Rep. 7:41008. doi: 10.1038. PMID: 28106101 (* co-corresponding authors).

35. Cheng XX, Zheng YY, Bu P, Qi XB, Fan CL, Li FQ, Kim DH and **Cao QL** (2018). Apolipoprotein E as a novel therapeutic neuroprotection target after traumatic spinal cord injury. Experimental Neurology 299: 97-108.

36. Erwin, A., Gallegos, C., Cao, Q., and O'Malley, M. K. (2019) A Robotic Platform for 3D Forelimb Rehabilitation with Rats. *IEEE Int Conf Rehabil Robot* **2019**, 429-434

C. Invited Articles (Reviews, Editorials, etc.) in Journals
D. Chapters

1. Cao QL, Onifer SM, Whittemore SR: Labeling stem cells in vitro for identification of their differentiated phenotypes after grafting into the CNS. In: Methods in Molecular Biology, vol 198: Neural Stem Cells: Methods and Protocols, Zigova T, Sanberg PR, Sanchez-Ramos J (eds). Humana Press, Totowa, NJ. Chapter 28, pp 307-318, 2002.

2. Cao QL (2015) Glial Precursor Cell Transplantation-mediated Regeneration After Spinal Cord Injury Repair. Chapter 21 in book “Neural Regeneration” edited by Xiaoming Xu and Kwok-Fai So (Humana Press).

3. Cao QL (2016) Oligodendrocyte Precursor Cells in Spinal Cord Injury Repair. Chapter 2 in book "***Cellular Therapy for Neurological Injury***" edited by Dr. Charles Cox (CRC Press).

F. Other Professional Communications

Presentations

University of North Texas, Department of Anatomy and Neurobiology, "Enhancing remyelination to promote functional recovery after SCI". Oct, 2007

Indiana University-Purdue University Indianapolis, Department of Neurosurgery, "Functional remyelination after SCI". Feb, 2008

Invited speaker in First Chinese Neurotrauma Scholar Associate Satellite Meeting, at 2011 National Neurotrama Symposium. "Neural Stem cells and spinal cord injury". Ford Lauderdale, Florida, USA, July, 2011.

Invited speaker at 41st Critical Care Congress, Society of Critical Care Medicine "Stem cells for Neurological Diseases". Houston, USA, February, 2012.

Invited speaker in 30th Annual National Neurotrauma Symposium, Nashiville, Tennessee, USA, August, 2013. "Human inducible pluripotent stem cell-derived neuronal precursor cells for spinal cord injury".

The 8th Symposium for Chinese Neuroscientists Worldwide. June 2014, Suzhou, China. "Human inducible pluripotent stem cell-derived glial precursor cells for spinal cord injury."

Nanjing Medical University, July, 2014. Nanjing, China
"Neural stem cells for spinal cord injury repairing."

The 33th Annual National Neurotrauma Symposium, Sante Fe, NM, July, 2015. "Transplantation of human inducible pluripotent stem cell-derived neural stem cells promotes locomotor recovery after spinal cord injury."

UTHealth Department of Integrative Biology and Pharmacology Seminar Series, Houston, Texas, January 2018. "*In vivo* neuronal reprogramming of reactive astrocytes after spinal cord injury."

3rd Joint Symposium of the International and National Neurotrauma Societies and the AANS/CNS Section on Neurotrauma and Critical Care, Toronto, Canada, August, 2018. "In vivo reprogramming of reactive astrocytes into functional neurons after cervical spinal cord injury."

MONICA E. CARDELLA

January 2, 2021

Professor of Engineering Education
Purdue University
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West Lafayette, IN 47906

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765-496-1206
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EDUCATION

2006	**Ph.D.** in Industrial Engineering at the **University of Washington**. Advisor: Cynthia J. Atman. Dissertation title: "Engineering mathematics: an investigation of students' mathematical thinking from a cognitive engineering perspective"
2002	**M.Sc.** in Industrial Engineering from the **University of Washington**. Advisor: Cynthia J. Atman.
1998	**B.Sc.** in Mathematics from the **University of Puget Sound**. Advisor: Ron VanEnkevort.

EXPERIENCE

August 2019-current	Program Director, Division of Research on Learning in Formal and Informal Settings, National Science Foundation
July 2019 – current	Professor of Engineering Education, *Purdue University*
June 2014- Aug 2019	Director, *INSPIRE Research Institute for P-12 Engineering*
July 2013 – June 2019	Associate Professor of Engineering Education, *Purdue University*
Aug. 2007-June 2013	Assistant Professor of Engineering Education, *Purdue University*
Oct 2010 – current	Affiliate of the Division of Environmental and Ecological Engineering, *Purdue University*
2006-2007	National Academy of Engineering Postdoctoral Fellow, *Stanford University*
2005	Research Assistant, *University of Washington, Learning in Informal and Formal Environments (LIFE) Center*
2000- 2006	Research Assistant, *University of Washington, Center for Engineering Learning and Teaching*

HONORS AND AWARDS

2020	Fellow, American Society for Engineering Education
2020	Lifetime Achievement Award, American Society for Engineering Education Pre-College Engineering Education Division
2019	American Society for Engineering Education 2019 President's Award for the Engineering Gift Guide
2019	Distinguished Service Award, American Society for Engineering Education Educational Research and Methods Division
2019	Best Diversity Paper Award, American Society for Engineering Education Pre-College Division
2019	*Design Studies Award* for the best paper published in 2018 in *Design Studies*: "Timescales and Ideaspace: an Examination of Idea Generation in Design Practice"
2018	Fellow, Big Ten Academic Leadership Program, 2018-2019 (selected Spring 2018).
2018	School of Engineering Education Graduate Student Mentoring Award, 2018.
2016	INSPIRE Inducted into 100Kin10 Network (for leaders in K-12 STEM Education)
2015	Fellow, Executive Leadership in Academic Technology and Engineering program, 2015-2016.
2014	Purdue University's Teaching Academy, induction ceremony September 2014
2013	Purdue University's College of Engineering Staff Awards of Excellence "Team Award" for First-Year Engineering Course Development
2011	National Science Foundation CAREER Award
2011	Purdue University's College of Engineering Faculty Awards of Excellence "Team Award" for INSPIRE (The Institute for P-12 Engineering Research and Learning)
2008	*William Elgin Wickenden Award* for the best paper published in the Journal of Engineering Education: "Engineering Design Processes: A Comparison of Students and Expert Practitioners"
2007	NAE/ CASEE *Faculty Fellow Award*, awarded by the Frontiers in Education conference

2006 National Academy of Engineering, *Postdoctoral Engineering Education Researcher Fellowship* for research with the Center for Design Research at Stanford University (September 2006-August 2007).
2006 *Apprentice Faculty Grant*, awarded by the Educational Research and Methods division of the American Society for Engineering Education.
2005 *Outstanding Female Graduate Student* in Industrial Engineering at the University of Washington. Presented by the Society of Women Engineers.
2004 Inducted member of *Alpha Pi Mu*, the Industrial Engineering Honor Society (served as the Vice President for the University of Washington chapter July 2005-June 2006).

SERVICE TO GOVERNMENT OR PROFESSIONAL ORGANIZATIONS

2020 External Reviewer, *Science Foundation Ireland*
2020 Author, commissioned paper for the National Academy Report *Enhancing Science and Engineering in Prekindergarten through Fifth Grades*
2018 External Reviewer, National Academy Report, *Science and Engineering for Grades 6-12: Investigation and Design at the Center*
2017-2019 Editor, *Journal of Pre-College Engineering Education Research*
2017-2020 Reviewer, *Design Studies*
2016-2017 Interim Editor, *Journal of Pre-College Engineering Education Research*
2015-2017 Chair, Educational Research and Methods Division, American Society for Engineering Education (ASEE)
2014-2017 Program Chair, Informal Learning Environments SIG, American Educational Research Association (AERA)
2012-2014 Vice Chair for Frontiers in Education 2014 Programs (2012-2014) & executive leadership board member of the Educational Research and Methods division, ASEE
2012-2014 Secretary-Treasurer of the K-12 & Pre-College Engineering Division, ASEE
2011-2012 Member-at-Large, Executive Board of the K-12 & Pre-College Engineering Division, ASEE
2010-2013 Helen Plants Committee Chairman and Executive Board Member of the Educational Research and Methods Division, ASEE
2010 Co-Chair of the *P-12 Engineering and Design Education Research Summit*, August 2010.
2007- 2019 Reviewer for the National Science Foundation
2011-2019 Founding Co-Editor and Reviewer for the *Journal of Pre-College Engineering Education Research* (J-PEER)
2009-present Reviewer for the *International Conference of the Learning Sciences*
2008-present Reviewer for the *Journal of Engineering Education*
2003-present Reviewer and Session Moderator for the *American Society for Engineering Education*
2010-present Reviewer and Session Moderator for the *Frontiers in Education* Conference
2004 Reviewer for the Innovations in Engineering Education Special Volume: *INNOVATIONS 2005- WORLD INNOVATIONS IN ENGINEERING EDUCATION AND RESEARCH*.
2004 Session Moderator, *International Conference on Engineering Education*.

MAJOR COMMITTEE ASSIGNMENTS IN THE DEPARTMENT, SCHOOL, AND/OR UNIVERSITY

2018 Purdue University Press: Director Search Committee
2007-2008; 2012- 2019 School of Engineering Education: Undergraduate Curriculum Committee
2008-2009; 2012-2019 School of Engineering Education: Faculty Search Committee
2007-2008; 2011-2019 School of Engineering Education: Graduate Committee
2012-2018 College of Engineering: Faculty Affairs Committee (Chair 2013-2014)
2012 School of Engineering Education: Instructional Support Coordinator Search Committee
2011 School of Engineering Education Graduate Recruitment Open House Committee (Member; Spring 2011)
2010 School of Engineering Education Graduate Research Fellowship application preparation committee
2009-present School of Engineering Education: INSPIRE: The Institute for P-12 Engineering Research and Learning
2009-2010 College of Engineering Strategic Plan Implementation: Internal Resource Team Co-Captain
2008-2009 School of Engineering Education: Graduate Recruitment Committee;

	Co-Chair Spring 2009
2009	University: Search Committee for the Innovations in P-12 sTEm Education Initiative
2008	University: STEM Goes Rural Curriculum Committee
2007-2008	University: Strategic Planning Committee for the Innovations in P-12 sTEm Education Initiative

ADVISORY BOARDS

2016-2019	External Advisor for the NSF-funded "Advancing Out-of-School Learning of Mathematics and Engineering" project
2015- 2018	External Advisor for the NSF-funded "Head Start on Engineering" project
2015 – 2017	External Evaluator for the NSF-funded "Developing Artifact Peer Review Assignment Methodologies to Maximize the Value of Peer Review for Students" project
2014 – 2018	External Advisor for the NSF-funded "Impacts of Prior Work Experience on Adult, Non-traditional, Engineering Students" project
2012	External Evaluator for the "Making Meaning" report, generated after the 2012 Maker Faire and Making Meaning Symposium, New York, NY.
2011-2015	External Advisor for the Mobile Area Education Foundation for the NSF-funded "Engaging Youth in Engineering" program
2010-2013	External Advisor for Concord Consortium on the NSF-funded "Engineering Energy Efficiency" project
2010- 2012	External Advisor for the Utah State University NSF-funded "Exploring Engineering Design Knowing and Thinking as an Innovation in STEM Learning" project
2010-2011	Evaluator for the Family Engineering Program's publication "Family Engineering: An Activity & Event Planning Guide"

CIVIC AND COMMUNITY ACTIVITIES

2015- present	Scientific advisor to the Association for Science, Space, Engineering, and Technology Inc. (ASSET) in operation of the Imagination Station science center
2014-2019	Leader for Girl Scout Troop 4244

Workshops delivered for teachers are included under "Short Courses and Workshops Taught"

TEACHING

COURSES TAUGHT AT PURDUE

ENE 595: Social Construction of Knowledge: Analysis of Video Data
Engineering Education PhD students
Spring 2017, Spring 2014, Fall 2013

ENE 595: Social Construction of Knowledge: Learning in Out-of-School and Informal Environments
Engineering Education PhD students
Fall 2015, Fall 2012, Fall 2011

ENE 595: Cognitive Engineering
Engineering Education PhD students; Industrial Engineering PhD Students; Education PhD students and Multidisciplinary Engineering undergraduates (juniors/seniors)
Fall 2016, Fall 2015, Fall 2013, Spring 2012, Spring 2010, Spring 2008

IDE 495: Design Methodologies for Diverse Stakeholders
* *permanent course number assigned in Spring 2019: IDE 385*
Multidisciplinary Engineering undergraduates (juniors/seniors)
Fall 2018, Fall 2017

ENGR 131: Ideas to Innovation I, on the **course leadership team** (and taught 1 section)
First-Year Engineering students (primarily freshmen)
Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013, Fall 2012, Spring 2012, Fall 2011, Spring 2011, Fall 2010, Spring 2010
Course coordinator, Spring 2012-Spring 2013

ENGR 126: Engineering Problem Solving and Computer Tools
First-Year engineering students
Fall 2008, Fall 2007

MENTORING EXPERIENCE

Purdue University
Doctoral Committee Chair

Fall 2018 – present	Donovan Colquitt, Engineering Education
Fall 2018 – present	Huma Shoaib, Engineering Education
Spring 2018 – present	Chanel Beebe, Engineering Education
Fall 2017 – present	Tikyna Dandridge, Engineering Education
Fall 2016 – May 2020	Jessica Rush, Engineering Education *But, Is It Working? Mentor Involvement In Informal Elementary Stem Programs. A Collective Case Study*
Fall 2015 – August 2020	Hoda Ehsan, Engineering Education *Capturing the Engineering Design Thinking of Children with Mild Autism*
Jan 2014 – June 2017	Trina Fletcher, Engineering Education *Academic and STEM Interest Outcomes for Female Students within a Summer Program: Single Sex versus Coeducation*
Jan 2013 – August 2016	John Mendoza-Garcia, Engineering Education *A Phenomenographic Study of the Ability to Address Complex Socio-Technical Systems Via Variation Theory*
Aug 2012 – Dec 2016	DeLean Tolbert, Engineering Education *Living, Learning, and Leveraging: An Investigation of Black Males Accessing Community Cultural Wealth and Developing Engineering Attributes*
Fall 2011- May 2018	Tamecia Jones, Engineering Education *Unobtrusive Assessment of Engineering Learning*
Spring 2010- Aug 2015	Brianna Dorie, Engineering Education *Informal Use of Storybooks for Engineering Development in Young Children*
Summer 2010- 2014	Meagan Pollock (Ross), Engineering Education ** Recipient of an NSF Graduate Research Fellowship* *Examination of High School Female's Experiences in Engineering*
Spring 2008- Feb 2015	Ming-Chien Hsu, Engineering Education *Undergraduate Engineering Students' Experiences with Interdisciplinary Learning*

Doctoral or Masters Committee Member
Degree in Progress

Fall 2020-present	Barbara Fagundes, Engineering Education (Doctoral committee member)
Fall 2019- present	Chanel Beebe, Industrial Engineering (Masters committee member)
Fall 2015- present	Tasha Zephrin, Engineering Education (Doctoral committee member)

Degree Completed

Spring 2019-Fall 2020	Donovan Colquitt, Technology Leadership and Innovation (Masters committee member)
Fall 2015 – Spring 2017	Les Grundman, Engineering Education (Doctoral committee member)
Fall 2015 – Spring 2017	Yu Gong, Engineering Education (Doctoral committee member)
Fall 2015 – Fall 2016	Ali Shafaat, PhD, Civil Engineering (Doctoral committee member)
Fall 2014 – Fall 2016	Sergey Dubikovsky Engineering Education (Doctoral committee member)
Spring 2014 –2015	Devarajan Ramanujan, Mechanical Engineering (Doctoral committee member)
Spring 2014 – Fall 2015	Antonette Cummings, Engineering Education (Doctoral committee member)
Fall 2013- Fall 2015	Anirudh Sriram, Mechanical Engineering (Masters committee member)
Fall 2013 – Fall 2015	Canek Philips, Engineering Education (Doctoral committee member)
Fall 2013- Fall 2015	Corey Schimpf, Engineering Education (Doctoral committee member)
Fall 2013-Sum 2015	Justin Hess, Engineering Education (Doctoral committee member)

Fall 2013- Sum 2016	James Cawthorne, Engineering Education (Doctoral committee member)
Spring 2013 – Spr 2017	Les Grundman, Engineering Education (Doctoral committee member)
Spring 2013- Sum 2016	Kelsey Rodgers, Engineering Education (Doctoral committee member)
Spring 2013- Fall 2015	Michele Yatchmeneff, Engineering Education (Doctoral committee member)
Spring 2013 – Fall 2015	Nicole Pitterson, Engineering Education (Doctoral committee member)
Fall 2013- Sum 2014	Anne Lucietto, Engineering Education (Doctoral committee member)
Fall 2012 – Sp. 2014	Farrah Fayaz, Engineering Education (Doctoral committee member)
Jan 2013- Dec 2013	George Ricco, Engineering Education (Doctoral committee member)
Spring 2012- Sp. 2014	Yi Luo, Learning, Design & Technology (Doctoral committee member)
Spring 2012- Sp 2014	James Huff, Engineering Education (Doctoral committee member)
Spring 2012- Sp. 2014	Noah Salzman, Engineering Education (Doctoral committee member)
Fall 2012- Spring 2015	Emily Dringenberg, Engineering Education (Doctoral committee member)
Fall 2012- Spring 2015	Dana Denick, Engineering Education (Doctoral committee member)
Spring 2012- Sp. 2013	Celia (Rui) Pan, Engineering Education (Doctoral committee member)
Spring 2011- Spr 2016	Lindsey Nelson, Engineering Education (Doctoral committee member)
Fall 2009- Spring 2012	Michele Strutz, Engineering Education (Doctoral committee member)
Fall 2009- Spring 2011	Carla Zoltowski, Engineering Education, (Doctoral committee member)
Spring 2008- Sp 2011	Joe Kim, Industrial Technology, (Masters Thesis committee member)
Spring 2009-Sp 2010	Sili Zhang, Anthropology (Masters Thesis committee member)

External thesis evaluations

2016	External thesis reviewer for Swinburne University of Technology: Scott Daniels,
2007	External thesis reviewer for the University of Queensland (similar to the role of a committee member): Janthea Andersen, "An Empirical Study of Design Management Practices in the Construction Industry"

Postdoctoral and Visiting Scholars

March 2018 - July 2018	Abeera Rehmat, Postdoctoral Researcher
Sept.2017 – July 2019	Ibrhaim Yeter, Postdoctoral Researcher
August 2016 – 2017	John Mendoza Garcia, Postdoctoral Researcher
May 2011-Aug 2011	Min Wang, Visiting Scholar
Sept. 2010-Aug 2011	Xiang Gong, Visiting Scholar
August 2010-May 2010	Tao (Tom) Hong, Postdoctoral Research (with Senay Purzer)
August 2009- 2010	Yoojung Chae, Postdoctoral Researcher
Aug 2007-August 2009	Noemi Mendoza-Diaz, Postdoctoral Researcher (direct supervisor Jan 2009-Aug 2009)

Undergraduates

Summer 2018- 2019	Sarah Whisman, K-5 Engineering Design and Computational Thinking
Spring 2018 – 2019	Carson Ohland (freshman/sophomore), Computational Thinking Amongst K-2nd Grade-Aged Children Engaged in Science Center Activities. Paper presented at the FIE 2018 conference.
Spring 2018	Melissa Gillbanks, Iteration in Engineering Design Processes (Independent Study)
Summer 2017- Fall 2018	Zachary Beyer (junior/senior), Design Thinking and Mathematical Thinking in Engineering – Differences Between Engineering, Mathematics and Design Students (poster presented at the 2018 ASEE IL/IN Regional Conference; received award for Best Poster)
Spring 2017	Jack Mueller (senior), Engineering Design Processes: Children, First-Year Engineering Students, and Graduating Seniors (Independent Study,
Spring 2017	Arman Shroff, Mathematics as a Gatekeeper to Engineering
Spring 2017	Yicheng Zhou, Mathematics as a Gatekeeper to Engineering
Fall 2016- Spring 2017	Sahil Bhalla, Mathematics as a Gatekeeper to Engineering
Fall 2016- Spring 2017	Clayton Steele, Mathematics as a Gatekeeper to Engineering
Fall 2016- Sum 2017	Shrishti Jagamohan, Mathematics as a Gatekeeper to Engineering
Fall 2016- Spring 2017	Ashley Van Wormer (poster presented at the 2017 Purdue Undergraduate Research Symposium)
Fall 2016	Nancy Garduno, Mathematics as a Gatekeeper to Engineering

Fall 2016	Veronica Vera-Llanos, Mathematics as a Gatekeeper to Engineering
Sum 2016- Sum 2017	Reis Lehman (sophomore/junior), Design Thinking and Mathematical Thinking in Engineering; Quality of Final Designs.
Spring 2016	Joel Phillips (junior/senior), Engineering Learning in Play Contexts
Fall 2015- Spring 2016	Guannan Liu (senior), Quantitative reasoning in engineering design. Paper prepared for the ASEE 2016 conference.
Spring-Summer 2014	Jacob Inman (senior), Investigating gender differences in learning-related toy purchases Analysis of consumer review data to investigate trends in educational toy purchases. Paper presented at the ASEE 2015 conference.
Spring 2011	Peter O'Banion (freshman). Measuring high school students' design process knowledge (Spring 2011). Developed and pilot tested an online and media rich version of the Design Process Knowledge Task to measure high school students' understanding of the engineering design process.
Spring 2009	Kenneth Okine (freshman), Engaging Pre-College Students in the NAE Grand Challenges (Spring 2009). Developed and administered a survey to measure high school students' interests in the NAE Grand Challenges.

Student Organizations

Aug 2018-present	Faculty Advisor for the Purdue Science Olympiad student organization

SHORT COURSES AND WORKSHOPS TAUGHT

January 2018	"Pushing the Limits with Engineering," with Kayla Maxey, Jessica Rush Leeker and Morgan Hynes, Indiana STEM Education Conference, West Lafayette, IN.
June 2017	"Educators' constructive feedback on students' design work" with Farshid Marbouti, John Mendoza-Garcia[PD], Heidi Diefes-Dux, and Matthew Verleger, the 2017 American Society for Engineering Education Annual Conference & Exposition, Columbus, OH.
February 2017	"Pre-College Engineering: A Serious Endeavor," Purdue University's President's Council Weekend Back to Class session, Naples, FL.
July 2016	"Blue Ocean Strategy & Polarity Management," Engineering Dean's ELT & Program Directors Retreat.
January 2016	"Engineering Design Behaviors: From Preschool to Professional Practice", Indiana STEM Education Conference, West Lafayette, IN.
June 2012	"Assessment in Pre-College Engineering Education Research," with Şenay Purzer at the American Society for Engineering Education Annual Conference & Exposition, San Antonio, TX.
June 2012	multiple faculty development workshops, including "Authentic Assessment of Student Work on Open-Ended Problems," (with Heidi Diefes-Dux), "Design thinking in Education and Practice," (with Carla B. Zoltowski), and Assessment of Design Knowledge and Skills (with Şenay Purzer) presented to delegates from King Fahd University of Petroleum and Mining, Dammam, Saudi Arabia, at Purdue University.
October 2011	Monica E. Cardella, "Mini-Workshop- A Strategy for Assessing Student Work on Open-Ended Problems" with Heidi Diefes-Dux, Frontiers in Education Conference, Rapid City, SD.
October 2011	"Special Session – Assessing Student Learning of Engineering," with William C. Oakes, Carla B. Zoltowski, Robin S. Adams, Şenay Purzer, Jim Borgford-Parnell, Reid Bailey and Denny Davis, Frontiers in Education Conference, Rapid City, SD.
October 2011	"Engaging Elementary-Aged Children and Their Parents in Engineering" with Joan Chadde at the Society of Women Engineers Annual Conference, Chicago, IL.
Fall 2011	NSF Graduate Research Fellowship Program workshop with Audeen Fentiman & mentoring meetings for Engineering Education graduate students
August 2011	Center for Teaching Excellence, "Micro-Teaching" as part of the Teaching Assistant Orientation program, Purdue University
October 2010	"Mini-Workshop- A Strategy for Assessing Student Work on Open-Ended Problems" with Heidi Diefes-Dux at the Frontiers in Education Conference, Rapid City, SD.

October 2010	"Special Session – Assessing Student Learning of Engineering," workshop with William C. Oakes, Carla B. Zoltowski, Robin S. Adams, Şenay Purzer, Jim Borgford-Parnell, Reid Bailey and Denny Davis at the Frontiers in Education Conference, Rapid City, SD.
Fall 2010	NSF Graduate Research Fellowship Program workshop & weekly mentoring meetings for Engineering Education graduate students
August 2010	Center for Teaching Excellence, Teaching Assistant Orientation, with Chell Nyquist, Purdue University.
February 2010	"Engineering the Common Good", Workshop at the NSF Engineering Education Awardees meeting, with John Duffy, February 1&2, 2010
Summer 2009	"Creativity as Part of Strategic Planning," Purdue University's College of Engineering Strategic Planning Team Member Training, July 9, 2009.
August 2008	Center for Teaching Excellence, Teaching Assistant Orientation, with Navindram Davendralingam, Purdue University.
September 2004	"Looking at Research on Learning: an Interactive Workshop," with Atman, Cynthia J. Atman, Theresa Barker and Susan Mosborg, University of Washington College of Engineering TA Workshop

OTHER TEACHING EXPERIENCES

Spring 2007	Co-organized an "Engineering Education Research" reading group for Stanford graduate students
Fall 2005	Organizer and discussion leader of a seminar series on issues of learning, teaching and TAing for graduate students in Industrial Engineering.
1999-2000	Mathematics and English as a Second Language instruction provider at Bates Technical College, Tacoma, as part of the AmeriCorps program.
Summer 1998	Teaching Assistant, Academic Challenge Program: mathematics, science and engineering enrichment program for underrepresented middle and high school students.
1995-2000	Independent tutor of high school and adult students in Mathematics and English as Second Language.

SPECIAL PROJECTS

Summer 2013	Antonette Cummings, "How Do Students Learn to Evaluate Design with Ambiguity?"
Summer 2013	Anne Lucietto, "Informal Learning: What is it?"
Summer 2013	DeLean Tolbert, "Narratives in STEM Education: African American Male Students"
Fall 2012	Noah Salzman, "Phenomenography and Engineering Education"
Fall 2012	Daniel Ferguson, "How do Purdue engineers informally learn professional skills after graduation?"
Summer 2010	Brianna Dorie "Engineering Children's Literature"

RESEARCH

RESEARCH INTERESTS

Engineering learning in informal environments; design thinking (from preschool to professional practice); engineering access and equity; assessment of design knowledge and skills; mathematical thinking in engineering.

GRANTS AND CONTRACTS

Current projects

The National Institutes of Health: Augmented Reality Platform for Feedback and Assessment in STEM Elementary Education, $300,000 awarded to Explore! Interactive; sub-award $49,719 02/15/2020-02/15/2021, Purdue PI.

The National Science Foundation: Research Initiation: Computational thinking in Biological Engineering (August 1, 2018-July 31, 2021), $ 199,710.56. PI: David Umulis. *I am not able to serve as Co-PI while serving as a Program Director at the National Science Foundation, but am able to continue contributing to the project.*

Completed Projects

The National Academy of Engineering's Center for the Advancement of Scholarship in Engineering Education *AGEP PEER Fellowship* (September 2006-August 2007). $95,000. PI.

The National Science Foundation: *IEECI: Formative Feedback: Impacting the Quality of First-Year Engineering Student Work on Modeling Activities* (October 2008- March 2011). $486,740. Co-PI. Co-investigators: Heidi Diefes-Dux (PI)

The National Science Foundation: *Students' Understanding of Human-Centered Design and the Impact of Service Learning (September 2009- August 2012).* $400,000. PI. Co-investigators: Bill Oakes (Co-PI)

The National Science Foundation: *IEECI: Assessing Sustainability Knowledge (ASK): Development of a framework to assess engineering undergraduate students' knowledge of sustainability concepts* (September 2009-August 2011). $150,000. Co-PI. Co-investigators: Alice Pawely (PI); Stephen Hoffmann and Matthew Ohland (Co-PIs)

Purdue University College of Engineering, Engineer of 2020 Seed Grant Program. "Developing Curious and Persistent Continuous Learners: Articulating and Assessing the Role of Information Skills in the First-Year Engineering Curriculum." (June 2010-June 2011) $40,000. Co-PI. Co-investigators: Michael Fosmire (PI) and Şenay Purzer (Co-PI).

The National Science Foundation: *DRK-12 R&D: Quality Cyber-Enabled, Engineering Education Professional Development to Support* Teacher Change and Student Achievement (September 2008 – August 2014). $2,995,450. Co-PI. Co-investigators: Heidi Diefes-Dux (PI), Sean Brophy (Co-PI), Johannes Strobel (Co-PI).

The National Science Foundation: Gender Research on Adult-child Discussions in Informal ENgineering environmentTs (GRADIENT) (Jan 2012-Dec 2014), $184,301. Co-PI. Co-investigators: Gina Svarovsky (PI; Science Museum of Minnesota).

The National Science Foundation: Informal Pathways to Engineering: Using Social Cognitive Career Theory to Understand How Informal Engineering Programs can Support Children's Sustained Interest and Participation in Engineering (Jan 2012-Dec 2014), $1,777,614. Senior Personnel (co-wrote proposal). Co-investigators: Marisa Wolsky (PI; WGBH), Christine Paulsen (Senior Personnel; Concord Evaluation Group).

The National Science Foundation: IDEA-Pen: Interactive Design and Analysis through a Pen-Based Interface (October 2013-September 2015), $200,000, Co-PI. Co-investigator: Karthik Ramani (PI).

The National Science Foundation: Expert-Novice Framework to Support Student and Instructor Feedback on Design (July 2013-July 2017), $300,000, PI. Co-investigator: Heidi Diefes-Dux (Co-PI).

The National Science Foundation: CAREER: Mathematics as a Gatekeeper to Engineering: The Interplay between Mathematical Thinking and Design Thinking (Oct 2011-Sept 2017), $438,969.00. PI.

The National Science Foundation: Measuring the Effects of Precollege Engineering on the Experience of Engineering Students (March 2013-February 2018) $271,081. Co-PI: 50%. Co-investigators: Noah Salzman (PI; Boise State University) Matthew Ohland (Co-PI; Purdue University).

Purdue University College of Engineering, Engineering Faculty Conversation in Healthcare and Medicine Seed Grant program. "Training and Tools to Promote Convergence and Drive Discovery in Life-Sciences" Co-PI with David Umulis (PI) $75,000

The National Science Foundation: RET Site: Collaborative Research: Sustainable Electronics, $438,582 09/15/2015 -08/31/2019, Evaluator. PI: Inez Hua.

The National Science Foundation: Integrated STEM and Computing Learning in Formal and Informal Settings for Kindergarten to Grade 2 (October 2015-September 2019), $2,044,930.00, PI. Co-investigators: Sean Brophy, Morgan Hynes, Tamara Moore, Senay Purzer.

The National Science Foundation: Collaborative Research: Strengthening the STEM Pipeline for Elementary School African Americans, Hispanics, and Girls by Scaling Up Summer Engineering Experiences (S2E2K), $272,804 09/01/2016 -08/31/2020, Purdue PI until Aug 2019 – overall project led by NSBE.

The National Science Foundation: Engineering Research Center for Innovative and Strategic Transformation of Alkane Resources – CISTAR, $16,327,195.00 (to date) (directly oversaw $47,728.47), 10/01/2017-09/30/2022, Director of Pre-College Education until Aug 2019. PI: Fabio Ribiero

OTHER FUNDING

2008 Purdue Research Foundation International Travel Grant, travel to Loughborough for the *Mathematical Education of Engineers* conference.$1000.

PUBLICATIONS

FULL ARTICLES IN REFEREED PUBLICATIONS

1. Cardella, Monica E. and Cynthia J. Atman "A Qualitative Study of the Role of Mathematics in Engineering Capstone Design Projects," in Aung, W. King, R., Moscinski, J., Ou S., and Sanchez Ruiz, L., (Eds.) 2005 *iNEER Sepcial Volume: INNOVATIONS 2005- WORLD INNOVATIONS IN ENGINEERING EDUCATION AND RESEARCH*, Begell House Publishing, USA, pp. 347- 362.
2. Atman, Cynthia J., Monica E. Cardella, Jennifer Turns and Robin Adams "Comparing Freshman and Senior Engineering Design Processes," *Design Studies*, Vol. 26, No. 4, 2005, p. 325-357.
3. Cardella, Monica E., Cynthia J. Atman and Robin S. Adams "Mapping Between Design Activities and External Representations for Engineering Student Designers," *Design Studies* Vol. 27, No. 1, 2006, p. 5-24.
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94. Dorie, Brianna L., Monica E. Cardella and Gina N. Svarovsky "Engineering Together: Context in Dyadic Talk During an Engineering Task (K-12 Fundamental)," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Seattle, WA, June 2015.
95. Inman, Jacob and Monica E. Cardella "Gender Bias in the Purchase of STEM-Related Toys (Fundamental)," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Seattle, WA, June 2015.
96. Marbouti, Farshid, Heidi A. Diefes-Dux, and Monica E. Cardella "There's More Than One Way To Analyze Feedback On Design*," Proceedings of the 45th ASEE/IEEE Frontiers in Education Conference*, El Paso, TX.

October 2015.

97. Tolbert, DeLean, Morgan Hynes, Darryl Dickerson, Monica Cardella, "Transitioning Students Navigating Engineering Identities" *Proceedings of the 45th ASEE/IEEE Frontiers in Education Conference*, El Paso, TX. October 2015.
98. Marbouti, Farshid, Heidi A. Diefes-Dux, and Monica E. Cardella "Professional Development on Giving Feedback on Design for Engineering Students and Educators," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, New Orleans, LA, June 2016.
99. Hynes, Morgan M. Hynes, Tamara J. Moore, Monica E. Cardella, Kristina Maruyama Tank, Senay Purzer, Muhsin Menekse and Sean P. Brophy "Inspiring Computational Thinking in Young Children's Engineering Design Activities (Fundamental)," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, New Orleans, LA, June 2016.
100. Tolbert, DeLean and Monica E. Cardella, "Engineer of 2020 Attributes and the Black Male Future Engineer: A Review of Literature," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, New Orleans, LA, June 2016.
101. Liu, Guannan DeLean Tolbert, John Alexander Mendoza-Garcia, Anirudh Roshan Sriram and Monica E. Cardella, "WORK IN PROGRESS: Design Fixation in First-Year Engineering Students' Problem Solving," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, New Orleans, LA, June 2016.
102. Tolbert, DeLean and Monica E. Cardella, "WORK IN PROGRESS: Quantitative Information Acquisition and Utilization by First-Year Engineering Students," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, New Orleans, LA, June 2016.
103. Salzman, Noah, Matthew W. Ohland and Monica E. Cardella, "Measuring the Effects of Pre-College Engineering, Year 3," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, New Orleans, LA, June 2016.
104. Jones, Tamecia R., Jean M. Trusedell, William C. Oakes and Monica E Cardella, "Measuring the Impact of Service-Learning Projects in Engineering: High School Students' Perspectives," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, New Orleans, LA, June 2016.
105. Tolbert , DeLean, Reis Lehman , Guannan Liu , Benjamin Sadler and Monica Cardella, "Knowledge transfer: Does more experience yield improved design quality?," *2016 IEEE Frontiers in Education Conference (FIE)*, Erie, PA, USA, 2016, pp. 1-4. doi: 10.1109/FIE.2016.7757349
106. Ehsan, Hoda, Xinrui Xu and Monica Cardella, "Representations of underrepresented characters in engineering children books," *2016 IEEE Frontiers in Education Conference (FIE)*, Erie, PA, USA, 2016, pp. 1-5. doi: 10.1109/FIE.2016.7757524
107. Shafaat, Ali, Hossein Ebrahiminejad, Farshid Marbouti, Monica Cardella and Anil Kandil, "Developing a systematic framework to enhance construction procedure design," *2016 IEEE Frontiers in Education Conference (FIE)*, Erie, PA, USA, 2016, pp. 1-3. doi: 10.1109/FIE.2016.7757591
108. Tolbert, DeLean and Monica Cardella, "What they say: Black children talk about learning engineering," *2016 IEEE Frontiers in Education Conference (FIE)*, Erie, PA, USA, 2016, pp. 1-4. doi: 10.1109/FIE.2016.7757648
109. Dasgupta, Annwesa, Anastasia M. Rynearson, Senay Purzer, Hoda Ehsan and Monica E Cardella, "Computational Thinking in K-2 Classrooms: Evidence from Student Artifacts," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Columbus, OH, June 2017.
110. Tolbert, D., & Cardella, M. E. "Understanding the Role of Mathematics in Engineering Problem Solving" *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Columbus, Ohio, June 2017.
111. Ehsan, Hoda and Monica E. Cardella "Capturing the Computational Thinking of Families with Young Children in Out-of-School Environments" *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Columbus, Ohio, June 2017.
112. Hua, Inez, Monica E. Cardella and Michael L. Curry, "Board 56: Research Experiences for Teachers (RET) Site: Sustainable Electronics*" Proceedings of the American Society for Engineering Education Annual Conference & Exposition*,, Columbus, Ohio, June 2017.
113. Ehsan, Hoda, Chanel Beebe, and Monica E. Cardella "Promoting Computational Thinking in children Using Apps" *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Columbus, Ohio, June 2017.
114. Salzman, Noah Matthew W. Ohland and Monica E. Cardella "Developing an Instrument to Assess the Effects of Pre-College Engineering Participation on the Experiences of First-Year Engineering Students*"*

Proceedings of the American Society for Engineering Education Annual Conference & Exposition, Columbus, Ohio, June 2017.

115. Young, Glenda D. David B. Knight, Walter Lee, Monica Cardella, Morgan Hynes, Karl Reid, and Trina Fletcher "Leveraging a multi-partner approach to develop successful STEM outreach programs," *2017 IEEE Frontiers in Education Conference (FIE)*, Indianapolis, IN, 2017, pp. 1-5. doi: 10.1109/FIE.2017.8190725
116. Ehsan, Hoda , Jessica Rush Leeker, Monica E. Cardella, Gina Navoa Svarovsky, "Examining Children's Engineering Practices During an Engineering Activity in a Designed Learning Setting: A Focus on Troubleshooting (Fundamental)," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, Utah, June 2018.
117. Haluschak, Emily M., Michelle L. Stevens, Tamara J. Moore, Kristina Maruyama Tank, Monica E. Cardella, Morgan M. Hynes, Elizabeth Gajdzik, Ruben D. Lopez-Parra Lopes, "Initial Problem Scoping in K-2 Classrooms (Fundamental)" *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, Utah, June 2018.
118. Ehsan, Hoda, Tikyna M. Dandridge, Ibrahim H. Yeter, and Monica E. Cardella, "K-2 Students' Computational Thinking Engagement in Formal and Informal Learning Settings: A Case Study (Fundamental)," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, Utah, June 2018.
119. Knight, David B., Walter C. Lee, Karl W. Reid, Monica E. Cardella, Morgan M. Hynes, Cherie D. Edwards, Glenda D. Young Collins, "Board 76: Strengthening the STEM Pipeline for Elementary School African Americans, Hispanics, and Girls by Scaling Up Summer Engineering Experiences," *Proceedings of the American Society for Engineering Education Annual Conference & Exposition*, Salt Lake City, Utah, June 2018. https://peer.asee.org/30103
120. Madamanchi, Aasakiran, Shenika Poindexter, Monica E Cardella; James Glazier, and David Umulis, "Qualitative Findings from Study of Interdisciplinary Education in Computational Modeling for Life Sciences Student Researchers from Emerging Research Institutions" *2018 IEEE Frontiers in Education Conference (FIE)*, San Jose, CA.
121. Madamanchi, Aasakiran, Monica E Cardella; James Glazier, and David Umulis, 'Factors Mediating Learning and Application of Computational Modeling by Life Scientists" *2018 IEEE Frontiers in Education Conference (FIE)*, San Jose, CA.
122. Ehsan, Hoda, Carson Ohland, Tikyna M. Dandridge, and Monica E. Cardella, "Computing for the Critters: Exploring Computational Thinking of Children in an Informal Learning Setting," *2018 IEEE Frontiers in Education Conference (FIE)*, San Jose, CA.
123. Lewis, Racheida S., Cherie Edwards, Walter C. Lee and David Knight, Kayla R. Maxey, Jessica Rush Leeker, Monica E Cardella and Morgan Hynes "Examining the Value of Mentoring in Youth Engineering Programs: What Motivates a Mentor to Mentor?" *2018 IEEE Frontiers in Education Conference (FIE)*, San Jose, CA
124. Cardella, M. (2019) Children's Design Processes: Problem Scoping, Fixation, and Testing. Poster presented at the Clive L. Dym Mudd Design Workshop XI. Claremont, CA.
125. Dandridge, T., Ehsan, H., Ohland, C., Lowe, T. Yeter, I., Gajdzik, E., Brophy, S., Cardella, M. (2019). Integrated STEM+C for children in formal and informal settings as a precursor to K-2 computer science education practices. Paper presented at the *ACM SIGCSE Technical Symposium.* Minneapolis, MN.
126. Lowe, Tony & Brophy, Sean & Cardella, Monica. (2019). Exploring the Definition of Computational Thinking in Research and the Classroom. Paper presented at *ACM SIGCSE Technical Symposium.* Minneapolis, MN. 10.1145/3287324.3293842.
127. Cardella, Monica E., David B. Knight, Walter C. Lee, Karl W. Reid, Morgan M. Hynes, Glenda D. Young Collins, Cheryl Beauchamp, Tikyna Dandridge, and Donovan Colquitt. "Board 24: Promoting the Participation of Elementary School African Americans, Hispanics, and Girls in STEM by Expanding Summer Engineering Experiences". *Proceedings of the American Society for Engineering Education Annual Conference and Exposition (ASEE), Tampa, Florida*, June 2019.
128. Drummond Oakes, Maeve, Monica E Cardella, Maryanne Sydlik, and Kristin M. Everett. "Board 41: Developing Summer Research Programs at an NSF ERC: Activities, Assessment, and Adaptation". *Proceedings of the American Society for Engineering Education Annual Conference and Exposition (ASEE), Tampa, Florida*, June 2019.
129. Ehsan, Hoda and Monica E. Cardella "Investigating Children with Autism's Engagement in Engineering Practices: Problem Scoping (Fundamental)" *Proceedings of the American Society for Engineering Education Annual Conference and Exposition (ASEE), Tampa, Florida*, June 2019.

130. Ehsan, Hoda, Abeera P. Rehmat, and Monica E. Cardella "Examining the role of parents in promoting computational thinking in children: A focus on homeschool families," *Proceedings of the American Society for Engineering Education Annual Conference and Exposition (ASEE), Tampa, Florida, June 2019*
131. Hynes, M. M., Moore, T. J., Cardella, M. E., Tank, K. M., Purzer, S., Menekse, M., Yeter, I. and Ehsa, H. (2019). Inspiring young children to engage in Computational Thinking in and out of school (Research to Practice). *Proceedings of the 2019 American Society for Engineering Education Annual Conference & Exposition,* Tampa, FL.
132. Ohland, C., Ehsan, H., & Cardella, M. "Parental Influence on Children's Computational Thinking in an Informal Setting," *Proceedings of the 2019 American Society for Engineering Education Annual Conference & Exposition,* Tampa, FL, June 2019.
133. Wang, Congying, Tikyna Dandridge, Monica E. Cardella, and Carol A. Handwerker. "Board 128: Work in Progress: Integrating Sustainability Engineering Education and Design into the K-12 Classroom: A Case Study in Electronics Recycling for Middle-School Youth". *Proceedings of the 2019 American Society for Engineering Education Annual Conference & Exposition,* Tampa, FL, June 2019.
134. Yeter, I. H., Rynearson, A. M, Ehsan, H., Rehmat, A. P., Dasgupta, A., Fagundes, B., Meneske, M., & Cardella, M. E. (2019, June). Design and implementation of data collection in a large-scale, multi-year pre-college engineering study: A retrospective. *Proceedings of the American Society for Engineering Education Annual Conference and Exposition (ASEE), Tampa, Florida.*
135. Lowe, Tony, Brophy, Sean & Cardella, Monica. (2019). Findings from a Multi-year Study of CT in K-2 Students in Formal and Informal Settings. ITiCSE '19: Proceedings of the 2019 ACM Conference on Innovation and Technology in Computer Science Education. 10.1145/3304221.3325585.
136. Ehsan, H., Cardella, M., & Cardella, P. (2019). Unplugged and Plugged Computational Thinking for Children: Research and Practice. *Visitor Studies Association (VSA) Annual Conference,* Detroit, MI.
137. Shoaib, Huma, Monica E. Cardella, Aasakiran Madamanchi and David Umulis, "An Investigation of Undergraduates' Computational Thinking in a Sophomore-Level Biomedical Engineering Course," *2019 IEEE Frontiers in Education Conference (FIE)*, Covington, KY, USA, 2019.
138. Shoaib, Huma, Monica E. Cardella, Aasakiran Madamanchi and David Umulis. "Computation, Gender, and Engineering Identity Among Biomedical Engineering Undergraduates." *2019 IEEE Frontiers in Education Conference (FIE)*, Covington, KY, USA, 2019.
139. Fagundes, Barbara, Hoda Ehsan, Tamara J. Moore, Monica E. Cardella, and Kristina M. Tank. "First-Graders' Computational Thinking in Informal Learning Settings (Work-in-Progress)." *Proceedings of the 2020 American Society for Engineering Education Annual Conference & Exposition,* June 2020.
140. Hua, Inez and Monica E. Cardella "Environmental Sustainability and Electronics: High School Teacher Development through Summer Research Experiences" *Proceedings of the 2020 American Society for Engineering Education Annual Conference & Exposition,* June 2020.
141. Mendoza-Garcia, John, Monica E. Cardella and William C. Oakes. "Blended Phenomenography: An alternative to investigate learning." *Proceedings of the 2020 American Society for Engineering Education Annual Conference & Exposition,* June 2020.
142. Shoaib, Huma, and Monica E. Cardella "A comparative study on gender bias in the purchase of STEM toys (Fundamental)" *Proceedings of the 2020 American Society for Engineering Education Annual Conference & Exposition,* June 2020.

REFEREED CONFERENCE SUMMARIES OR ABSTRACTS

1. Atman, Cynthia J., Jennifer Turns and Monica Cardella. "Engineering Students Solving Design Problems: Cases from a Within-Subjects Verbal Protocol Study," *Annual Meeting of the American Educational Research Association,* Seattle, Washington, June 2001
2. Turns, Jennifer, Robin S. Adams, Cynthia J. Atman and Monica E. Cardella. "How Can We Move from Research to Practice in Undergraduate Engineering Design Education?" Poster presented at the *International Conference for the Learning Sciences*, October 2002, Seattle, WA.
3. Cardella, Monica E., Cynthia J. Atman and Robin Adams "Sketching as a Support for Engineering Design Problem Solving" an extended abstract in the *Proceedings of the Industrial Engineering Research Conference*, May 2003, Portland, Oregon.
4. Cardella, Monica E. "The Role of Community in Engineering Students' Learning and Use of Mathematics," *Annual Meeting of the American Educational Research Association*, New York, New York, March 2008.
5. Cardella, Monica "Investigating Engineering Students' and Practitioners' Mathematical Thinking" Extended Abstract submitted for the *Research in Engineering Education Symposium*, July 2008.

6. Yun, Juyeon, Monica Cardella, Şenay Purzer, and Ming-Chien Hsu "Parents' Roles in K-12 Education: Perspectives from Science and Engineering Education Research." In the Proceedings of the *American Educational Research Association* Annual Meeting, April 2010, Denver.
7. Merugureddy, Raghavi, Monica E. Cardella and Heidi A. Diefes-Dux and Amani Salim "TAs' Experiences with Providing Feedback on Open-ended Model Eliciting Problems" an extended abstract in the *Proceedings of the Industrial Engineering Research Conference*, May 2011, Reno, NV.
8. Zoltowski, Carla B., Monica E. Cardella and William C. Oakes "The Development of Assessment Tools Using Phenomenography" presented at the *Research in Engineering Education Symposium*, October 2011, Madrid.
9. Cardella, M. & Svarovksy, G.. "Family Conversations During Museum-Based Engineering Experiences." Poster presented at the Colloquium on P-12 STEM Education Conference: Minneapolis, MN. July, 2012.
10. Cardella, Monica E., Carla B. Zoltowski, and William C. Oakes. "Developing Human-Centered Design Approaches: Preparing Professionals to Address Complex Problems" presented at SIGDOC 2012, Oct 03-05 2012, Seattle, WA, USA
11. Svarovsky, Gina and Monica Cardella. "Gender Research on Adult-Child Discussions Within Informal Engineering Environments (GRADIENT): Early Findings." *Annual Meeting of the American Educational Research Association*, San Francisco, CA, April, 2013.
12. Cardella, Monica E., Patrice Buzzanell, Antonette Cummings, DeLean Tolbert and Carla B. Zoltowski "A tale of two design contexts: Quantitative and qualitative explorations of student-instructor interactions amidst ambiguity" *Design Thinking Research Symposium X*, West Lafayette, IN, 2014.
13. Ehsan, Hoda, Monica Elaine Cardella, and Gina Navoa Svarovsky, "Engineering and Computational Thinking Among Families Engaging With an Exhibit at a Science Center," *Annual Meeting of the American Educational Research Association*, New York, NY, 2018
14. Tolbert, DeLean, and Monica E. Cardella "The Engineer of 2020 Mindset: Identifying Bridges Between the Socio-Cultural Experiences and Engineering Design Contexts of Eight African American Adolescents", *Mudd Design Workshop X: Design and the Future of the Engineer of 2020, Proceedings of a workshop,* May 2017, Claremont, California.
15. Maxey, Kayla R. [G], Jessica Rush Leeker[G], Monica E. Cardella, and Morgan M. Hynes "Integrating Social Context in Engineering Experiences to Promote Interests of Diverse Learners," at the Collaborative Network for Engineering and Computing Diversity Conference, Crystal City, VA, May 2018.
16. Rehmat, A. P., Ehsan, H., Yeter, I., Moore, T. J., & Cardella, M. (2019, April). Exploring teachers', and students' perceptions of computational thinking. *Paper presentation at the International Conference of National Association of Research in Science Teaching (NARST) in Baltimore, MD.*
17. Ehsan, H., Cardella, M., & Sanger, M. T. (2020). First Graders' Engineering Design Processes During a Field Trip Activity: Expanding Problem and Solution Spaces. The National Association of Research on Science Teaching (*NARST) Annual Conference. Portland, OR.*
18. Ehsan, H., & Cardella, M. (2019). Advancing Homeschooling Education through Museums: Parents Promote Computational Thinking and Engineering in Children. *Associations of Science and Technology Centers (ASTC),* Toronto, CAN.
19. Ehsan, H., Cardella, M., & Cardella, P. (2019). Computational Thinking and Engineering for 5-to 7-Year-Olds: An Exhibit Designed to Broaden Participation for a Better Future *Associations of Science and Technology Centers (ASTC),* Toronto, CAN.
20. Rehmat, A. P., Ehsan, H., & Cardella, M. E. (2019, October). Instructional strategies to engage children in computational thinking. Paper presentation at *the Big10 Maker and CS Education Research Conference*. Indiana University, Bloomington, IN.

OTHER CONFERENCE/SYMPOSIA CONTRIBUTIONS

1. Cardella, Monica E. "Engineers' Use of Mathematics in Conceptual Design," Poster presented at the National Academy of Engineering/ Center for the Advancement of Scholarship in Engineering Education Dane and Mary Louise Miller Symposium, October 27, 2006, San Diego, CA.
2. Cardella, Monica E., Hoda Ehsan, Elizabeth Gajdzik, and Connor Hage "Integrated STEM+CT for K-2 In and Out of School" *2018 NSF STEM for All Video Showcase: Transforming the Educational Landscape*. http://stemforall2018.videohall.com/presentations/1285

BOOKS EDITED

1. Cardella, Monica E., Chell E. Nyquist, Matthew W. Ohland and A. Van Epps (Eds.). *Ideas To Innovation PKG Purdue University,* Boston, MA: Pearson Learning Solutions, 2010.
2. Purzer, Şenay, Johannes Strobel and Monica E. Cardella (Eds.) *Engineering in Pre-College Settings: Research, Policy and Practices,* Purdue University Press, 2014.

PEER-REVIEWED CHAPTERS IN BOOKS

1. Hjalmarson, Margret, Monica E. Cardella and Robin Adams, "Uncertainty and Iteration in Design Tasks for Engineering Students," in Lesh, Richard, Eric Hamilton and James Kaput (eds.) *Models & Modeling as Foundations for the Future in Mathematics Education,* Lawrence Erlbaum, 2007.
2. Cardella, Monica E. "Mathematical Modeling in Engineering Design Projects: Insights from an Undergraduate Capstone Design Project and a Year-Long Graduate Course," in Lesh, Richard et al. (eds.) *Modeling Students' Mathematical Modeling Competencies,* Springer, 2010.
3. Cardella, Monica E. "Chapter 18: User-Centered Design and Needfinding" in Cardella, M. E., Chell E. Nyquist, Matthew W. Ohland and A. Van Epps (Eds.). *Ideas To Innovation PKG Purdue University,* Boston, MA: Pearson Learning Solutions, 2010.
4. Cardella, Monica E., Carla B. Zoltowski and William C. Oakes, "Developing Human-Centered Design Practices and Perspectives through Service Learning" in Baillie, C., Riley, D. and Pawley, A. (eds.) *Engineering and Social Justice: In the University and Beyond*. Purdue University Press, 2012.
5. Cynthia J. Atman, Ozgur Eris, Janet McDonnell, Monica E. Cardella and Jim Borgford-Parnell, "Engineering Design Education: Research, Practice and Examples that Link the Two," in Aditya Johri and Barbara Olds (Eds.). *The Cambridge Handbook of Engineering Education Research,* Cambridge University Press, January 2014.
6. Hsu, Ming-Chien, Monica E. Cardella and Şenay Purzer, "Assessing design" In Purzer, Şenay, Johannes Strobel and Monica E. Cardella (Eds.) *Engineering in Pre-College Settings: Research, Policy and Practices*, Purdue University Press, 2014.
7. Monica E. Cardella, Noah Salzman, Şenay Purzer and Johannes Strobel, "Assessing engineering knowledge, attitudes and behaviors" In Purzer, Şenay, Johannes Strobel and Monica E. Cardella (Eds.) *Engineering in Pre-College Settings: Research, Policy and Practices,* Purdue University Press, 2014.
8. Dorie, Brianna and Monica E. Cardella "Engineering at Home" In Purzer, Şenay, Johannes Strobel and Monica E. Cardella (Eds.) *Engineering in Pre-College Settings: Research, Policy and Practices,* Purdue University Press, 2014.
9. Cardella, Monica, Şenay Purzer and Johannes Strobel. "The Future of Pre-College Engineering Education" In Purzer, Şenay, Johannes Strobel and Monica E. Cardella (Eds.) *Engineering in Pre-College Settings: Research, Policy and Practices,* Purdue University Press, 2014.
10. Cummings, Antonette, DeLean Tolbert, Carla Zoltowski, Cardella, Monica E., and Patrice M. Buzzanell "A Quantitative Exploration of Student-Instructor Interactions Amidst Ambiguity" in Adams, R.S. and Junaid A. Siddiqui (Eds.), *Analyzing Review Conversations*, Purdue University Press, 2015.
11. Shroyer, Kathryn, Jennifer Turns, Terri Lovins, Monica Cardella, and Cynthia J. Atman, "Team Idea Generation in the Wild: A View from Four Timescales " In *Analysing Design Thinking: Studies of Cross-Cultural Co-Creation*, CRC Press, Taylor & Francis, July 2017.

GOVERNMENT, UNIVERSITY OR INDUSTRIAL REPORTS (NON-REFEREED)

1. Cardella, Monica E., Jennifer Turns, Cynthia J. Atman, Robin Adams. "Analysis of the Senior Follow-Up Data: The Ping Pong and Street Crossing Problems*",* CELT Technical Report CELT-01-04 Center for Engineering Learning and Teaching, University of Washington, Seattle, WA, 2001.
2. Cardella, Monica E., Jennifer Turns, Cynthia J. Atman, Robin Adams, and Eddie Rhone. "Detailed Descriptions of the Design Processes of Four Engineering Educators", CELT Technical Report CELT-03-01, Center for Engineering Learning and Teaching, University of Washington, Seattle, WA, 2003.
3. Mosborg, Susan, Cynthia J. Atman, Robin Adams, Jennifer Turns, and Monica Cardella. "Study of Engineering Design Expertise Now Underway at the University of Washington." CELT Technical Report number CELT-05-02, Center for Engineering Learning and Teaching, University of Washington, Seattle, WA, 2005.
4. Mosborg, Susan, Monica E. Cardella, Cynthia J. Atman, Robin S. Adams, and Jennifer Turns. Engineering Design Expertise Study Codebook, CELT Technical Report CELT-06-02, Center for Engineering Learning and Teaching, University- of Washington, Seattle, WA 2006.

5. Mosborg, Susan, Monica E. Cardella, Jason J. Saleem, Cynthia J. Atman, Robin S. Adams, and Jennifer Turns. Engineering Design Expertise Study, CELT Technical Report CELT-06-01, Center for Engineering Learning and Teaching, University- of Washington, Seattle, WA, 2006.
6. Cardella, Monica E., Cynthia J. Atman, Jennifer Turns and Robin Adams. Four Examples: the Teaching Challenge of Students with Varying Initial Design Abilities, CELT Technical Report CELT-06-09, Center for Engineering Learning and Teaching, University of Washington, Seattle, WA, 2006.
7. Trina Fletcher, Monique Ross, DeLean Tolbert, James Holly, Monica Cardella, Allison Godwin, and Jennifer DeBoer "Ignored Potential A Collaborative Roadmap For Increasing African American Women In Engineering" written for the National Society of Black Engineers, the Society of Women Engineers, and the Women in Engineering ProActive Network, published 2017.

INVITED PRESENTATIONS

Fall 2018 "Active Learning Strategies for Engineering Design, Mathematical Modeling and Problem Solving" Inter American University of Puerto Rico, Bayamón Campus, September 21, 2018

Spring 2018 "Engineering Design – Children, Undergraduates and Practitioners" Guest Lecture in *Design Cognition and Learning* (graduate course), Arizona State University, April 9, 2018.

Spring 2016 "Engineering Design from Preschool to Professional Practice", Learning Sciences Research Institute, University of Illinois Chicago, April 2016

Spring 2014 "Engineering at Home, Schools, Museums and Beyond" with Şenay Purzer, Science on Tap (seminar series), March 13, 2014, Lafayette, IN.

Fall 2013 "Do engineers drive trains or make iPods?" at the Silicon Valley Symposium, with Şenay Purzer, September 10, 2013, Mountain View, CA.

Fall 2012 "First-Year Engineering at Purdue: An Iterative Design Process" at Northwestern University, November 6, 2012.

Summer 2012 "First-Year Engineering at Purdue: From Research to Practice," University of Portland, August 3, 2012.

Summer 2012 multi-day faculty development workshop and seminar series Beihang University of Aeronautics and Astronautics, Beijing, China, May 7-21, 2012.

a. "Engineering education and engineering education research in the United States: historical development and recent trends" May 9, 2012,
b. "First-Year Engineering Experience at Purdue: Background, Development and Implementation" May 10, 2012,
c. "First-Year Engineering Experience at Purdue: Content and Curriculum" May 14, 2012
d. "First-Year Engineering Experience at Purdue: Pedagogy" May 15, 2012,
e. "First-Year Engineering Experience at Purdue: Assessment" May 16, 2012
f. "Engineering Thinking: Studies of Design and Mathematics in Engineering" May 18, 2012

Fall 2011 "Engaging Elementary-Aged Children and Their Parents in Engineering" Society of Women Engineers Annual Conference, with Joan Chadde, Oct 15, 2011, Chicago, IL.

Summer 2011 Invited Panelist: "Best Practices in K-12 Engineering — Assessments of Participant Outcomes" at the American Society for Engineering Education Annual Conference & Exposition, June 2011, Vancouver CAN.

Spring 2011 Invited Panelist: "Young Audiences' STEAM Conversation and Public Panel" at the Young Audiences: Arts for Learning Annual Conference, April 2011, Indianapolis, IN.

Fall 2010 "Mathematical Thinking in Engineering Design: Ambiguity, Uncertainty, Precision and Accuracy," University of Maryland, Dec. 8, 2010

Winter 2010 "Engineering the Common Good", Workshop at the NSF Engineering Education & Centers Awardees meeting, with John Duffy, February 1&2, 2010

Summer 2008 "Engineering is Everywhere," Rowan University, Engineering Clinics for Teachers Keynote Presentation, July 14, 2008

Summer 2007 "Pathways in P-12 sTEm Education" University of Washington, June 11, 2007

Spring 2007 "User-Centered Engineering Education" Virginia Polytechnic & State University, April 5, 2007

Spring 2007 "Understanding Mathematical Thinking and Engineering Design: Insights and Opportunities for STEM Education" Clemson University, March 27, 2007

Winter 2007 "Mathematical Thinking, Engineering Design and P-12 sTEm Education: Opportunities for Exploration" Purdue University, March 6, 2007

Autumn 2006	"Mathematical Thinking in Engineering Design: Insights from a Cognitive Engineering Perspective" Arizona State University, October 10, 2006.
Spring 2006	"Mathematics and Design in Engineering Education: Insights from a Cognitive Engineering Perspective" University of Georgia, April 19, 2006.
Spring 2005	"Engineering Learning Research at the Center for Engineering Learning and Teaching" American Society for Engineering Education Mathematics and Physics Division Luncheon, with Cynthia J. Atman, June 15, 2005.

SEMINARS

Fall 2013	"The Mathematics and Engineering Design Learning Environments and Experiences (MEDLEE) Group" School of Engineering Education Research Seminar, on September 25, 2013.
Fall 2005	"Portraying Engineering Design Expertise: Empirical Insights" presentation with Cynthia J. Atman to the Ford Motor Company on October 25, 2005 and the Boeing Company on November 3, 2005 (originally presented at the First International Computing Education Research Workshop, October 1, 2005).
Spring 2004	"Engineering Education as an Application of Cognitive Engineering, Mathematics, Representations and Design," Invited lecture, Industrial Engineering 593.
Winter 2004	"Cognitive Models in Engineering Education: Engineering Educators' Design Processes" Industrial Engineering Visiting Committee meeting, March 4, 2004
Winter 2004	"Exploring Engineering Education: Thick Descriptions of Engineering Educator's Design Processes" Invited lecture with Cynthia J. Atman, Industrial Engineering 592, January 20, 2004.
Fall 2002	"Center for the Advancement of Engineering Education (CAEE)" Industrial Engineering Visiting Committee meeting, with Cynthia J. Atman, November 15, 2002.

RESOURCES DEVELOPED BASED ON RESEARCH

The Parents' Guide to Introducing Engineering at Home developed to share research findings with parents and the general population: https://drive.google.com/file/d/0B4hn6Pse3qQUdXhLMnBKWW1Gcmc/view

The Engineering Gift Guide a follow-up resource that builds on *the Parents' Guide to Introducing Engineering at Home* (project lead: Elizabeth Gajdzik): https://engineering.purdue.edu/INSPIRE/EngineeringGiftGuide *2014-2018 editions*

PROFESSIONAL MEMBERSHIPS

Alpha Pi Mu, *the Industrial Engineering Honor Society* (2004 - present)
American Society for Engineering Education (2005 - present)
American Education Research Association (2007- present)
Association of Computing Machinery, Special Interest Group on Design of Communication (2012- 2013)
International Society of the Learning Sciences (2010 - 2017)
National Association for Research on Science Teaching (2013-2014, 2020)
National Council on Measurement in Education (2011 – 2013)
Science Educators for Equity, Diversity and Social Justice (present)
Visitor Studies Association (2013 - 2014)

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CAREER GOAL

Equity and inclusion through pedagogical research and practice.

EDUCATION

Florida International University, Miami, Florida
PhD in Biology

Florida International University, Miami, Florida
MSc in Biology

Morehouse College, Atlanta, Georgia
BSc in Biology, minor in Environmental Studies

PROFESSIONAL EXPERIENCE AND SKILLS

University of Rhode Island, Kingston, Rhode Island **Department of Biology Associate Professor Biology Education**
http://web.uri.edu/bio/bryan-dewsbury/, http://seasprogram.net**,** August 2014 - Present

- Research program focuses on the social context of learning. Projects include the role of social belonging in academic achievement, intentional interventions to reduce bias and increase empathy and untangling the belonging and career reflection process of STEM students.
- Faculty development on curriculum design, as it pertains to inclusive practices.
- Teach a. Principles of Biology I (enrollment 140) b. Principles of Biology I Honors (enrollment 45) c. What's the big idea: A No Boundary Thinking approach to solving complex social challenges (enrollment 16) d. STEM Course Design in Higher Education (graduate course enrolling 6).

John N Gardner Institute, Fellow for Inclusive Teaching, August 2016 – Present

- Consult with institutions of higher education on inclusive teaching and curriculum design
- Conduct faculty development workshops on the role of equity and social justice in curriculum design
- Co-create and implement the annual Teaching and Learning Academy (an institute on curriculum design and assessment)

Florida International University, Miami, Florida **Center for the Advancement of Teaching Teaching Assistant,** January 2014 – June 2014

- Led book groups on Stereotype Threat and instruction in the STEM disciplines for faculty from all departments on campus.
- Managed the TA certification program by running workshops on pedagogical skills and performing classroom visits and teaching evaluation.
- Conducted classroom observations of faculty, and midterm reviews.

Florida International University, Miami, Florida, **Quantifying Biology in the Classroom (QBIC) Program Head Teaching Assistant,** August 2008 – August 2013

- Head TA for QBIC, an integrative, quantitative, pedagogical program for undergraduate majors in the Department of Biological Sciences (http://qbic.fiu.edu).
- Taught lab sections for QBIC program in Genetics, General Biology, QBIC Bound Summer Session & Ecology as well as Journal Club classes.
- Substitute taught for General Biology Lecture (for Ecology Unit), and Ecology Lecture.
- Designed syllabi for all lab sections of QBIC General Biology, QBIC Ecology and QBIC Bound Summer Session as well as QBIC General Biology lecture to incorporate a more significant quantitative component.
- Designed the core pedagogical approach (The Teaching Pentagon) that the QBIC Program uses to integrate various other disciplines into the main biology course.
- Creator of the web video series "Confluence: Where life and science meet" (http://qbic.fiu.edu/confluence). This is an interview series with research scientists (mostly minority) to expose students to the lives and work of people who ask and investigate today's most interesting questions in biology. The series addresses identity construct issues underrepresented student groups have with respect to career choice.
- Recruitment advisor for the QBIC program.
- Assessment advisor for the QBIC program.

Biscayne National Park, Homestead, Florida, **Damage Recovery Program Diving Technician,** January 2007 - December 2007

- Technician for the Damage Recovery Program which oversaw the restoration of damaged seagrass beds (from vessel groundings mainly) and coral reefs.
- Designed and implemented monitoring program for restored seagrass beds.
- Monitored lobster-trap and debris removal projects done by contractors.
- Marine flora and fauna identification.
- ArcGIS®, SPSS and Sigma Plot proficient.
- Proficient in experimental design and ecological data analysis.

Florida International University, Miami, Florida, **Seagrass Ecosystem Research Lab Research Assistant,** August 2003 – December 2006

- Coordinated bi-monthly seagrass sampling to monitor ecosystem health in Florida Bay as part of the Florida Coastal Everglades – Long-Term Ecological Research (FCE-LTER) program.
- Sampled five sites using SCUBA across Florida Bay for seagrass population demographics, seagrass morphology and habitat use by Florida Bay fauna.
- Represented the FCE-LTER at a distributed graduate seminar at the National Center for Ecological Analysis and Synthesis (NCEAS) in March 2005 on the characterization and implementation of Ecosystem-Based Management (EBM)(see publication below).
- Carbon and nitrogen analysis using Carlo-Erba CHN analyzer.
- Phosphorus analysis using an acid extraction and colorometric technique.
- Chlorophyll-*a* analysis using acetone extraction and spectrofluorometry.
- Soluble sugars analysis using the MBTH method.

PhD Project

The ecology and economics of the controls of primary producer community structure

(https://www.youtube.com/watch?v=aGmcfnQezIo)

MSc Project
The role of fish in nutrient concentration in an oligotrophic subtropical estuary

PUBLICATIONS

Peer-reviewed

- Taylor, C and **B.M. Dewsbury.** in press. Mosquitoes Out of Place: Claims-making, Representation, and Boundary Politics in the Debate Over Field Trial Releases of Genetically Modified Mosquitoes in the Florida Keys. Studies in Symbolic Interaction (14 pages)
- MacDonald L, **Dewsbury B**, Marcette J. 2020. The timeliness of inclusion efforts in biology education. J. Microbiol. Biol. Educ. 21(1): doi:10.1128/jmbe.v21i1.2123
- **Dewsbury B**. 2020. A chance at birth: an academic development activity to promote deep reflection on social inequities [‡]. J. Microbiol. Biol. Educ. 21(1): doi:10.1128/jmbe.v21i1.2037
- Canfield, K.N., Menezes, S., Matsuda, S.B., Moore, A., Mosley Austin, A.N., **Dewsbury, B.M**., Feliú-Mójer, M.I., McDuffie, K.W., Moore, K., Reich, C.A. and Smith, H.M., 2020. Science communication demands a critical approach that centers inclusion, equity, and intersectionality. *Frontiers in Communication*, *5*, p.2.
- **Dewsbury, B.** 2020**.** A Worthy Burden: Reflections on the Journey of a STEM Professor of Color in Higher Education. In S. Brand, & L. Ciccomascolo (Eds.), Social Justice and Putting Theory Into Practice in Schools and Communities (pp. 29-43). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-9434-5.ch003
- **Dewsbury, B.M.**, Taylor, C, Reid, A and C. Viamonte. 2019. Career choice among first-generation, minority STEM college students. J Micro Bio Ed 20 (3)
- **Dewsbury, B.M.** and C. Braeme. 2019. Inclusive Teaching. CBE-LSE Vol 18(2)
- Taylor, C. and **Dewsbury, B**., 2019. Barriers to inclusive deliberation and democratic governance of genetic technologies at the science-policy interface. Journal of Science Communication, 18(3), p.Y02.
- **Dewsbury, B.M.** 2019. Deep Teaching - A conceptual model for inclusive approaches to higher education STEM pedagogy. Cultural Studies in Science Education, https://doi.org/10.1007/s11422-018-9891-z, 23 pgs
- Loberti, A.M. and **B.M. Dewsbury,** 2018. Using a Logic Model to Direct Backward Curriculum Design. J Micro Bio ed, 19(3)
- Taylor, C and **B.M. Dewsbury**. 2018. On the problem and promise of metaphor use in science communication. J Micro Bio Ed 19 (1)
- **Dewsbury, B.M.**, 2017. Context determines strategies for 'activating' the inclusive classroom. J Micro Bio Ed 18 (3) pgs 1-5
- **Dewsbury, B.M.**, 2017. On faculty development of STEM inclusive teaching practices. FEMS Microbiology Letters, 364 (18), pgs 1-6
- **Dewsbury, B.M.**, Bhat, M, and J.W. Fourqurean. 2016. A review of economic valuations of seagrass ecosystems. Ecosystem Services 18: 68-77
- **Dewsbury, B.M.**, 2015. Debating the role of higher education in society
  Review of 'Beyond the University: In defense of liberal education', Michael S. Roth; (2014). Yale University Press, New Haven, CT, 228 pages. J Micro Bio Ed 16(1), pgs 96-97
- **Dewsbury, B.M.,** Koptur, S and J Fourqurean. 2015. "Ecosystem responses to prescribed fire along a chronosequence in a subtropical pine rockland habitat" Car J Sci 24: 1-12

- **Dewsbury, B.M.**, 2014. ”A guide to understanding the science behind useful approaches to learning” Review of: The New Science of Learning: How to Learn in Harmony With Your Brain; Terry Doyle and Todd Zakrajsek; 2013; Stylus Publishing; Sterling, VA. 126 pages. J Micro Bio Ed 15(1), pgs 3-4
- **Dewsbury, B.M.**, Reid, A and O. Weeks. 2013. Confluence: A seminar series as a teaching tool. J. Microbiol. Bio Ed 14(2): 258-259
- **Dewsbury, B.M.**, Lowenstein, M. K. and A. Rosenblatt. 2011. “Biology without borders: An integrative strategy for increasing conceptual resonance among biology majors” Proc. Assoc. Biol. Lab. Teach.; 32(327)
- **Dewsbury, B.M.** and J.W. Fourqurean. 2010. “Artificial reefs concentrate nutrients and alter benthic community structure in an oligotrophic, subtropical estuary” Bull. Mar. Sci., 86(4), pgs 813-829
- O.I. Weeks, E. Villamor, M. Tracey, P. Stoddard, S. Shapiro, J. Makemson, R. Garcia, S. Gavassa, T. Philippi, T. Pitzer, **B.M. Dewsbury**, G. Narasimhan, A. McGoron, A. Tashakkori. 2010. “QBIC, an interdisciplinary and quantitative biological sciences curriculum: concept to implementation”. Journal of Sci. Ed. 12(1): 11-14
- Arkema, K.K., S.C. Abramson and **B.M., Dewsbury.** 2006. “Marine ecosystem-based management: from characterization to implementation**”**. Front Ecol Environ; 4(10): 525 - 532

Other publications

- **Dewsbury, Bryan**. 2018. The soul of my pedagogy. Scientific American. January 23rd, 2018. https://blogs.scientificamerican.com/voices/the-soul-of-my-pedagogy/
- **Dewsbury, Bryan.** 2019. Teaching With Technology in Higher Ed? Start With Relationship-Building. January 2nd, 2019. https://www.edsurge.com/news/2019-01-02-teaching-with-technology-in-higher-ed-start-with-relationship-building

Articles and other media about my work

- University of Rhode Island homepage | Teaching to Inspire |https://www.uri.edu/features/teaching-to-inspire/
- The Chronicle of Higher Education | Freshmen are souls to be awakened | https://www.chronicle.com/article/Freshmen-Are-Souls-That/243559
- The Chronicle of Higher Education | Professors Share: The Moment That Changed the Way I Teach | https://www.chronicle.com/article/Professors-Share-The-Moment/245266
- Teaching in Higher Education (podcast) | Teaching as an act of social justice | https://teachinginhighered.com/podcast/teaching-as-an-act-of-social-justice-and-equity/
- Leading Lines (podcast) | Teaching with technology | http://leadinglinespod.com/uncategorized/episode-041bryan-dewsbury/
- Course Hero | https://www.coursehero.com/faculty-club/best-lessons/social-inequity/
- Spark Science | An interview with STEM education Bryan Dewsbury | https://www.sparksciencenow.com/

ADVISING

- University of Rhode Island (URI), College for the Environment and Life Sciences (CELS), Science and Engineering summer fellows mentor - **Summer 2015, 2016, 2017, 2018**
- Faculty advisor to the URI CELS Undergraduate Research Club – **May 2015 – present**
- Marine Biology academic advisor (20 students per semester) – **September 2014 – Present**
- URI Summer Coastal Fellows Program advisor – **Summer 2015 – Present**

- **Major Professor advisor**
  1. Cynthia Taylor (completed May 2020 PhD)
  2. Holly Swanson
  3. Jessica Adams
  4. Asta Habtemichael

  Dissertation committee member
  1. Joseph Brown (Dept. of Chemistry) [COMPLETED]
  2. Heather Miceli (School of Education) [COMPLETED]
  3. Clifton Berwise (Dept. of Psychology) [COMPLETED]
  4. Teresa Davis (Department of Psychology) [COMPLETED]
  5. Mehwish Shahid (Department of Psychology) [COMPLETED]
  6. Fred Connery (School of Education) [COMPLETED]
  7. Leah Feldman (Department of Marine Affairs) [COMPLETED]
  8. Kaytee Canfield (Department of Marine Affairs) [COMPLETED]
- Masters students research credits
  1. Travis O'Dell (College Student Personnel) [COMPLETED]
  2. Danika Korpacz (School of Education) [COMPLETED]
- Undergraduate student research credits
  1. Gianna Vagueiro [Spring 2016]
  2. Mikaela Gonzaga (Leadership program) [Spring 2016]
  3. Kelsea Adams (Honors Program) [Spring 2016]
  4. Kyle Blomster (TAship) [Spring 2016]
  5. Marisa DeCollibus (Honors Program) [Fall 2016 & Spring 2017],
  6. Rachael Adams (Honors Program) [Spring 2017]
  7. Vanessa Kolb (Honors Program) [Spring 2017]
  8. Kelley Carr [Fall 2017]
  9. Deanna Gardner [Spring 2018]
  10. Michael Vandiver [Fall 2018]
  11. Max Bonnici [Spring 2019]

PROFESSIONAL DEVELOPMENT

- Designing a curriculum to produce significant learning (http://www.deefinkandassociates.com/) – Dee Fink and Associates, Chicago Illinois, *May 2013*
- Teacher certification program (https://ugrad.fiu.edu/cat/Pages/TACertification.aspx), Center for the Advancement of Teaching, Florida International University, *September 2011 – May 2012*
- Assessment Residency, Biology Scholars Program (http://www.biologyscholars.org/assessment/), American Society for Microbiology, *June 2012*

GRANTS

- NSF RCN-UBE (Research Coordination Network – Undergraduate Biology Education) subaward - $50,000 (2019 - 2020)
  Responsibilities involve designing and implementing an inclusive teaching workshop for participant faculty from universities and colleges in the United States. I will lead a team of six facilitators who will use a blended model to support long-term sustained practices on inclusions in STEM classrooms.

- NIH MARC award: MARC U*STAR Training Program at the University of Rhode Island (2019 - 2024) - $1.2M (Dewsbury 50% effort)
  Responsibilities included recruitment and advisement of MARC trainees. Curriculum design for the professional and social development of trainees. Research lab placement of trainees. Oversee collaborative programming with other URI undergraduate research programs.
- NSF NOYCE award - Phase II: URI Robert Noyce Teacher Scholarship Program;
  Award No. 1339963 – Funding amount (2019 – 2023) - $1.2M (Dewsbury – 8% effort)
  Design and implementation of summer course for preservice teachers on inclusive practices
- Catalytic grant from Pearson International to study the effects on learning of courses with integration of science learning outcomes (2018 - 2019) - $5,000
- John N Gardner Institute Fellow for the development of inclusive teaching academies (2017 - 2018) - $5,000
- Donald H. Wulff Diversity Travel Fellowship, Professional Organization of Developments annual conference, Montreal, QC (2017) - $1,700
- Council for Research, Project Development Grant program, University of Rhode Island grant to study Implicit Bias (2016 - 2017) - $15,000
- Catalytic grant from Pearson International to study reflective assignments and learning (2016 - 2017) - $5,000
- Provost Office Innovation Grant II [No Boundary Thinking J- Term international course at the University of Cape Coast, Ghana] (2016) - $33,500
- Rhode Island Office of the Postsecondary Commissioner grant to study Social Emotional Learning (2016 - 2017) - $10,100
- NSF EAGER award for No Boundary thinking collaboration (2014) - $300,000 ($30,000 subcontract)
- NSF NOYCE award - Phase I: URI Robert Noyce Teacher Scholarship Program;
  Award No. 1339963 – Funding amount $1.92M (2013 – 2019, Dewsbury – 5% effort)
- URI Office of the Provost Multicultural Grant to develop faculty book groups on inclusive pedagogy (2014 - 2015) - $3,100
- URI Collaboration for the Exploration of Math and Science (CEMS) grant – to redevelop the first and second iterations of the introductory biology course (2014) - $4,500

PRESENTATIONS

- **Dewsbury, B.M.** and A. Santucci. SURI (STEM Education URI) – Transforming gateway STEM instruction around principles of 'Deep Teaching'. American Association of Colleges and Universities (AAC&U) Transforming STEM conference, November 2019, Chicago, IL
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. Hamilton College, October 2019, Clinton, NY **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. University of Baltimore, August 2019, Baltimore, MD **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. American Society of Microbiology Conference for Undergraduate Educators closing plenary 2019, August 2019, Alexandria, VA **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. Western Universtiy Conference for Science Education, July 2019, London, Ontario, Canada **(Invited)**

- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. Bioquest 2019, July 2019, Williamsburg, VA **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. June 2019, Oakland University, Rochester, MI **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. May 2019, Pace University, Manhattan, NY **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. May 2019, Memorial University, Newfoundland, St. John's, Canada **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. March 2019, Duke University, Durham, NC **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. March 2019, Morehouse College, Atlanta, GA **(Invited)**
- **Dewsbury, B.M.** – The promise and practice of inclusive teaching. March 2019, John N. Gardner Institute Teaching and Learning Academy 2019, Atlanta, GA **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose, Best practices in curriculum design online course, American Society for Microbiology Education Section, February 2019 **(Invited)**
- Seitsinger, A. M., de Groot, C., Byrd, **D., Dewsbury, B**., Fogleman, J., & Peno, K. Recruiting and supporting STEM majors into teacher education: URI's Robert Noyce Teacher Scholarship program. Poster presented at the 2019 Joint Mathematics Meetings, January 2019, Baltimore, MD.
- **Dewsbury, B.M.** – Teaching for meaning and purpose, Inclusive Science Communication Symposium, September 2018, Kingston, RI (**Invited**)
- **Dewsbury, B.M.** – Teaching for meaning and purpose, University of Massachusetts, Lowell, September 2018, Lowell, MA **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose, Florida Metropolitan Universities Consortium annual conference, September 2018, Jensen Beach, FL (**Invited**)
- **Dewsbury, B.M.** – Pedagogy for meaning and purpose, Southwestern University, August 2018, Winfield, KS (**Invited**)
- **Dewsbury, B.M.** – Sense of belonging at a large, public, research university, Purdue University, August 2018, West LaFayette, IN (**Invited**)
- **Dewsbury, B.M.** – Teaching for meaning and purpose, Arizona State University, August 2018, Tempe, AZ (**Invited**)
- **Dewsbury, B.M.** – Teaching for meaning and purpose, Elon University, August 2018, Elon, NC (**Invited**)
- **Dewsbury, B.M.** – Transitioning from graduate school to faculty, Florida International University, August 2018, Miami, FL (**Invited**)
- Seitsinger, A. M., **Dewsbury, B**., Peno, K., Byrd, D., Fogleman, J., & de Groot, C. Recruiting and supporting STEM teachers for high need school districts. Poster presented at the 2018 Noyce Summit, July 2018, Washington, DC. (**Invited**)
- **Dewsbury, B.M.** – Pedagogy for meaning and purpose, Keynote for Diversity luncheon, Botanical Society of America, July 2018, Rochester, MN (**Invited**)
- **Dewsbury, B.M.** – Reducing the cost of attendance, Teaching and Learning Showcase 2018, March 2018, Kingston, RI (**Invited**)
- **Dewsbury, B.M.** – Deep Teaching in STEM classrooms, Scientific American & Macmillan Education 5th Annual Executive STEM Summit, October 2017, New York, NY (**Invited**)
- **Dewsbury, B.M.** – Reflection assignments and the student experience in Introductory Biology. Society for the Advancement of Biology Education Research, July 2017, Minneapolis, MN

- **Dewsbury, B.M.** – The whole classroom: Inclusive Teaching in STEM Classrooms. Gordon Conference for Undergraduate Biology Education, July 2017, Easton, MA (**Invited**)
- **Dewsbury, B.M.** and M Kravec – Student reflection on self in an introductory biology course. Biology Leadership Community, March 2017, Tucson, AZ (**Invited**)
- **Dewsbury, B.M.** and J Caulkins – Early intervention and at-risk students in STEM courses. John N Gardner Institute Gateways to Completion, March 2017, Las Vegas, NV
- **Dewsbury, B.M.** and J Caulkins – STEM Diversity Institute 2016, URI Diversity Week 2016, Kingston, RI.
- **Dewsbury, B.M.** – The whole classroom: A pedagogy for all students. Goshen College annual faculty summit, August 2016, Goshen IN. (**Invited**)
- **Dewsbury, B.M.,** Bush, N and J Rubio – On social belonging in Higher Ed: A qualitative analysis at a large, public, research institution. Ecological Society of America Annual Conference, August 2016, Ft. Lauderdale, FL.
- **Dewsbury, B.M.** and K Perrelli – Early intervention and social belonging at URI. Hobsons University, July 2016, Las Vegas, NV.
- **Dewsbury, B.M.** – The whole classroom: A pedagogy for all students. American Society for Microbiology Conference for Undergraduate Educators. July 2016, Bethesda, MD. (**Invited**)
- **Dewsbury, B.M.** and J Couret – Affect matters: The role of belonging on academic performance in STEM classrooms. Society for the Advancement of Biology Education Research Annual Conference. July 2016, Minneapolis, MN.
- **Dewsbury, B.M.** – Inclusive Teaching: Strategies for holistic pedagogy. American Society for Microbiology MICROBE. June 2016, Boston, MA. (**Invited**)
- **Dewsbury, B.M.**, and J. Caulkins – Biology without Borders: Inclusive pedagogy in a large, gateway STEM course. National Conference on Race and Ethnicity, May 2016, San Francisco, CA
- **Dewsbury, B.M.** – The whole classroom: sense of community and academic performance in an introductory STEM classroom. John N Gardner Institute Community of Practice, April 2016, Atlanta, GA
- **Dewsbury, B.M.** – The whole classroom: A pedagogy for all students. Biology Learning Community Conference. March 2016, New Orleans, LA. (**Invited**)
- Seitsinger, A. M. Byrd, D., de Groot, C., **Dewsbury, B**., Fogleman, J., Peckham, J., & Peno, K. (2016, January). Recruiting STEM majors into teacher education: URI's Robert Noyce Teacher Scholarship program. Poster presented at the 2016 Joint Mathematics Meetings, Seattle, WA.
- **Dewsbury, B.M.** Career choice among ethnic minorities in the STEM disciplines. Society for the Advancement of Biology Education Research, August 2015, Minneapolis, Minnesota
- **Dewsbury, B.M.**, and D. Korpacz. Affect matters: Incorporating psychological variables significantly affects predictions of student success. Ecological Society of America, August 2015, Baltimore Maryland
- Caulkins, J, Fournier, K, Brittain, C and **B.M. Dewsbury**, G2C at URI: A case study in gateway reform to promote student success. April 2015, Charlotte, North Carolina.
- **Dewsbury, B.M.**, Multi-dimensional pedagogy: A holistic approach to teaching and science education. CEMS (Collaboration for the Exploration of Math and Science) Brown Bag talks, September 2014, URI
- **Dewsbury, B.M.**, Koptur, S., Gavassa, S. and I. Newman. Mixed methods analysis of a unique pedagogical program to improve biology education. Ecological Society of America, August 2013, Minneapolis, Minnesota

- **Dewsbury, B.M.** BIO2013: Preliminary results of a program designed to increase learning in the total student. Society for the Advancement of Biology Education Research, July 2013, Minneapolis, Minnesota
- **Dewsbury, B.M.** and M.K. Lowenstein. The Teaching Pentagon: A pedagogical technique for integrating undergraduate biology courses**.** American Society for Microbiology Conference for Undergraduate Educators, May 2013, Englewood, Colorado
- **Dewsbury, B.M.**, Reid, A and O. Weeks. Confluence: Where life and science meet. Ecological Society of America, August 2012, Portland Oregon
- **Dewsbury, B.M.**, Bhat, M., and J.W. Fourqurean. An optimal solution for the valuation of seagrass ecosystems. Ecological Society of America, August 2012, Portland, Oregon.
- **Dewsbury, B.M.**, and J.W. Fourqurean. The abundance, distribution and biogeochemistry of seagrasses and macroalgae in Biscayne Bay, Florida. American Association for the Advancement of Science, February 2012, Vancouver, Canada.
- **Dewsbury, B.M.**, Lowenstein, M.K., Goldina, A. and A. Rosenblatt. Journal Club: A four-year class to improve scientific literacy and outreach among undergraduate biology majors. American Society of Cell Biology, December 2011
- **Dewsbury, B.M.**, and J.W. Fourqurean. The abundance, distribution and biogeochemistry of seagrasses and macroalgae in Biscayne Bay, Florida. Coastal and Estuarine Research Federation biannual meeting, November 2011, Daytona Beach, Florida.
- **Dewsbury, B.M.**, and J.W. Fourqurean. The abundance, distribution and biogeochemistry of seagrasses and macroalgae in Biscayne Bay, Florida. Southeastern Phycological Colliloquy, October 2011, Miami, Florida.
- **Dewsbury, B.M.** The Teaching Pentagon: An integrative, quantitative method for teaching General Biology. Ecological Society of America annual meeting, August 2011, Austin, Texas
- **Dewsbury, B.M.**, and J.W. Fourqurean. The abundance, distribution and biogeochemistry of seagrasses and macroalgae in Biscayne Bay, Florida. Ecological Society of America annual meeting, August 2011, Austin, Texas
- **Dewsbury, B.M.**, S. Koptur and J.W. Fourqurean. The biogeochemistry and vegetation of a pine rockland habitat along a chronosequence. Botanical Society of America annual meeting, July 2011, St. Louis, Missouri.
- **Dewsbury, B.M.**, M. Bhat and J. W. Fourqurean. An 'optimal' solution for the valuation of seagrass ecosystems. United States Society for Ecological Economics bi-annual meeting, June 2011, East Lansing, Michigan.
- Lowenstein, M.K., **B.M. Dewsbury**, A. Rosenblatt and O.I. Weeks. Redefining General Biology: Creating an innovative, integrative, and quantitative biology curriculum. The American Society for Cell Biology 50th Annual Meeting, December 2010, Philadelphia, Pennsylvania
- **Dewsbury, B.M.** and M.K. Lowenstein. The Teaching Pentagon: A pedagogical technique for integrating undergraduate biology courses. National Institutes of Health/National Institutes of General Medical Health/Minority Opportunities in Research Conference, June 2010, Chicago, Illinois
- **Dewsbury, B.M.** and M.K. Lowenstein. Biology without borders: An integrative strategy for increasing concept resonance among biology majors. Association of Biology Laboratory Educators Conference, June 2010, Halifax, Nova Scotia, Canada
- **Dewsbury, B.M**. Untangling the relationship between water quality and primary producers in Biscayne Bay, Florida. Florida International University Graduate Student Association Scholarly Forum, March 2010, Florida International University, Miami, Florida

- **Dewsbury, B.M.** and J.W. Fourqurean. The abundance and distribution of seagrasses and macroalgae in Biscayne Bay, Florida. Benthic Ecology Conference, March 2010, Wilmington, North Carolina
- **Dewsbury, B.M.** and T. Pitzer. Resource competition between two fast-growing plants: A QBIC Ecology lab experience integrating ecological theory, statistics, literature analysis and experiential learning. Florida Education Research Association Conference, November 2009, Orlando, Florida
- **Dewsbury, B.M.** and J.W. Fourqurean. The role of fish in nutrient concentration in an oligotrophic subtropical estuary. Florida International University Graduate Student Association Scholarly Forum, March 2006, Florida International University, Miami, Florida
- **Dewsbury, B.M.** and J.W. Fourqurean. The role of fish in nutrient concentration in an oligotrophic subtropical estuary. FCE-LTER All Scientists Meeting 2005, Miami, Florida

Faculty development and other talks

- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. Rice University, January 2020, Houston, TX **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. Advancing Intro Bio 2019, August 2019, HHMI, Washington, DC **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. EdProDevCon 2019, HHMI Biointeractive, July 2019, HHMI, Washington, DC **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. May 2019, Valencia College, Orlando, FL **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. May 2019, University of Utah, Salt Lake City, UT **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. May 2019, Framingham University, Framingham, MA **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. May 2019, Widener University, Philadelphia, PA **(Invited)**
- Moore, K, Martinez, C, Alexander G and **B.M. Dewsbury** – Can we talk? A documentary about belonging in STEM. Movie screening and panel discussion. March 2019, Brown University, Providence, RI **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. March 2019, Coker College, Florence, SC **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. March 2019, Amherst College, Amherst, MA **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. March 2019, Boston College, Boston, MA **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. March 2019, Biology Leadership Community 2019, Henderson, NV **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. March 2019, Transformative Learning Conference 2019, Oklahoma City, OK **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. February 2019, Indiana University, Bloomington, IN **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. February 2019, Connecticut College, New London, CT **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. February 2019, Columbia College, Columbia, SC **(Invited)**

- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. January 2019, Mercy College, Dobbs Ferry, NY **(Invited)**
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. January 2019, California Lutheran University, Thousand Oaks, CA **(Invited)**
- **Dewsbury, B.M.** – A chance at birth: A faculty development workshop. January 2019, Society for the Advancement of Biology Education Research West, Irvine, CA
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. January 2019, Washtenaw Community College, Ann Arbor, MI (**Invited**)
- **Dewsbury, B.M.** – Teaching for meaning and purpose: A faculty development workshop. January 2019, Macalester College, St. Paul, MN (**Invited**)
- Moore, K, Martinez, C, Alexander G and **B.M. Dewsbury** – Can we talk? A documentary about belonging in STEM. Movie screening and panel discussion. Society for the Advancement of Chicanos and Native Americans in Science 2018, San Antonio, TX
- **Dewsbury, B.M.** – A chance at birth: A faculty development workshop. October 2018, Center for Teaching and Learning diversity series, Yale University, New Haven, CT (**Invited**)
- **Dewsbury, B.M.** - A chance at birth: A faculty development workshop. September 2018, Inclusive Science Communication Symposium, Kingston, RI (**Invited**)
- **Dewsbury, B.M.** – An inclusive campus: Inclusion training for Resident Assistants, August 2018, Kingston, RI (**Invited**)
- **Dewsbury, B.M.** – A chance at birth: A faculty development workshop. July 2018, National Conference of Academic Deans, Conway, AR (**Invited**)
- **Dewsbury, B.M.** – A chance at birth: A faculty development workshop. July 2018, HHMI Biointeractive Development Conference, Washington, DC (**Invited**)
- **Dewsbury, B.M.** – A chance at birth: A faculty development workshop. June 2018, International Conference of Education Developers 2018, Atlanta, GA
- **Dewsbury, B.M.** – Inclusive practices in higher education: A faculty development workshop. April 2018, Trinity Washington University, Washington, DC (**Invited**)
- **Dewsbury, B.M.** – Inclusive practices in higher education: A faculty development workshop. March 2018, Gateways to Completion Conference 2018, Houston, TX. (**Invited**)
- **Dewsbury, B.M.** – Inclusive practices in higher education: A faculty development workshop. February 2018, Biology Leadership Community, Orlando, FL. (**Invited**)
- **Dewsbury, B.M.** – Inclusive practices in higher education: A faculty development workshop. January 2018, Community College of Rhode Island, Warwick, RI. (**Invited**)
- **Dewsbury, B.M.** – Inclusive practices in higher education: A faculty development workshop. January 2018, Gonzaga University, Spokane, WA. (**Invited**)
- **Dewsbury, B.M.** – Inclusive practices in higher education: A faculty development workshop. September 2017, Hendrix College, Conway, AR. (**Invited**)
- **Dewsbury, B.M.** – Inclusive practices in higher education: A workshop. American Society of Microbiology Conference for Undergraduate Educators. July 2017. Denver, CO. (**Invited**)
- **Dewsbury, B.M.** and C Sandoval – Teaching all students: Inclusive practices in higher education. HHMI investigators meeting. April 2016. Bethesda, MD (**Invited**)
- **Dewsbury, B.M** and C Sandoval – Teaching all students: Inclusive practices in higher education. American Society for Cell Biology 2016 pre-conference workshop, December 2016, San Francisco, CA. (**Invited**)
- **Dewsbury, B.M. –** The Whole classroom – A development workshop on inclusive practices for faculty and students, Sacramento State University, Sacramento, CA, December 2016. (**Invited)**

- **Dewsbury, B.M.**, Martinez, C and J Caulkins. Inclusive practices in higher education. American Association of Colleges and Universities 2016 conference, November 2016, Boston, MA.
- **Dewsbury, B.M.** Keynote address for the 2015 graduating class of Paul Cuffee High School – June 16th, 2015 (**Invited**)
- **Dewsbury, B.M.** Inclusive Pedagogy in the college classroom. Webinar given on February 18, 2015 as part of the American Society of Microbiology (ASM) MicroOOC pedagogy webinar series (**Invited**)

VOLUNTEER EXPERIENCE Career Day

- STEAM (STEM + arts) – A night of inquiry and design (an outreach event through Paul Cuffee Lower School June 16th, 2015
- Coral Shores High School, Islamorada, FL – October 2013
- Treasure Village Middle School, Islamorada, FL – September 2013
- Terra Environmental Research Institute (High School), Miami, FL – April 2012
- MAST Academy (High School), Homestead, FL – March 2012
- Henry E.S. Reeves Elementary, Miami, FL – April 2011, May 2012 & May 2013

SERVICE

- Contributing scholar to the Columbia University Massive Open Online Course (MOOC) on Inclusive teaching (https://www.edx.org/course/inclusive-teaching-supporting-all-students-in-the-college-classroom)
- Board member – Equity Institute, a program from the American Talent Initiative
- Advisory board member – Quantifying Undergraduate Biology Education and Synthesis (QUBES) (2018 – Present)
- Journal of Microbiology and Biology Education (JMBE) Section Editor (Research) (September 2018 – Present)
- University of Rhode Island Inclusive Science Communication Symposium Planning committee member, URI, Kingston, RI, September 2018
- URI Biology Department curriculum sub-committee – worked on revamping introductory courses, September 2018
- URI Search committee member – Assistant Director of Faculty Development, Office for the Advancement for Teaching and Learning, August 2018
- Deep Teaching URI – A 5-part faculty development workshop series on inclusive practices for faculty with the College for the Environment and Life Sciences at URI, 2017-2018
- URI Honors College Search committee member – Honors Program Administrative Assistant. June 2017
- Creator of the Confluence Interview Series (a continuation of the program from Florida International University; http://seasprogram.net/confluence). This series introduces students from diverse backgrounds to the pathways that various scientists take to achieve their goals. The seminar and interviews are hosted in front of a student-only audience and the videos are used to engage students in reflective exercises about career choice.
- Coordinator of the transformation/alignment of Biology 101/102 sequence courses in the Department of Biological Sciences at URI. This project involved a reconfiguration of the syllabi

to align content between sections, and create more symmetry between the two courses. I also supervise the Supplemental Instruction assignment for the BIO 101 courses.

- Journal of Microbiology and Biology Education (JMBE) Section Editor (Tips and Tools) (September 2015 – September 2018)
- Lead Facilitator of the American Society for Microbiology Biology Scholars Program Assessment Hybrid course (January 2015 – 2016)
- Advisory board member, SMILE (Science and Math Investigative Learning Experiences) Program at URI (May 2015 – Present)
- Co-organizer of the 2015 Cruickshank Lecture seminar in the Department of Biological Sciences
- URI open house volunteer on behalf of the Department of Biological Sciences and the Marine Biology Program. (October 2015)
- Recruiter of graduate students for CELS (in collaboration with Michelle Fontes-Barros). Recruitment trips include the McNair conference (October 2015) at Florida International University, Miami, FL and the Annual Biomedical Research Conference for Minorities in Science (ABRCMS) in Seattle, WA (November 2015).
- Prepared and delivered the inaugural STEM Diversity Institute for faculty to launch URI's Diversity Week. Workshops included 'Inclusive Pedagogy' and 'Know thyself – an examination of privilege'. (September 2015)
- Prepared and delivered new faculty orientation workshop on 'Inclusive pedagogy' at URI (August 2015)
- University of Rhode Island's Joint Committee for Academic Planning (JCAP) member, subcommittee on pedagogy,
  University of Rhode Island – May – July 2015
- Search committee member – Multicultural Postdoctoral Fellow, Department of Biological Sciences. Start date. August 30th, 2015
- CEMS (Collaboration for the Exploration of Math and Science) STEM conference co-organizer and lead workshop entitled "If we build it, will they come?: Support structures and undergraduate use at URI", panel members included Pamela Rohland (disability services), Annie Russell (Gender and Sexuality center), John Cruz (University college Early Alert services) | This committee was responsible for the design and implementation of the Center for the Advancement of Teaching and Learning at the University of Rhode Island.
- SOTL (Scholarship Of Teaching and Learning) reading group organizer (Spring 2015) – Books read 'Blindspot by Greenwald and Banaji' and 'Whistling Vivaldi by Claude Steele'
- Black Scholars award review committee member (Spring 2015)
- Search committee member – Assistant Director of the Office for the Advance of Teaching and Learning (OATL).
- Inclusive Pedagogy Webinar – American Society of Microbiology (ASM) webinar, February 18th, 2015 @ 1500hrs EST.
- Annual Academic Summit planning committee, January 16, 2015
- Member of Gateway to Completion (G2C) URI subcommittee on communications – December 2014 - Present
- Member of Gateway to completion (G2C) URI subcommittee on diversity – December 2014 - Present
- Member of steering committee – Gateway to Completion (G2C) program at University of Rhode Island
- URI Coastal Fellows poster presentation judge – December 2014

- Member - Collaboration for the Exploration of Math and Science (CEMS) (http://web.uri.edu/cems/)
- Facilitator – Biology Scholars Program Assessment Residency (www.biologyscholars.org) – June 24th-28th 2014, June 25th – 29th 2015
- GEM GRAD (Getting Ready for Advanced Degree) Lab hosted by Florida International University. I was a panel member to provide minority students advice on how to navigate graduate school – September 2013
- Presentation to MBRS RISE Program fellows on "Balancing work and family" February 2013
- Presentation at the FIU Global Learning roundtable – "Stereotype threat: Cultural-social pressures as barriers to academic performance" (http://www.youtube.com/watch?v=9wDxRPthb84) - January 8th, 2013
- Creator, Confluence seminar series (http://qbic.fiu.edu/confluence). In this series we invite scientists from around the country to give seminars and interviews on their life and work. The goal of this series is to provide our students an opportunity to connect to the struggles that these scientists faced along their journeys, to inspire the students to overcome their own challenges.
- Urban Ecologist Search Committee, Department of Biology, Florida International University - January – April 2011

REVIEWER

- Section Editor (Research) for the Journal of Microbiology and Biology Education – October 2015 - present
- Journal for Research in Science Teaching (JRST) – February 2015 - Present
- CBE-LSE (Cell Biology Education Life Sciences Education) – January 2015 – Present

PROFESSIONAL ASOCIATIONS AND CERTIFICATIONS

John N Gardner Institute Fellow	August 2017 - Present
Society for the Advancement of Biology Education Research (SABER)	August 2013 - Present August 2014 - Present
Sigma Xi society	
Biology Scholars Program Alumni	August 2013 - Present
American Society for Microbiology	January 2013 - Present
American Association or the Advancement of Science	August 2011 -Present
American Institute of Biological Sciences (AIBS)	January 2010 - Present
Association of Biology Laboratory Educators (ABLE)	August 2009 - 2014

HONORS AND AWARDS

- Honorable Mention for Education Section Paper awards, Ecological Society of America annual meeting, Louisville, KY, August 2019
- URI Diversity and Inclusion Award for Faculty Excellence, AY 2018/2019
- URI Foundation Teaching Excellence Award nominee, AY 2018/2019
- Finalist for the Biology Education Researcher of the year by the National Association of Biology Teachers AY 2-17/2018
- URI College for the Environment and Life Sciences Teaching award 2015-2016, May 2016.
- Carl Storm Underrepresented Minority Fellowship to attend 2015 Gordon Conference on Undergraduate Biology Education Research, Bates College, July 2015
- Appreciation award from the Title V Opening the Gateway Conference for my work on promoting diversity on campus (Florida International University) through Stereotype Threat workshops, October 2013
- Biology Scholars Program (BSP) Alumni Travel Award ($1500), August 2013
- Florida International University Provost Award for TA of the year, March 2013
- Assessment fellow in American Society for Microbiology, Biology Scholars Program, June 2012
- Kelly Parker Fellowship ($500) for Tropical Botany Research, July 2009

LEADERSHIP

- **Faculty President** – URI Sigma Xi Society chapter

References available upon request

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Kirsten T. Edwards, PhD
Linda Clarke Anderson Presidential Professor
Educational Leadership & Policy Studies
Faculty Fellow, Office of the VP for Research & Partnerships

EDUCATION

2012 **Doctor of Philosophy**: Educational Leadership, Research, and Counseling
Minor: Women's and Gender Studies
Specializations: Higher Education and Curriculum Studies
Louisiana State University —Baton Rouge, LA

Dissertation: "She speaks with wisdom and faithful instruction…": The Influence of a Religio-spiritual Epistemology on the Academic Knowledge, Pedagogy, and Theorizing of Black Women University Teachers

2005 **Master of Public Administration**
Southern University—Baton Rouge, LA

2001 **Bachelor of Science:** Marketing
Louisiana State University—Baton Rouge, LA

AREAS OF SCHOLARLY INTEREST

Faculty
Curriculum and Pedagogy
Equity and Access
Global Higher Education

PUBLICATIONS

Books

Madden, S., Eodice, M., Edwards, K. T., & Lockett, A. (Eds.) (2020). *Learning from the Lived Experiences of Graduate Student Writers*. Logan, UT: Utah State University Press.

Edwards, K. T., Baszile, D. T., & Guillory, N. A. (Eds.) (2019). *Black Women Theorizing Curriculum Studies in Colour and Curves*. New York, NY: Routledge.

Edwards, K. T., & Davidson, M. (Eds.) (2018). *College curriculum at the crossroads: Women of color reflect and resist*. New York, NY: Routledge.

Baszile, D. T., Edwards, K. T., & Guillory, N. A. (Eds.). (2016). *Race, gender, and curriculum theorizing: Working in womanish ways.* Lanham, MD: Lexington Press of Rowman and Littlefield.

Articles in Refereed Journals

Edwards, K. T. (accepted). Melanated Minds and Diasporic Bodies: Womanist Curricular Praxis as Radical Intervention in Study Abroad, *Curriculum Inquiry*.

Edwards, K. T. (revise and resubmit). White Concealment, *Hypatia.*

Shahjahan, R., Estera, A., Surla, K., Edwards, K. T. (revise and resubmit). Towards 'Decolonizing' Curriculum and Pedagogy (DCP) across Disciplines and Global Higher Education Contexts: A Critical Synthesis, *Review of Educational Research.*

Shahjahan, R., & Edwards, K. T. (under review). Whiteness as futurity and globalization of higher education, *American Educational Research Journal.*

Dancy, T. E., Edwards, K. T., & Davis, J. E. (2018). Historically white universities and plantation politics: Anti-Blackness and higher education in the Black Lives Matter era, *Urban Education, 53(2) 176–195.* ***Listed among journal's "Most Read Articles" (#1, August 2020)**

Edwards, K. T. (2017). College teaching on sacred ground: Judeo-Christian influences on Black women faculty pedagogy, *Race Ethnicity and Education*, *20*(1), 117-131.

Pope, E. C., & Edwards, K. T. (2016). Curriculum homeplacing as complicated conversation: (Re)narrating the mentoring of Black women doctoral students, *Gender and Education*, *28*(6), 769-785.

Edwards, K. T., & Baszile, D. T. (2016). Scholarly rearing in three acts: Black women's testimonial scholarship and the cultivation of radical Black female inter-subjectivity, *Knowledge Cultures*, 4(1), 85-99.

Davidson, M. D., Beliveau, R., Edwards, K. T., Carstarphen, M. G., Dancy, T. E., Eodice, M., Graham, G., Humphrey, K. L., Irvin, S., Keppel, B., & Kulemeka, O. (2015). After Trayvon: Voices from the academy respond to a tragedy, *Cultural Studies←→Critical Methodologies*, 15(4), 299-308.

Edwards, K. T. (2015). Perceptions of power and faith among Black women faculty: Re-thinking institutional diversity, *Innovative Higher Education*, 40(3), 263-278.

Edwards, K. T., Loftin, J. K., Nance, A. D., Riser, S., & Smith, Y. (2014). Learning to transform: Implications for centering social justice in a student affairs program, *College Student Affairs Journal*, 32(1), 1-17.

Edwards, K. T. (2014). Teach with me: The promise of a raced politic for social justice in college classrooms, *Journal of Critical Thought and Praxis*, *2*(2), 1-20.

Edwards, K. T. (2013). Christianity as anti-colonial resistance? Womanist theology, Black liberation theology, and the Black Church as sites for pedagogical decolonization, *Souls: A Critical Journal of Black Politics, Culture, and Society*, *15*(1-2), 146-162.

Edwards, K. T. (2013). White activism and social justice in educational leadership: The work of Jean-Charles Houzeau, *International Journal of Leadership in Education*, *16*(3), 263-278.

Edwards, K. T. (2011). Maybe Langston was right?, *Journal of Curriculum and Pedagogy, 8*(1), 22-25.

Edwards, K. T. (2010). Incidents in the life of Kirsten T. Edwards: A personal examination of the academic in-between space, *Journal of Curriculum Theorizing, 26*(1), 113-128.

Book Chapters

Edwards, K. T. (in press). Black Theory Matters: Anti-Blackness, White Logics, and the Limits of Diversity Research Paradigms. In B. Wozolek (Ed.). *Black Lives Matter in US Schools: Race, Resistance, and Education*. New York, NY: SUNY Press.

McGuire, K., Edwards, K. T., Dancy, T. E. (accepted). #BlackLove Stories. In A. Tachine, & Z. Nicolazzo (Eds.), *Weaving as Otherwise: Reframing Qualitative Research through Relational Lenses*. Sterling, VA: Stylus

Dancy, T. E. & Edwards, K. T. (2020). On labor and property: Historically white colleges, Black bodies, and constructions of (anti-)humanity. In C. Grant, M. J. Dumas, and A. Woodson (Eds.), *The future is Black: Afropessimism, fugitivity, and radical hope in education* (pp. 31-46). New York: Routledge.

Edwards, K. T. (2020). An After(Word) on the Future of Higher Education. In S. Madden, M. Eodice, K. T. Edwards, & A. Lockett (Eds.), *Learning from the Lived Experiences of Graduate Student Writers* (pp. 278-282). Logan, UT: Utah State University Press.

Edwards, K. T. (2018). Stories of migration: Passing through, crossing over, and decolonial transgressing in academyland. In O. N. Perlow, D. I. Wheeler, S. L. Bethea, & B. M. Scott (Eds.) *Black women's liberatory pedagogies: Resistance, transformation, and healing within and beyond the academy* (pp. 85-100). London, UK: Palgrave Macmillan.

Edwards, K. T. (2018). Spaces of power and authenticity: Judeo-Christian privilege among Black women faculty at HBCUs. In M. C. Brown & T. E. Dancy (Eds.) *Black colleges across the diaspora: Global perspectives on race and stratification in postsecondary education* (pp. 125-147). England, UK: Emerald.

Edwards, K. T. (2018). Academic Sapphires: College curriculum at the intersection of race, gender, and Black women's subversion. In K. T. Edwards & M. Davidson (Eds.) *College curriculum at the crossroads: Women of color reflect and resist* (pp. 52-74). New York, NY: Routledge.

Edwards, K. T. (2016). Learning to (re)member as womanish curricular transcendence. In D. T. Baszile, K. T. Edwards, & N. Guillory (Eds.) *Race, gender, and curriculum theorizing: Working in womanish ways* (pp. 53-69). Lanham, MD: Lexington Press of Rowman and Littlefield.

Baszile, D. T., Edwards, K. T., & Guillory, N. A. (2016). When, where, and how we enter: An Introduction. In D. T. Baszile, K. T. Edwards, & N. Guillory (Eds.) *Race, gender, and curriculum theorizing: Working in womanish ways* (pp. xi-xxi). Lanham, MD: Lexington Press of Rowman and Littlefield.

Edwards, K. T., & Thompson, V. J. (2016). Womanist pedagogical love as justice work on college campuses: Reflections from faithful Black women academics. In M. Byrd (Ed.) "Spirituality in the workforce: Philosophical and social justice perspectives*," New Directions for Adult and Continuing Education (NDACE).* 152, 39-50.

Edwards, K. T. (2014). Is it "Marissa" or "Michelle?". In K. J. Fasching-Varner, R. E. Reynolds, K. A. Albert, & L. L. Martin (Eds.) *Trayvon Martin, race, and American justice: writing wrong* (pp. 93-100). Boston, MA: Sense Publishers.

Edwards, K. T. (2014). "The whiteness is thick": Predominantly white classrooms, student of color voice, and Freirian hopes. In G. Yancy & M. Davidson (Eds.) *Exploring race in predominantly white classrooms: Scholars of color reflect* (pp. 17-30). New York: Routledge.

Lindbom-Cho, D. R., Edwards, K. T., Fasching-Varner, K. J., & Mitchell, R. W. (2014). Critical feminism in education. In J. Pedersen & S. Totten (Eds.) *Educating about social issues in the 20th and 21st century volume 4: Critical pedagogues and their pedagogical theories* (pp.35- 50). Charlotte, NC: Information Age Publishing.

Edwards, K. T. (2013). Fluidity and possibility: Imagining woman of colour pedagogies. In N. Wane, J. Jagire, & Z. Murad (Eds.) *Ruptures: Anti-colonial & anti-racist feminist theorizing* (pp. 139-156). The Netherlands: Sense Publishers.

Mitchell, R., & Edwards, K. T. (2013). The colour of thought: Advising ethnic minority candidates through a radical ethic of pedagogical love. In A.-Chr. Engels-Schwarzpaul & M. A. Peters (Eds.) *Of other thoughts: Non-traditional approaches to the doctorate. A handbook for candidates and supervisors* (pp. 101-114). Rotterdam, Netherlands: Sense Publishers.

Mitchell, R., & Edwards, K. T. (2010). Power, privilege, and pedagogy: Collegiate classrooms as sites to learn racial equality. In T. E. Dancy (Ed.) *Managing diversity: (Re)Visioning equity on college campuses* (pp.45-68). New York: Peter Lang.

Book Review

Edwards, K. T. (2019). *Beyond Respectability: The Intellectual Thought of Race Women* by Brittney C. Cooper (review). *The Review of Higher Education 42*(5), E-8-E-12.

Encyclopedia Contribution

Edwards, K. T. (2014). Black subculture: Womanist theology. In S. Thompson (Ed.) *Encyclopedia of diversity and social justice* (pp. 112-114). Blue Ridge Summit, PA: Rowman & Littlefield.

Guest Editorship Commentaries

Edwards, K. T., Baszile, D. T., & Guillory, N. (2016). When, where, and why we enter: Black women's curriculum theorising—An editorial commentary, *Gender and Education, 28*(6), 707-709.

Edwards, K. T., & Dancy, T. E. (2013). Learning with Sandy Hook: Mass violence in educational settings—An editorial commentary, *Journal of Curriculum and Pedagogy, 10*(2), 106-109.

SPONSORED RESEARCH ACTIVITY

Brock Initiative for Transformative Leadership Conversation, Oklahoma Center for Education Policy, University of Oklahoma, (2018, Co-PI, $500,000 for five years)

1. Conceptualized a theory and framework for Transformative Leadership Conversation that seeks to humanize schooling.
2. Lead workshops for school leaders on using Transformative Leadership Conversation to re-order powered relationships in schools.
3. Engaging 80 public school and district leaders in four districts in the praxis of Transformative Leadership Conversation.

University of Oklahoma Office of the Vice Provost for Faculty Development, Research Funding to Study "Black Women: Afro-Caribbean Literature, Cultural Expression, and Self-Love" a Pilot Education Abroad Program (2016 $6000)

University of Oklahoma Jeannine Rainbolt College of Education "Summer Research Grant" Recipient (2013 $6,000) (2015 $6,000)

University of Oklahoma "Presidential International Travel Fellowship" Recipient (2015 $1,500)

Louisiana State University "Dissertation Year Fellowship" Recipient (2011-2012 $25,000)

PRESENTATIONS

Refereed Conference Papers

Edwards, K. T., Baszile, D. T., John, C. A., Johnson, D., Vaught, S. E. (2019). *The House of Resistance and the* Undercommons*: Black Women's Academic Leadership as Insurgent Fugitivity*. A paper presented at the National Women's Studies Association Conference. (San Francisco, CA)

Edwards, K. T., & Austin, J. (2018). *Womanist marronage: The fugitive strategies of Black women scholars.* A paper presented at the Biennial Meeting of Global Feminisms and The Anti-Colonial Project. (Cavehill, Barbados)

Edwards, K. T., Guillory, N. A., & Vaught, S. (2018). *Feminist Futurisms: Radical Educational Loves.* A paper presented at the National Women's Studies Association Conference. (Atlanta, GA)

Edwards, K. T., & Brown, J. (2018). *Stealin' and Meetin': A Black women's reading circle as intellectual maroonage.* A paper presented at the National Women's Studies Association Conference. (Atlanta, GA)

Edwards, K. T. (2018). *An Epistemology of Pedagogical Resistance: Narrative Research as Critical Intervention and Preparation.* A paper presented at the Annual Meeting of the American Educational Research Association. (New York, NY)

Edwards, K. T., & Covaleskie, J. F. (2018). *Paying the Price for Free Speech: Discourses of Civility and Curricular Violence on College Campuses.* A paper presented at the Annual Meeting of the American Educational Research Association. (New York, NY)

Edwards, K. T. (2017). *African Women's Diasporic Consciousness as Curricular Transcendence: Engaging and Questioning through a Study Abroad Program.* A paper presented at the National Women's Studies Association Conference. (Baltimore, MD)

Edwards, K. T., Kelly, B. T., Poon, O., Pope, E. C., Sihite, E., Squire, D. D., & Turman, N. T. (2017). *Empowered Teaching: Radical and Transformative Pedagogies for Social Justice.* An interactive symposium facilitated at the annual Association for the Study of Higher Education Conference. (Houston, TX)

Edwards, K. T. (2017). *African Diasporic Consciousness as Curricular Model for Equal Educational Opportunity in Study Abroad.* A paper presented at the Annual Meeting of the American Educational Research Association. (San Antonio, TX)

Edwards, K. T., Haslerig, S. J. (2017). *Trauma, Violence, and Healing: Diversity Plans as Crisis Management, a Reconceptualization.* A paper presented at the Annual Meeting of the American Educational Research Association. (San Antonio, TX)

Edwards, K. T., Bondi, S., Elliott, C., Kanagala, V., Robbins, C. K., & Tran-Parsons, U. (2017). *Communities Without Consensus: Vibrance in Resistance, Pedagogy and Oppositional Spaces.* A paper presented at the annual American College Personnel Association (ACPA) Conference. (Columbus, OH)

Edwards, K. T., & Covaleskie, J. (2016). *The High Prices of Free Speech.* A paper presented at the American Educational Studies Association Conference. (Seattle, WA)

Edwards, K. T., & Pope, E. C. (2016). *Narratives of Homeplacing in Hostile Territory: Mentoring Black Women Graduate Students, Truth-Telling, and Difficult Dialogues.* A paper presented at the Annual Meeting of the American Educational Research Association. (Washington, DC)

Edwards, K. T., Bondi, S., Elliott, C., Kanagala, V., Robbins, C. K., & Tran-Parsons, U. (2016). *Extended Session: Social Justice Pedagogy and Practice: The Self As Instrument.* An interactive presentation at the annual American College Personnel Association (ACPA) Conference. (Montreal, Canada)

Edwards, K. T. (2015). *Judeo-Christian Black Women Professors' Perceptions of Organizational Culture: Implications for Religious Diversity and Faculty-Student Experience.* A paper presented at the annual Association for the Study of Higher Education Conference. (Denver, CO)

Edwards, K. T. (2015). *A Sacred Vocation: Christianity and Black Women Faculty, Pedagogical Implications.* A paper presented at the annual Hawaii International Conference on Education. (Honolulu, HI)

Edwards, K. T., Alavi, R., Davidson, M. (2015). *Reading Groups, Resistance, and Homeplace-ing: Women of Color Reflect on the Work of Justice.* A paper presented at the annual National Conference on Race and Ethnicity in American Higher Education. (Washington, DC)

Edwards, K. T. (2015). Divine inspiration: The influence of a religio-spiritual episteme on the pedagogical commitments of Judeo-Christian Black women faculty. A paper presented at the biennial Gender and Education Association Conference. (London, UK)

Edwards, K. T. (2014). *Pedagogical Translators: Politicized Students' of Color Role in Facilitating Critical Dialogue in College Classrooms.* A paper presented at the annual Curriculum and Pedagogy Conference. (New Orleans, LA)

Edwards, K. T., Osei-Kofi, N., Davidson, G. M., Mukherjee, S., Whitehead, K. (2014). *The Road to Justice: Women of Color Teaching about Race in Predominantly White Classrooms.* A paper presented at the annual National Women's Studies Association Conference. (San Juan, PR)

Edwards, K. T. (2014). *Teaching on Sacred Ground: Judeo-Christian Influences on Black Women Faculty Pedagogy.* A paper presented at the annual Association for the Study of Higher Education Conference. (Washington, D.C.)

Edwards, K. T. (2014). *"The Whiteness is Thick": Predominantly White Classrooms, Student of Color Voice, and Freirian Hopes.* A paper presented at the Annual Meeting of the American Educational Research Association. (Philadelphia, PA)

Edwards, K. T. (2013). *Toward a Black Feminized Religio-Spiritual Epistemology: The Academy, The Black Church, and Black Women.* A paper presented at the annual Curriculum and Pedagogy Conference. (New Orleans, LA)

Edwards, K. T., Smythe, J., Wang, H. (2013). *Resistance, Negotiation, and Improvisational Play in Transnational Education.* A paper presented at the Transnationalism and Minority Cultures: Mid-America Conference. (Norman, OK)

Edwards, K. T. (2013). *Black Women, Faith, and the University Classroom: Narrative Inquiry Concerning Religio-Spiritual Epistemology and Pedagogy.* A paper presented at the Annual Meeting of the American Educational Research Association. (San Francisco, CA)

Edwards, K. T. (2013). *An Endarkened Curriculum of Place: The Black Church as a Site for Learning.* A paper presented at the Annual Meeting of the American Educational Research Association. (San Francisco, CA)

Edwards, K. T. (2013). *Religio-spiritual Black Women Professors as Dual-Representatives: University-Community Partnership Implications.* A paper presented at the annual American College Personnel Association Convention. (Las Vegas, NV)

Edwards, K. T. (2012). *Christianity as Post-colonial Resistance? Black Liberation Theology, The Black Church, Womanist Theology as Sites for Pedagogical Decolonization.* A paper presented at the annual Curriculum and Pedagogy Conference. (New Orleans, LA)

Edwards, K. T. (2012). *The Black Church as a Curriculum of Place: Implications for Epistemology, Ontology, and Knowledge Production.* A paper presented at the annual Curriculum and Pedagogy Conference. (New Orleans, LA)

Edwards, K. T., DiAquoi, R., Smith, S., Tabi, E. (2012). *Im/Possibilities of Educational Revolution: The Contours of Education and Black Subjectivities.* A paper presented at the Annual Conference of the Comparative and International Education Society. (San Juan, PR)

Edwards, K. T. (2012). *Revelation, Revision, Resistance, and Revolt: Liberating Notions of Black Women Academics*. A paper presented at the Louisiana State University College of Education Curriculum Theory Project's Curriculum Camp. (Baton Rouge, LA)

Edwards, K. T. (2011). *Scholarly Dreams, Academic Nightmares: Interrogating the "American Dream" Towards Equity and Liberation in Academe*. A paper presented at the American Educational Studies Association Annual Conference. (St. Louis, MO)

Edwards, K. T., Kaur, M., Desai, C., Murad, Z. (2011). *Beyond What We Know: Exploring the Radical Possibilities of Challenging Relationships*. A paper presented at the Curriculum and Pedagogy Conference. (Akron, OH)

Edwards, K. T. (2011). *Silver and Gold and "Sapphire Bound!": Critical Race Theory as Method in Uncovering Multiple Forms of Black Women's Intellectual Resistance*. A paper presented at the Bergamo Conference on Curriculum Theory and Classroom Practice. (Dayton, OH)

Edwards, K. T. (2011). *From William Lloyd Garrison to Tim Wise: Recovering Examples of White Anti-Racist Protest in History Through the Writings of Jean-Charles Houzeau*. A paper presented at the Bergamo Conference on Curriculum Theory and Classroom Practice. (Dayton, OH)

Edwards, K. T. (2011). *Flowing Through the Binds: Women of Color Resistance, Power, Creation, and Pedagogies*. A paper presented at the Annual Meeting of the American Educational Research Association. (New Orleans, LA)

Edwards, K. T., Loftin, J., Nance, A., Riser, S., Smith, Y. (2011). *"Diversity" or Social Justice: Implications for Centering the Work of Social Justice in Higher Education*. A paper presented at the Annual Meeting of the American Educational Research Association. (New Orleans, LA)

Edwards, K. T., Baszile, D. (2011). *Scholarly Rearing: The Promise of Black Women's Testimonial Scholarship*. A paper presented at the Annual Meeting of the American Educational Research Association. (New Orleans, LA)

Edwards, K. T., Baber, L., Bonner, F., Dancy, T., Enke, K., Fries-Britt, S., Gasman, M., Harris, F., Lewis, C., Mitchell, R., Museus, S., Palmer, R., Pasque, P., Ropers-Huilman, R., Strayhorn, T., Watson, L. (2011). *Lessons from Managing Diversity: (Re)Visioning Equity on College Campuses*. A paper presented at the Annual Meeting of the American Educational Research Association. (New Orleans, LA)

Edwards, K. T. (2011). *Fluid, Fixed, Malleable, and Immovable: Women of Color and Pedagogical (re)Makings*. A paper presented at the Annual Meeting of the American Association for the Advancement of Curriculum Studies. (New Orleans, LA)

Edwards, K. T. (2011). *Reconsidering the Limits of Civil War Era White Radical Protest and Activism: An Anti-racist Analysis of the Work and Writing of Jean-Charles Houzeau*. A paper presented at the Louisiana State University College of Education Curriculum Theory Project's Curriculum Camp. (Baton Rouge, LA)

Edwards, K. T., Boone, K., Nance, A., Smith, Y. (2010). *Coloring Outside the Lines: Students Discuss the*

Effects of a Higher Education Administration Program Specifically Interested in the Work of Social Justice. A paper presented at the Curriculum and Pedagogy Conference. (Akron, OH)

Edwards, K. T. (2010). *A River Runs Through Her: Exploring the Reinvention of Teaching and Learning in Women of Color's Scholarly Spaces.* A paper presented at the Curriculum and Pedagogy Conference. (Akron, OH)

Edwards, K. T. (2010). *Dreams of Grandeur: Interrogating the "American Dream" as a Barrier to the Work of Access, Equity, and Justice in U.S. Higher Education.* A paper presented at the Curriculum and Pedagogy Conference. (Akron, OH)

Edwards, K. T., Clegorne, N., Mitchell, R., Parker, B. (2010). *Ritual and Consequence: Higher Education and the Bondage of the American Dream.* A paper presented at the Bergamo Conference on Curriculum Theory and Classroom Practice. (Dayton, OH)

Edwards, K. T. (2010). *Incidents in the Life of Kirsten T. Edwards: A Personal Examination of the Academic In-between Space.* A paper presented at the annual meeting of the American Educational Research Association. (Denver, CO)

Edwards, K. T. (2009). *The Making of Dr. Edwards: A (Counter)Narrative, Autobiographical Understanding of the U.S. Higher Education Experience.* A paper presented at the Annual Meeting of the Mid-South Educational Research Association. (Baton Rouge, LA)

Edwards, K. T. (2009). *Betwixt & Between: Navigating the Uncomfortable Spaces between Oppression and Privilege within the Academy.* A paper presented at the Bergamo Conference on Curriculum Theory and Classroom Practice. (Dayton, OH)

Edwards, K. T. (2009). *Tide and New & Improved Tide: (Re)Discovering the "Center" in Marginalized Critical Spaces.* A paper presented at the Curriculum and Pedagogy Conference. (Decatur, GA)

Edwards, K. T., Mitchell, R. (2009). *Stories of Privilege or Diversity Realized Honorary Whiteness or Seeds of Resistance.* A paper presented at the Annual Meeting of the American Educational Research Association. (San Diego, CA)

Edwards, K. T. (2009). *Privilege and the Professoriate: Faculty of Color in PWI Classrooms.* A paper presented at the Louisiana State University College of Education Curriculum Theory Project's Curriculum Camp. (Loranger, LA)

Edwards, K. T. (2009). *Emergency Preparedness for an Eminent Threat: Institutional Accountability to Women of Color.* A paper presented at the 12th Annual Women's and Gender Studies Graduate Student Conference at Louisiana State University. (Baton Rouge, LA)

Edwards, K. T., Mitchell, R. (2008). *Privileged Practices Teachers of Color in Predominantly White Universities: Teacher Practical Knowledge Informed by Critical Race Theory Diversity Realized or Honorary Whiteness.* A paper presented at the Bergamo Conference on Curriculum Theory and Classroom Practice. (Dayton, OH)

Invited Lectures and Workshops

Edwards, K. T., Dillard, C., Evans-Winters, V., Thomas, C., Welch, O. (2019). *Black Women, Black Feminism: Learning from the Intersections.* An invited address delivered for the University of Pittsburg's Center for Urban Education. (Pittsburgh, PA)

Edwards, K. T. (2019). *Shades of Black: Community Conversations on Colorism.* An invited keynote delivered for the University of Texas at Dallas's Multicultural Center. (Dallas, TX)

Edwards, K. T. (2018). *Implicit Bias and Microaggressions.* An invited workshop facilitated through the Center for Teaching Excellence Graduate Teaching Academy, University of Oklahoma. (Norman, OK)

Edwards, K. T., Baszile, D. T., Helfenbein, R. J., Gershon, W. S., Stoval, D. O., Guillory, N. A., Huckaby, M. F., Matias, C. E., Tuck, E., Hartlep, N. D., He, M. F. (2017). *Division B Fireside Chat: What Is the Face of Social Justice Activism in Curriculum Studies?* An invited address delivered for Division B-Curriculum Studies at the Annual Meeting of the American Educational Research Association. (San Antonio, TX)

Edwards, K. T., Baszile, D. T., Berry, T., Guillory, N., Huckaby, F., Matias, C., Morton, B., Taylor-Brandon, L. (2016). *Womanish Ways: Monologues at the Intersections of Race, Gender, and Curriculum Theorizing.* An invited address delivered at the American Educational Studies Association Conference. (Seattle, WA)

Edwards, K. T., Cole, E. R., Twombly, S. B. (2016). *The Evolving Higher Education Community: Reflecting on Our Past to Inform the Future of the Field.* An invited address delivered for Division J-Postsecondary Education at the Annual Meeting of the American Educational Research Association. (Washington, DC)

Edwards, K. T., Gaddie, R., Links, J., Simpson, E., Ware, L. (2015). *Heritage? Hate?: Southern Identities and the Confederate Flag.* An invited address delivered for the University of Oklahoma's Center for Social Justice. (Norman, OK)

Edwards, K. T. (2015). *What does it Matter to You?* An invited address delivered for the University of Central Oklahoma's Black Male Initiative and Black Male Fellows Program. (Edmond, OK)

Edwards, K. T., & Foster, K. (2014). *Critical Conversations: Women of Color and White Standards of Beauty.* An invited address delivered for Oklahoma State University's Ethics Center. (Stillwater, OK)

Edwards, K. T. (2014). *Race: The Power of an Idea.* An invited address delivered for the University of Oklahoma's Center for Social Justice's "Teach In on Race." (Norman, OK)

Edwards, K. T. (2014) *Becoming an Inclusive Teacher: Creating Inclusive Classrooms-Implicit Bias.* An invited workshop facilitated through the Center for Teaching Excellence Faculty Learning Community, University of Oklahoma. (Norman, OK)

Edwards, K. T., & Hennessey, M. N. (2013). *Mentorship and teaching philosophy.* An invited workshop facilitated for the Graduate Teaching Academy, University of Oklahoma. (Norman, OK)

Edwards, K. T. (2013). *Diversity in Educational Policy and Politics.* An invited workshop facilitated through the N.E.W Leadership Women's Leadership Initiative, Carl Albert Congressional Research and Studies Center. (Norman, OK)

Edwards, K. T. (2013). *The Divine and the Discipline: Narratives of Religio-spiritual Black Women Professors.* An invited address for the University of Oklahoma's Center for Teaching Excellence's "Brown Bag Discussions on Diversity and Teaching in Higher Education." (Norman, OK)

Edwards, K. T., Baszile, D., Asher, N., Guillory, N., Rahman, A. (2010). *F-words, G-spots, and I-politics- or- Beyond Identity Politics: Possibilities for Global Feminisms in Education by Women of Color.* An invited address delivered for the Bergamo Conference on Curriculum Theory and Classroom Practice. (Dayton, OH)

Edwards, K. T. (2010). *Ebbs and Flows: Black Female Resistance, Fluidity, Identity, and Pedagogy.* An invited address delivered for the Louisiana State University College of Education Curriculum Theory Project's Curriculum Camp. (Baton Rouge, LA)

Edwards, K. T., Durand, E. S., Milam, J., Mitchell, R. (2009). *Practicing What You Preach in the In-between: Holding the Academy Accountable for Establishing a Critical Community.* An invited address delivered for the Bergamo Conference on Curriculum Theory and Classroom Practice. (Dayton, OH)

PROFESSIONAL EXPERIENCE

Administrative Appointments

2020-present *Faculty Fellow for the Office of the Vice President for Research and Partnerships*, University of Oklahoma, Norman, OK

- Support the Office of the VPRP's vision for institution-wide convergence research
- Inform structural supports that enhance the research capacity of scholars in the arts, humanities, and social sciences—specifically those who employ qualitative methodologies and engage inquiry into equity and inclusion
- Organize collaborations amongst the VPRP leadership team and campus partners towards the enhancement of cross-disciplinary undergraduate research opportunities for minoritized students
- Identify structural inequities in the research and creative enterprise and support the development of effective responses

2018-2020 *Associate Department Chair for Educational Leadership & Policy Studies*, University of Oklahoma, Jeannine Rainbolt College of Education, Norman, OK

- Assist the chair with departmental leadership in the areas of teaching, research, and service
- Work with Committee A to develop rigorous and ethical evaluative procedures
- Vision and implement effective supports for pre-tenure faculty
- Organize and collaborate with colleagues to establish initiatives that respond to faculty and student need

- Collaborate and strategize with community partners to cultivate projects that address local, state, and national areas of urgency

Faculty Appointments

2018-present *Associate Professor of Adult and Higher Education*, University of Oklahoma, Jeannine Rainbolt College of Education, Norman, OK (***core affiliate faculty appointments in African & African American Studies, Women's & Gender Studies, and The Center for Social Justice***)

- Coordinator, Student Affairs emphasis area
- Co-coordinator, Higher Education emphasis area
- Courses Taught

  EDAH 5970/WGS 3810: Bodies that (Don't) Matter*

  2016 University of Oklahoma Presidential Dream Course co-taught with Maria Davidson, Guest Lecturers: Patricia Hill Collins, Mariana Ortega, and George Yancy, $20,000 Award for Instructional Support

  EDAH 5543: Gender, Society, and Higher Education
  EDAH 5033: Critical Literature in Adult and Higher Education
  EDAH 6013: Foundations of Doctoral Research in Adult and Higher Education
  EDAH 5213: History of U.S. Higher Education
  EDAH 5970: Spirituality & Religious Diversity in Higher Education
  EDAH 5013: The Adult Learner

  WGS 3810: Unlearning Racism
  WGS 3233: Women Creating Social Change

2012-2018 *Assistant Professor of Adult and Higher Education*, University of Oklahoma, Jeannine Rainbolt College of Education, Norman, OK

2009-2012 *Graduate Teaching Assistant,* Louisiana State University, College of Education, Baton Rouge, LA

2009-2011 *Graduate Research Assistant,* Louisiana State University, College of Education, Baton Rouge, LA

RELATED EXPERIENCE

2006-2009 *Program Founder and Coordinator*, Louisiana State University, Minority Business Program (currently Diversity and Inclusion Initiative), Baton Rouge, LA

2006-2009 *Academic Advisor*, Louisiana State University, E. J. Ourso College of Business, Baton Rouge, LA

2005 *Administrative Intern*, Children's Hospital, New Orleans, LA

2005 *Arts and Cultural Programs Assistant/Intern*, Arts Council of Greater Baton Rouge, Baton Rouge, LA

2004-2005 *Graduate Assistant*, Southern University System Office of the President, Baton Rouge, LA

2002-2003 *Workforce Development Officer*, Louisiana Department of Labor, Baton Rouge, LA

2002 *Financial Assistance Officer*, Louisiana Office of Student Financial Assistance, Baton Rouge, LA

PROFESSIONAL SERVICE

Journal Editorship
Associate Editor, *Gender and Education* (2018-2019)

National and Regional
American Educational Research Association (AERA), Division B-Curriculum Studies, Equity and Inclusion Officer (2017-2020)
Oklahoma State University Curriculum Studies Advisory Board (2015-present)
American College Personnel Association (ACPA) Coalition for Women's Identities, Directorate Member (2017-2019)
American Educational Research Association (AERA), Division J-Postsecondary Education, Emerging Scholars Workshop, Co-Chair (2017-2019)
American Educational Research Association (AERA), Division B-Curriculum Studies, Nominations Committee Member (2014-2017)
American Educational Research Association (AERA), Division J-Postsecondary Education, Emerging Scholars Workshop, Faculty-in-Residence (2017)
American Educational Research Association (AERA), Division J-Postsecondary Education, Poster Session Committee Reviewer (2016)
American Educational Research Association (AERA), Religion and Education SIG, Secretary (2016-2017)
American Educational Studies Association (AESA), Religion and Education Review Team Leader (2016)
Curriculum and Pedagogy Group Executive Council, Secretary and Publications and Program Committee Member (2013-2016)

University
University of Oklahoma
Faculty Senate Representative (2018-present)
University Council on Faculty Awards and Honors (2016-2019)
Provost's Advisory Committee on Women's Issues (PACWI) Recruitment and Retention Committee (2015-2019)
Faculty Senate Scholars Selection Committee (2014-2019)
Women's and Gender Studies Curriculum Committee, Co-Chair (2017-2019)
Women's and Gender Studies Awards Committee (2014-2019)
Women of Color Collective, Founding Member (2015-2019)
Center for Social Justice Diversity Allies Curriculum Development Team (2015-2016)

College
Jeannine Rainbolt College of Education

Curriculum Committee (2014-present)
Diversity Committee (2013-2016, 2018-present)

Department
Educational Leadership and Policy Studies
Graduate Studies Committee (2019-present)
Curriculum Committee (2013-present)
Libraries Liaison (2016-present)
Department Handbook Revision Ad-hoc Taskforce (2015)
Social Committee (2014-2017)
Multicultural/Diversity Committee (2013-2016, 2018-present)
Elections Committee (2013-2016)

Program Area
Adult and Higher Education
Admissions Committee, Chair (2013-present)
Comprehensive Exam Review Committee, Member or Chair (2012-present)
Curriculum Committee, Chair (2013-present)
Resources Committee (2012-2016)
Faculty Search Committee (2014, 2018-Chair)

Manuscript & Proposal Reviewer
Equity and Excellence in Education
Gender and Education
International Journal of Leadership in Education
International Journal of Qualitative Studies in Education
Journal of Curriculum and Pedagogy
Journal of Diversity in Higher Education
The Journal of Higher Education
The Professional Educator
American College Personnel Association (ACPA)
American Educational Research Association (AERA)
- Division B-Curriculum Studies
- Division J- Postsecondary Education
- SIG- Critical Examination of Race, Ethnicity, Class and Gender in Education
- SIG- Religion & Education

PROFESSIONAL AFFILIATIONS

American Educational Research Association (AERA)
- Division B- Curriculum Studies
- Division G- Social Context of Education
- Division J- Postsecondary Education
- SIG- Leadership for Social Justice
- SIG- Narrative Research
- SIG- Religion and Education
- SIG- Research Focus on Black Education

American Educational Studies Association

American College Personnel Association (ACPA)
Association for the Study of Higher Education (ASHE)
Curriculum and Pedagogy Group (C&P)
National Women's Studies Association (NWSA)

HONORS & AWARDS

ACPA Coalition for Women's Identities Research & Scholarship Award (2017)
OU Women's and Gender Studies Faculty Award (2017)
OU Jeanine Rainbolt College of Education Patricia L. Hardré Graduate Mentoring Award (2017)
OU Department of Educational Leadership and Policy Studies Teacher of the Year Award (2017)
OU Black Girls Rock (#BGR) Rock Star Faculty Award (2017)
Professors of Curriculum Honorary Society (2015)
OU Department of Educational Leadership and Policy Studies Most Promising Faculty Award (2013)
LSU School of Education's Outstanding Dissertation Award (2013)
LSU Curriculum Theory Project's Curriculum Camp Graduate Student Article Award (2012 $300)
International Journal of Leadership in Education Emergent Scholar Manuscript Competition Graduate Student Award (2012 $300)
National Council for Black Studies Summer Institute participant (2010)
LSU Black Faculty and Staff Caucus Charles Harrington Most Outstanding Graduate Student Award (2010 $300)
Lillian Oleson Scholarship (2009-2012 $3,000)
Fred G. Thatcher Fellowship (2009-2012 $3,000)
Journal of Curriculum Theorizing Distinguished Graduate Student Paper Competition Winner (2009)
University Council for Educational Administration (UCEA) Barbara L. Jackson Scholar (2008-2010)
Pi Alpha Alpha National Public Administration Honor Society (2005)
Housing and Urban Development Fellowship Recipient (2004-2005 $24,000)

COMMUNITY SERVICE

Trained Intergroup Dialogue Facilitator, University of Oklahoma Southwest Center for Human Relation Studies
YWCA Crisis Volunteer-Certified Trained Advocate
The City of Norman Human Rights Commission Member (2015-2019)
L.O.V.E.T.H (Letting Our Vision Excel Through Him) Inner-City Outreach Program (Co-Director of Dance, Instructor January 2006-2012)
Arts Council of Greater Baton Rouge Volunteer (May 2005-2012)

References Available Upon Request

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John C Hackett
Associate Professor
Department of Physiology and Biophysics
Virginia Commonwealth University

Contact Information

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Massey Cancer Center
Virginia Commonwealth University
401 College St.
Richmond, VA 23219
Telephone 804.828.5679
Email**:** john.hackett@vcuhealth.org
ORCID: https://orcid.org/0000-0002-4923-2668

Biographical Details

Born Winter Park, Florida July 11, 1976
Spouse: Rajini Hackett (2001)
Children: Dev Hackett (2004), Pavan Sai Hackett (2006)

Education

Postdoctoral Researcher, Computational Chemistry, Department of Chemistry, The Ohio State University, Columbus, OH, December 2004-July 2006.
Mentor: Christopher M. Hadad

Ph.D., Medicinal Chemistry, 12/2004, Division of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, The Ohio State University, Columbus, OH.
Mentor: Robert W. Brueggemeier

B.Sc., Pharmacy (honors) 5/1999 College of Pharmacy, University of Florida, Gainesville, FL
Research Advisor: Margaret O. James

Professional Experience

Director, Massey Cancer Center Proteomics Resource, 1/2016-current
Associate Professor (tenured), Physiology & Biophysics, Virginia Commonwealth University School of Medicine 5/2013-current
Affiliate Faculty, Pharmacology, and Toxicology, Virginia Commonwealth University School of Medicine 9/2007 -
Graduate Research Associate, Division of Medicinal Chemistry and Pharmacognosy, The Ohio State University 2002-2004

Graduate Teaching Associate, Division of Medicinal Chemistry and Pharmacognosy, The Ohio State University 1999-2002
Community Pharmacist, Walgreen Drug Company, Columbus, OH 1999-2006

Professional Licensure, Affiliations, and Awards
Registered Pharmacist, State of Ohio, License # 03-3-23742
Registered Pharmacist, Commonwealth of Virginia, License # 0202207424
Society of Biological Inorganic Chemistry
International Society for the Study of Xenobiotics(ISSX)
The Rho Chi Pharmaceutical Honor Society, Upsilon Chapter
Albert H. Soloway Graduate Student Award in Pharmacy and Cancer Research, 2002
Balshone Medicinal Chemistry Recognition Award, 2004
Full Member, VCU Massey Cancer Center and Developmental Therapeutics Group
International Advisory Committee, International Symposia on Cytochrome P450 (2015-
Session Chair, Looking to the future: Understanding P450 “omics” in the era of big data. 21st International Conference on Cytochrome P450, Brisbane, Australia June 23-27, 2019
Conference Organizer, International Conference on Cytochrome P450, Washington, D.C. June 2021.

Grant Reviewing Activities
The Ohio Supercomputer Center Allocations
Research Corporation for Scientific Advancement
Alzheimer's and Related Diseases Research Award Fund (2011, 2012)
Macromolecular Structure and Function A (MSFA) Study section ad hoc (10/2012)
NIEHS/NIH Superfund Basic Research Program (P42) Review Panel (10/2011)
National Center for Supercomputing Applications (NCSA) Blue Waters/NSF Graduate Fellowship Program (3/2014, 3/2015, 3/2016, 3/2017, 03/2018)
National Science Foundation Petascale Computing Resource Allocations (03/2015)
Xenobiotic and Nutrient Disposition and Action (XNDA) Study section ad hoc (10/2015, 10/2020)
National Science Foundation CAREER Award Review (10/2015,10/2016)
Austrian Science Fund (2018)
CSR Anonymization Project Study Section (8/2018)
NIGMS SCORE Review Panel (11/2019)
NICCH ZAT1 AJT (16) R Preclinical Screening for Natural Product Drug Interactions Review Panel (04/2020)
American Chemical Society-Petroleum Research Fund (05/2020)

Consulting
WD Lab Grown Diamonds (2017-)

Editorial and Manuscript Reviewing Activities
Editorial Board Member, *Journal of Biological Chemistry*, 7/1/2017-
Editorial Board Member, *Biotechnology and Applied Biochemistry,* 2013-
Reviewer for *Journal of Physical Chemistry, Journal of the American Chemical Society, Journal of Biological Chemistry, Nature Chemical Biology, Angewandte Chemie*

International Edition, ChemPhysChem, Journal of Chemical Theory and Computation, Current Inorganic Chemistry, Journal of Medicinal Chemistry, Environmental Science and Technology, Metallomics, Chemical Research in Toxicology, ACS Catalysis, Chemistry-A European Journal, Journal of Inorganic Biochemistry, Journal of Molecular Structure, Chemical Science, Current Pharmaceutical Design, Journal of Chemical Information and Modeling, Journal of Molecular Liquids, Scientific Reports, Bioorganic and Medicinal Chemistry, Biophysics Reviews, Archives of Biochemistry and Biophysics.

Research Support

A. Pending Grants

1. 1R01GM000000-01A1. Mechanisms of gating and H^+ permeation in voltage sensor domain proteins. Submitted 7/5/2020. (PI: I. Scott Ramsey, VCU)

B. Active and Completed Grants

2. R01GM135414 "Dynamics and Interactions of Cytochrome P450 19A1" **$1,483,134** NIH/NIGMS**.** 07/01/2020-04/30/2024. (PI: John C Hackett)
3. 1R13ES032310-01 "22nd International Conference on Cytochrome P450: biochemistry, Biophysics, and Biotechnology" **$7000** NIH/NIEHS 08/01/2020-07/15/2020-06/30/2021. (PI: John Hackett)
4. R01GM130810 "Functional Dynamics of Cytochrome P450s" (PI: William Atkins, University of Washington) NIH/NIGMS. **$571,511.** 12/1/18-11/30/22.
5. Value and Efficiency Teaching and Research (VETAR). "Cytochrome P450 Dynamics at the Membrane Interface" **$50,000**. 06/01/2019-12/31/2020
6. 3R01GM114168-02S1 Supplement to Purchase a Stopped-Flow Kinetics Instrument. NIH/NIGMS **$68,825**. Funded 05/01/2016-04/31/2017
7. R01GM114168. Computational and Vibrational Probes of CYP3A4 Solution Dynamics. 07/15/2015 – 04/30/2019 **$1,204,752** (PI: John C Hackett)
8. Structural and biochemical consequences of mitochondrial DNA methylation on the function of mTERF. Massey Cancer Center. **$200,000**. (Co-PI: Shirley Taylor, VCU Microbiology)
9. American Cancer Society Pilot Project/VCU Massey Cancer Center. Correlating plasticity and promiscuity in CYP 3 A 4 - catalyzed oxidation reactions. 09/01/2012-8/31/2013. **$30,000**.
10. N000141210773 Office of Naval Research. Resonance Raman Spectroscopy Instrumentation for Biophysical Studies of Heme Proteins. (PI: John C Hackett) 06/15/2012-06/14/2013. **$269,977**.
11. 1S10RR027411-01. High Performance Computing Cluster for Biomedical Research at VCU. 06/15/2010-06/14/2013. NCRR/NIH **$416,859.** (w/ PI Meng Cui)
12. R01GM092827 "Enzyme Environmental Effects in Complex Cytochrome P450-Catalyzed Reactions" (PI: John C Hackett) NIH/NIGMS. **$1,476,734** Funded 09/01/2010-08/31/2016.
13. 3R01GM092827-02S1 Supplement to Purchase an UV-Vis-NIR absorption spectroscopy instrument. NIH/NIGMS **$47,995**. Funded 09/01/2011-08/31/2012.
14. R01CA140416 "Antifolate activators of AMP-dependent protein kinase" (w/ PI: Richard G. Moran) NIH/NCI. **$1,424,861.** Funded 03/01/2010-03/31/2015.
15. Mechanisms of Aromatase-Catalyzed O_2 Activation and Androgen Biotransformation.

07/01/2009-06/30/2010. American Cancer Society Institutional Research Grant. **$20,000**.

16. Biophysical Characterization of Mycobacterium tuberculosis CYP132. 07/01/2008-06/30/2009. The Jeffress Memorial Trust. **$25,000.**
17. Identification of novel scaffolds for lanosterol 14α-demethylase inhibitor design. 01/01/2007-12/31/2007 A.D. Williams Fund **$14,974**.
18. Army Medical R & D Command, DAMD17-02-1-0529. Structure-based Design of ATP Competitive Keratinocyte Growth Factor Receptor Tyrosine Kinase Inhibitors. **$66,000** (Principal Investigator: John C Hackett). 04/15/2002-5/14/2005.

Invited Talks

1. Department of Physiology and Biophysics, Virginia Commonwealth University, September 3, 2020.
2. Department of Chemistry and Biochemistry, Biomolecular Sciences Institute, Florida International University, August 23, 2020.
3. 11th International Conference on Porphyrins and Pthalocyanines. Buffalo, New York June 28-July 3 2020. (Rescheduled due to COVID-19)
4. 21st International Conference on Cytochrome P450, Brisbane, Australia June 23-27, 2019.
5. 7th Georgian Bay International Conference on Bioinorganic Chemistry, Charles W. Stockey Centre, Parry Sound, Ontario. May 21-25, 2019
6. Department of Physics, Virginia Commonwealth University, September 20, 2019.
7. Terner Symposium: Frontiers in Physical Chemistry. Department of Chemistry, Virginia Commonwealth University October 25, 2018.
8. Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco (CIATEJ), Guadalajara, Jalisco, Mexico November 10, 2017.
9. 21st Jornadas Científicas, Universidad Autónoma de Nayarit, Nayarit, Mexico November 7-9, 2017.
10. 20th International Congress on Cytochrome P450, Dusseldorf, Germany. August 27-31, 2017.
11. 6th Georgian Bay International Conference on Bioinorganic Chemistry, Charles W. Stockey Centre, Parry Sound, Ontario. May 23-27, 2017
12. Department of Chemistry, Marquette University, March 3, 2017 (Host: James Kincaid)
13. Biophysics Program, The Ohio State University, September 16, 2016. (Host: Christopher M. Hadad)
14. Focusing on the Future**.** College of William and Mary School of Education and Center for Gifted Education. February 7, 2015.
15. American Chemical Society 248th National Meeting San Francisco August 10-14, 2014.(Host: Alenka Luzar)
16. Department of Chemistry, Virginia Commonwealth University, February 18, 2014. (Host: Scott Gronert)
17. Department of Medicinal Chemistry, University of Washington, Seattle, WA December 12, 2013 (Host: William Atkins)
18. 9th Seminars of Advanced Studies on Molecular Design and Bioinformatics: Energy (SEADIM 9), La Habana and Varadero, Cuba. July, 7-12, 2013.
19. Theoretical Chemistry Group, Max Planck Institut für Kohlenforschung, Mülheim,

Germany. May 16, 2013 (Host: Walter Thiel)
20. 18th International Congress on Cytochrome P450, Seattle, Washington, USA. June 18-22, 2013. (Host: Paul Ortiz de Montellano)
21. Department of Physiology and Biophysics, Virginia Commonwealth University School of Medicine. September 13, 2012. (Host: Diomedes Logothetis)
22. 34th Reaction Mechanisms Conference, University of Missouri, Columbia, Missouri, June 19-23, 2012. (Host: Christopher M. Hadad)
23. Virginia Commonwealth University Massey Cancer Center Research Seminar. February 15, 2012. (Host: Richard Moran)
24. Pfizer Global Research and Development, Groton CT. January 27, 2012.
25. Applied Theory on Molecular Systems. Symposium in honor of Eluvathingal Jemmis. Indian Institute of Chemical Technology, Hyderabad, India. November 2-5, 2011.
26. Keynote Speaker, Structural Biology and Chemistry Sections, Virginia Academy of Sciences, University of Richmond, Richmond, Virginia, May 26, 2011.
27. Department of Chemistry, Georgetown University, Washington, D. C. April 14, 2011. (Host: Toshiko Ichiye)
28. Laboratory of Computational Biology, National Heart, Lung, and Blood Institute, Rockville, MD. October 21, 2010. (Host: Bernard Brooks)
29. University of Tennessee Health Sciences Center, Memphis, TN. April 26, 2010. (Host: Duane Miller)
30. Department of Chemistry, University of Richmond. April 15, 2010. (Host: Ellis Bell)
31. VCU Institute for Structural Biology and Drug Discovery. March 31, 2010.
32. Department of Pharmaceutical Organic Chemistry, Mansoura University, Mansoura, Egypt. December 15, 2009. (Host: Atif Tantawy)
33. Department of Chemistry, University of Richmond January 23, 2009. (Host: Ellis Bell)
34. VCU Department of Biochemistry. October 13, 2008. (Host: Jessica Bell)
35. VCU Department of Chemistry. November 15, 2007. (Host: Nick Farrell)
36. International Society of Quantum Biology and Pharmacology (ISQBP) Gilda Loew Memorial Meeting 2005 Williamson Theatre, CUNY College of Staten Island, New York, New York October 5-8, 2005.
37. Division of Medicinal Chemistry and Pharmacognosy, College of Pharmacy, The Ohio State University. May, 11, 2005.

Conference Abstracts

19. Lorela Paço, John C Hackett, Michelle Redhair, Nicholas A. Treuheit and William M. Atkins. Ligand-dependent dynamics of cytochrome P450 3A4 in nanodiscs. International Conference on Cytochrome P450, Brisbane, Australia June 23-27, 2019.
20. Zarate-Perez, F.; Velázquez-Fernández, J. B., Jennings, G. K., Shock, L. S., Lyons, **C.** E.; Hackett, J. C. Biophysical Characterization of *Aptenodytes forsteri* Cytochrome P450 19 (Aromatase). American Society of Biochemistry and Molecular Biology Annual Meeting, San Diego, CA, April 21-25, 2018.
21. Mei-Hui Hsu, Brian R. Baer, John C. Hackett, Allan E. Rettie, Eric F. Johnson. X-ray crystal structures of rabbit P450 4B1 reveal structural adaptations for ω-hydroxylation. 20th International Congress on Cytochrome P450, Dusseldorf, Germany. August 27-31, 2017.
22. Jennings, G. K.; Ritchie, C. M.; Hackett, J. C. 1,3-Thiazol-2-ylidene inhibition of

CYP3A4. 19th International Conference on Cytochrome P450. Tokyo, Japan, June 11-15, 2015.

23. Jennings, G.K.; Modi, A.; Ritchie, C. M.; Hackett J. C. Capture and Characterization of Early Oxygen Intermediates in CYP51 Catalysis. Asian Biological Inorganic Chemistry Conference (AsBIC-VI), November 5-8, 2012, Hong Kong, China.
24. J. E. Elenewski and J. C Hackett, "Lifetime and Mechanism of Substrate Hydroxylation by Hydroxyiron(IV) Porphyrin Through *Ab Initio* Dynamics." 18th International Conference on Cytochrome P450, Seattle, WA (June 19, 2013)
25. Jennings, G.K.; Modi, A.; Ritchie, C. M.; Elenewski, J. E.; Hackett J. C. Spin Equilibrium and Oxygen Binding Kinetics of Mycobacterium tuberculosis CYP51. International Conference on Cytochrome P450 (ICCP450), June 18-22, 2013, Seattle, Washington, USA.
26. Elenewski, J. E; Hackett, J. C. Ab Initio Reaction Dynamics of Iron-Oxo (IV) Porphyrin. 34th ACS Reaction Mechanisms Conference, June 19-22, 2012, Columbia, Missouri.
27. Sen, K.; Hackett, J. C. Coupled through-space electron transfer and proton hopping in P450-catalyzed androgen aromatization. World Association of Theoretical and Computational Chemists (WATOC), July 17-22, 2011, Santiago de Compostela, Spain
28. Elenewski, J. E; Hackett, J. C.Path Integral Monte Carlo Simulations of Proton Tunneling In Effective Ab Initio Potential Landscapes. World Association of Theoretical and Computational Chemists (WATOC), July 17-22, 2011, Santiago de Compostela, Spain.
29. Jennings, G. K.; Modi, A.; Terner, J.; Hackett, J. C. The Role of Threonine 260 in Mycobacterium tuberculosis Lanosterol 14α-Demethylase Catalysis. Twenty-Sixth Annual Daniel T. Watts Research Poster Symposium, October 27-29, 2009, Richmond, VA, USA.
30. Jennings, G. K.; Elenewski, J. E.; Modi, A.; Terner, J.; Hackett, J. C. Spectroscopic Insight into Mycobacterium tuberculosis CYP51 Oxygen Activation at Cryogenic Temperatures. International Congress of BioInorganic Chemistry (ICBIC15), August 7-12, 2011, Vancouver, BC, Canada.
31. Sen, K. Hackett, J. C. Coupled through-space electron transfer and proton hopping in P450-catalyzed androgen aromatization. Computational Chemistry Gordon Research Conference, August 29-September 3, 2010. Les Diablerets, Switzerland.
32. Sen, K.; Hackett, J. C. MD and QM/MM Studies of Lanosterol 14α-Demethylase Catalysis: Theoretical Insight into P450-catalyzed C-C bond cleavage. 14th International Conference of Biological Inorganic Chemistry. Nagoya, Japan, July 25-30, 2009.
33. Sen, K.; Hackett, J. C. Proton transfer pathways for molecular oxygen activation in Mycobacterium tuberculosis CYP51. International Symposium on Microsomes and Drug Oxidations. Saratoga Springs, NY. July 6-10, 2008.
34. Sen, K; Hackett, J. C. Molecular dynamics simulation and QM/MM studies of *Mycobacterium tuberculosis* CYP51. 8th International ISSX meeting, Sendai, Japan October 9-12 2007.
35. Tao, P.; Hackett, J. C.; Hadad, C. M. Applying molecular dynamics to understand signal transduction: Recognition of TRPC6 by FKBP12**.** Abstracts of Papers, 232nd ACS National Meeting, San Francisco, CA, United States, Sept. 10-14, 2006.

36. Muthukrishnan, S.; Mandel, S. M; Hackett, J. C.; Hadad, C. M.; Singh, P. N. D.; Gudmundsdóttir, A. D. Photolysis of α-azidoazetophenones: Photochemical cleavage of triplet alkyl nitrenes.
37. Hackett, J. C; Sanan, T.; Hadad, C. M. Oxidation mechanisms of perhalogenated benzenes by cytochrome P450: A computational study. International Society of Quantum Biology and Pharmacology (ISQBP) Gilda Loew Memorial Meeting 2005 Williamson Theatre, CUNY College of Staten Island, New York, New York October 5-8, 2005.
38. Hackett, J. C ; Brueggemeier, R.W.; Hadad, C. M. Computational Chemistry for P450 Catalysis: Application to Aromatase and Oxidative Dehalogenation. 14th International Conference on Cytochromes P450: Biochemistry, Biophysics, and Bioinformatics. The Hyatt Regency Hotel, Dallas, Texas. May 31-June 5, 2005.
39. Hackett, J. C; Brueggemeier, R. W.; Hadad, C. M. The final catalytic step of cytochrome P450 aromatase unveiled by computational chemistry. Aromatase 2004, Edinburgh, Scotland. September 6-8 2004.
40. Hackett, J. C; Brueggemeier, R. W.; Hadad, C. M. Reactivity and Spectra of Model Cytochrome P450 Catalytic Intermediates. 36th Annual Graduate Student Symposium in Medicinal Chemistry, University of Michigan, Ann Arbor, Michigan. June 26-28, 2003.
41. Hackett, J. C ; Brueggemeier, R. W.; Hadad, C. M. Reactivity and Spectra of Model Cytochrome P450 Catalytic Intermediates (Abstract 198). The 12th North American ISSX Meeting, Providence, Rhode Island. October 12-16, 2003.
42. Hackett, J. C; Brueggemeier, R. W.; Hadad, C. M. Reactivity and Spectra of Model Cytochrome P450 Catalytic Intermediates (COMP 117) 226th American Chemical Society National Meeting. New York, New York. September 7-11, 2003.
43. Hackett, J. C ; Li, P.-K.; Brueggemeier, R. W. Virtual screening using a KGFR homology model. American Association for Cancer Research 93rd Annual Meeting, San Francisco, California. April 6-10, 2002.
44. James, M. O.; Gadagbui, B. K. -M.; Hackett, J. C. Glutathione S-transferases (GST) in fish and marine crustacea. Book of Abstracts, 21 6th ACS National Meeting, Boston, August 23-27, 1998.

Publications

1. Sweeney, D. T.; Krueger, S.; Sen, K.; Hackett, J.C. Solution structures of anionic lipoprotein nanodiscs. Submitted.
2. Hackett, J. C. PSI relieves the pressure of membrane fusion. *J. Biol. Chem.* **2020,** *295,* 14563-14564.
3. Paço, L.; Zarate-Perez, F.; Clouser, A. F.; Atkins, W. M., Hackett, J. C. Dynamics and mechanism of androstenedione binding to membrane-associated aromatase. *Biochemistry* **2020**, *25*, 2999-3009.
4. Zarate-Perez, F., Hackett, J. C. Conformational selection is present in ligand binding to cytochrome P450 19A1 lipoprotein nanodiscs. *J. Inorg. Biochem*. **2020***, 209,* 111120.
5. Redhair, M.; Hackett, J. C.; Pelletier, R. D.; Atkins, W. M. Dynamics and Location of the Allosteric Midazolam Site in Cytochrome P4503A4 in Lipid Nanodiscs. *Biochemistry* **2020**, 29,766-779.

6. Jennings, G. K.; Hsu, M.-H.; Shock, L. S.; Johnson, E. F.; Hackett, J. C. Non-covalent interactions dominate dynamic heme distortion in cytochrome P450 4B1. *J. Biol. Chem.* **2018,** *293*,11433-11446.
7. Zarate-Perez, F.; Velázquez-Fernández, J. B., Jennings, G. K., Shock, L. S., Lyons, C. E.; Hackett, J. C. Biophysical Characterization of Aptenodytes forsteri Cytochrome P450 Aromatase. *J. Inorg. Biochem*. **2018**, *184*, 79-87.
8. Hackett, J. C. Membrane-embedded substrate recognition by cytochrome P450 3A4. *J. Biol. Chem.* **2018**, *293,* 4037-4046.
9. Tao, P.; Hackett, J. C.; Kim, J. Y.; Saffen, D.; Hayes, C. J.; Hadad, C. "Molecular Determinants of TRPC6 Channel Recognition by FKBP12" in Computational Chemistry Methodology in Structural Biology and Materials Sciences, ISBN 978-1-77188-568-3, Apple Academic Press, Inc., **2017.**
10. Zuo, R.; Yi Zhang, Y.; Jiang, C.; Hackett, J. C.; Loria, R.; Bruner, S. D.; Ding, Y. Improving the nitration activity of P450 biocatalysts. *Sci. Rep.* **2017**, *7,* 842.
11. Jennings, G. K.; Ritchie, C. M.; Shock, L. Hackett, J. C. N-heterocyclic carbene capture by cytochrome P450 3A4. *Mol. Pharmacol*. **2016,** *90*, 42-51.
12. Sheldon, J. E. Dcona, M.M.; Lyons, C. E. Hackett, J. C. Hartman, M. C. T. Photoswitchable anticancer activity via trans–cis isomerization of a combretastatin A-4 analog. *Org. Biomol. Chem.* **2016**, *14*, 40-49.
13. Di Nardo, G.; Breitner, M.; Bandino, A.; Ghosh, D. Jennings, G. K.; Hackett, J. C.; Gilardi, G. Evidence for an elevated aspartate pKa in the active site of human aromatase. *J. Biol. Chem*. **2015**, *290*, 1186-1196.
14. Elenewski, J. E.; Hackett, J. C. Ab Initio Dynamics of the Cytochrome P450 Hydroxylation Reaction. *J. Chem. Phys.* **2015,** *142,* 064307.
15. Jennings, G. K.; Modi, A.; Elenewski, J. E.; Ritchie, C. M.; Nguyen, T.; Ellis, K. C.; Hackett, J. C. Spin equilibrium and O2-binding kinetics of Mycobacterium tuberculosis CYP51 with mutations in the histidine-threonine dyad. *J. Inorg. Biochem.* **2014**, *136*, 81-91.
16. Elenewski, J. E.; Hackett, J. C. Solvatochromism and the Solvation Structure of Benzophenone. *J. Chem. Phys.* **2013**, *138,* 224308.
17. Elenewski, J. E.; Hackett, J. C. Cytochrome P450 Compound I in the Plane–Wave Pseudopotential Framework: GGA Electronic and Geometric Structure of Thiolate–Ligated Iron (IV)–Oxo Porphyrin. *J. Comput. Chem.* **2013**, 34, 1647-1660.
18. Elenewski, J. E.; Hackett, J. C. A GGA+U approach to effective electronic correlations in thiolate-ligated iron-oxo (IV) porphyrin. *J. Chem. Phys.* **2012**, *137, 124311.*
19. Sen, K.; Hackett, J. C. Coupled electron transfer and proton hopping in P450-catalyzed androgen aromatization. *Biochemistry* **2012**, *51,* 3039-3049.
20. Lawrence, S. A.; Hackett, J. C.; Moran, R. G. Tetrahydrofolate recognition by the mitochondrial folate transporter. *J. Biol. Chem.* **2011**, 286, 31480-31489.
21. Elenewski, J. E.; Hackett, J. C. Free Energy Landscape of the Retinol/Serum Retinol Binding Protein Complex: A Biological Host-Guest System. *J. Phys. Chem. B* **2010***, 114,* 11315-11322.
22. Sen, K.; Hackett, J. C. Peroxo-iron mediated deformylation in lanosterol 14α-demethylase catalysis. *J. Am. Chem. Soc.* **2010**, *132*, 10293–10305. Google Scholar Citations: **35** This paper was highlighted in Patra, T., *et al.* Metal-Mediated Deformylation Reactions: Synthetic and Biological Avenues. *Angewandte Chemie*

International Edition **2011**, *50*, 12140-12142.

23. Alligrant, T.; Hackett, J. C.; Alvarez, J. C. Acid/Base and Hydrogen Bonding Effects on the Coupled Proton-Electron Transfer of Quinones and Hydroquinones in Acetonitrile: Mechanistic Investigation by Voltammetry, 1H-NMR, Electronic Spectra and Computation. *Electrochimica Acta* **2010***, 55,* 6507-6516*.*
24. Hackett, J. C. Chemical Reactivity Theory: A Density Functional View [Invited Book Review]. *J. Am. Chem. Soc.* **2010**, *132,* 7558*.*
25. Sen, K.; Hackett, J. C. Molecular oxygen activation and proton transfer mechanisms in lanosterol 14α-demethylase catalysis. *J. Phys. Chem. B.* **2009** *113,* 8170-8182.
26. Hackett J.; Xiao, Z.; Zang, X.P.; Lerner, M.L.; Brackett, D.J.; Brueggemeier, R.W.; Li, P.K.; Pento, J.T. Development of keratinocyte growth factor receptor tyrosine kinase inhibitors for the treatment of cancer. *Anticancer Res.* **2007**, *27*, 3801-3806.
27. Wang, J.; Kubicki, J.; Burdzinski, G.; Hackett, J. C.; Gustafson, T. L.; Hadad, C. M.; Platz, M. S. Early events in the photochemistry of 2-naphthyl azide from femtosecond UV/Vis spectroscopy and quantum chemical calculations. Direct Observation of a very short-lived singlet nitrene. *J. Org. Chem*. **2007**, *72*, 7581-7581.
28. Hackett, J. C; Sanan, T.; Hadad, C. M. Oxidation of perhalogenated benzenes by cytochrome P450 Compound I. *Biochemistry,* **2007**, *46*, 5924-5940.
29. Muthukrishnan, S.; Mandel, S. M.; Hackett, J. C.; Singh, N. D. P.; Hadad, C. M.; Gudmundsdottir, A. D. Competition between α-cleavage and energy transfer in α-azidoacetophenones. *J. Org. Chem.* **2007***, 72*, 2757-2768*.*
30. Burdzinski, G.; Hackett, J. C.; Wang, J.; Gustafson, T.; Hadad, C. M.; Platz, M. S. Early Events in the Photochemistry of Aryl Azides from Femtosecond UV/Vis Spectroscopy and Quantum Chemical Calculations. *J. Am. Chem. Soc.* **2006**, 128, 13402-13411.
31. Su, B.; Hackett, J. C ; Diaz-Cruz, E. S.; Kim, Y.-W.; Brueggemeier, R. W. Lead optimization of 7-benzyloxy 2-(4'-pyridylmethyl)thio isoflavone aromatase inhibitors. *Bioorg. Med. Chem.* **2005**, *13*, 6571-6577.
32. Burdzinski, G.; Gustafson, T.; Hackett, J. C; Hadad, C. M.; Platz, M. S. The Direct Detection of an Aryl Azide Excited State: An Ultrafast Study of the Photochemistry of Para and Ortho-Biphenyl Azide. *J. Am. Chem. Soc*. **2005**, *127*, 13764-13765.
33. Brueggemeier, R. W.; Hackett, J. C; Diaz-Cruz, E. D. Aromatase inhibitors for the treatment of breast cancer. *Endocrine Rev.* **2005**, *26*, 331-345.
34. Hackett, J. C; Brueggemeier, R. W.; Hadad, C. M. The final catalytic step of cytochrome P450 aromatase: A density functional theory study. *J. Am. Chem. Soc.* **2005***, 127,* 5224-5237.
35. Hackett, J. C; Kim, Y.-W.; Brueggemeier, R. W. Synthesis and Characterization of Azole Isoflavone Inhibitors of Aromatase. *Bioorg. Med. Chem.* **2005**, 13, 4063-4070.
36. Kim, Y.-W.; Hackett, J. C; Brueggemeier, R. W. Synthesis and Aromatase Inhibitory Activity of Novel Pyridine-Containing Isoflavones. *J. Med. Chem*. **2004**, *47*, 4032-4040.

Patents

1. Pento, T.; Li, P.-K.; Hackett, J. C; Brueggemeier, R. W. Keratinocyte Growth Factor Receptor - Tyrosine Kinase Specific Inhibitors for the Prevention or Cancer Metastasis *US7,960,548, B2. June 14, 2011*

2. Brueggemeier, R. W.; Kim, Y.-W., Hackett, J. C Novel Heteroaryl-containing Isoflavones as Aromatase Inhibitors. *US Pat. US20090253715. October, 8, 2009.*

Student and Postdoctoral Researcher Mentorship

Dr. Emil Iqbal, postdoc, 8/2018-06/2019, now Research Scientist, Merck
David Tyler Sweeney, rotation student, 2017, graduate student, 06/2017-current
Dr. Francisco Zarate-Perez, Research Scientist, 01/2016-current
Dr. Jesus Velazquez, postdoc, 12/2016-11/2017, now CIATEJ Guadalajara, Mexico
Dr. Kakali Sen, postdoc 2007-2010, Research Scientist, Scientific Computing Department STFC Daresbury Laboratory, United Kingdom.
Dr. Caroline Ritchie, postdoc, 2011-2013, now Covidien, Boston, MA
Dr. Justin Elenewski, Assistant Professor, University of New Mexico Department of Chemistry.
Dr. Gareth Jennings graduate student 2008-2012, postdoc 2012-2016, Research Scientist, Thermo Scientific,-San Diego
Dr. Thuy Nguyen, 2011-2013 , now RTI, North Carolina
Dr. Anuja Modi, Masters degree student 2007-2009, now UT Southwestern.
Dr. Shahenda El-Missiri, graduate student 2008-2009, Associate Professor, Mansoura University, Egypt
Dr. Lisa Shock, Postdoc, 2013-2016, now Assistant Professor, VCU Department of Microbiology and Immunology.
Madeleine Crozier, VCU Chemistry Undergraduate 2013-2017
Christopher Waite, VCU Physiology and Biophysics Rotation Student, 2014
Ashley Bennett, VCU Physiology and Biophysics Rotation Student, 2015
Tyler Steele, VCU Physiology and Biophysics Rotation Student, 2014
Samantha Katner, VCU Chemical Biology Rotation Student, 2014
Tyler Sweeney, VCU Physiology and Biophysics Rotation Student, 2017-

Committee Service

Search Committee Chair, Department of Microbiology and Immunology, 2017
Review of Recurring Activities, Department of Physiology and Biophysics, 06/2017
PharmD Program Curriculum, 2010-2013
PharmD Program Admissions, 2009-2013
Physiology and Biophysics Faculty Search Committee, 2008
PharmD Program Scholarship and Awards, 2008,2009
PharmD Program Academic Performance, 2007,2008
Promotion and Tenure Guidelines Committee, 2008-2011

Teaching (Title, Year(s), [Hours])

Molecular Pharmaceutics, 2010, [3]
Molecular Modeling, 2007-2012, [6/yr]
Special Topics in Medicinal Chemistry, 2011 [4],2012, [8]
Womens Health 2011[3], 2012[3]
Pharmaceutical Foundations Laboratory 2009[24], 2010[16], 2011,[16], 2012[16]
Pulmonary Therapeutics Module, 2010-2012 [4/yr]
Medicinal Chemistry for Nurse Anesthesia, 2007-2013 [3/yr]
Basic Pharmaceutical Principles, 2008[5], 2009-2011[14/yr]

Introduction to Pharmaceutical Science, 2009-2012[3/yr]
Advanced Medicinal Chemistry-Enzyme Reaction Mechanisms, 2007[5], 2009[5], 2011[8]*
Medicinal Chemistry (Non-Major Survey Course), 2007-2011 [1.5/yr]
Medicinal Chemistry (PharmD Professional Course), 2007[6], 2008[6]
Molecular Mechanism of Xenobiotic Metabolism, 2008 [15]*, 2010[17]*
Clinical Skills Laboratory, 2007[12], 2008[24]
Ion Channels in Membranes, 2015, 2017, 2019 [2]
From Molecules to Organisms: Molecular Biophysics, 2013-2016 [3/yr]
Graduate Physiology-Adrenal Physiology, Male and Female Reproductive Physiology, Pregnancy , 2015, 2016, 2017, 2018, 2019 [4/yr]
Physiology (for Dentistry) Adrenal Physiology, Male and Female Reproductive Physiology, Pregnancy, 2017, 2018, 2019,2020 [4/yr]
*denotes course coordinator

Other Service Activities
Faculty Advisor, Rho Chi Pharmaceutical Honor Society, Lambda Chapter 2008-2011

Professional References (Alphabetical Order)

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Professional Preparation

Dillard University	Physics	B.S.		1982
Columbia University	Electrical Engineering	B.S.		1983
Columbia University	Electrical Engineering	M.S.		1984
University of South Florida	Electrical Engineering	Ph.D.		2009

Appointments

2020 - present	Assoc. Professor	Dept. of Electrical and Computer Engineering, UTEP
2014 - 2020	Asst. Professor	Dept. of Electrical and Computer Engineering, UTEP
2010 - 2014	Asst. Professor	Dept. of Electrical Engineering, SPSU (now KSU)
2014 - present	Visiting Faculty	NSLS II-CFN-Nonproliferation and National Security, BNL
1989 - 1993	Sr. Systems Engineer	Martin Marietta Manned Space Systems (Lockheed-Martin)
1984 - 1989	Software Engineer	IBM Federal Systems Division
1988 - 1996	Officer – Lt. JG	Engineering Field Division, U.S. Navy Reserves

Products

- Journal Articles

1. Luis Valerio Frias, Angel De La Rosa, Victor Rodriguez, Christian Enriquez, Alberto Telles, Yves Ramirez, Daniel Rivera, Javier Herrero, Luis Bustamente, Xiao Tong and **Deidra Hodges**, "Characterization and Analysis of Device Fabrication Process for Performance Optimization of Perovskite Solar Cells", *AIP Advances*, October, 2019.
2. Shaimum Shahriar, Venessa Castaneda, Manuel Martinez, Aditya Mishra, Tahmina Akter, Kelly Schutt, Jorge Boscoboinik and **Deidra Hodges**, "Oxidation States in perovskite layers formed using various deposition techniques", *Journal of Renewable and Sustainable Energy*, October, 2019.
3. Felicia Manciu, Kevin Bennet, Yoonbae Oh, Abhijeet Barath, Aaron Rusheen, Abbas Kousani, **Deidra Hodges**, Jose Guerrero, Jonathan Tomshine, and Kendall Lee, "Analysis of Carbon-based Microelectrodes for Neurochemical Sensing", *Materials*, October, 2019.
4. Castro-Colin, M., L. Banuelos, C. Diaz-Moreno, **Deidra Hodges**, E. Ramirez-Homs, D. Korolkov, N. Sharmin, and J. A. Lopez. "Temperature Effects in the Composition of Metal Halide Perovskite Thin Films", *Journal of Nuclear Physics, Materials Sciences, Radiation and Applications*, August 2018.
5. Rosales, C. A. G., Duarte, M. F. G., Kim, H., Chavez, L., **Hodges, Deidra**, Mandal, P., & Tseng, T. L. B. 3D printing of shape memory polymer (SMP)/carbon black (CB) nanocomposites with electro-responsive toughness enhancement. *Materials Research Express*, 2018.
6. L. O. Giraldo, A. Bolotnikov, G. Camarda, G. De Geronimo, J. Fried, **D. Hodges**, A. Hossain, E. Vernon, and R.B. James, "A linear array of position-sensitive virtual Frisch-grid CdZnTe for low-energy gamma rays." *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, 2018.

7. Luis O. Giraldo, Aleksey Bolotnikov, G. Camarda, G. De Geronimo, J. Fried, R. Gul, **D. Hodges**, A. Hossain, E. Vernon, and R.B. James, "Study of sub-pixel position resolution with time-correlated transient signals in 3D pixelated CdZnTe detectors with varying pixel sizes," *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, 2017.
8. Luis Ocampo Giraldo, Aleksey E. Bolotnikov, G.S. Camarda, S. Cheng, G. De Geronimo, A. McGilloway, J. Fried, **D. Hodges**, A. Hossain, K. Ünlü, M. Petryk, Valerie Vidal, E. Vernon, G. Yang and R.B. James, Using a pulsed laser beam to investigate the feasibility of sub-pixel position resolution with time correlated transient signals in 3D pixelated CdZnTe detectors, *Nuclear Inst. and Methods in Physics Research, A*, 2017.
9. Eva M. Deemer, P. K. Paul, Felicia S. Manciu, C. E. Botez, **Deidra R. Hodges**, Z. Landis, *et al.*, "Consequence of oxidation method on graphene oxide produced with different size graphite precursors," *Materials Science and Engineering: B*, vol. 224, pp. 150-157, 2017.
10. Aditya Mishra, J. Catalan, D. Camacho, M. Martinez, and **Deidra Hodges**, "Evaluation of physics-based numerical modelling for diverse design architecture of perovskite solar cells," *Materials Research Express*, vol. 4, p. 085906, 2017.
11. Aditya Mishra, **Deidra Hodges**, and R. Misra, "Influence of processing temperature and precursor composition on phase region of solution processed methylammonium lead iodide perovskite," *Materials Research Express*, vol. 4, p. 096201, 2017.
12. Aditya Mishra, A. Kumar, **Deidra Hodges**, and R. Misra, "Tunable TiO2–pepsin thin film as a low-temperature electron transport layer for photoelectrochemical cells," *Materials technology*, vol. 32, pp. 829-837, 2017.
13. Manuel Martinez, Shaimum Shahriar, Donato Kava, Cheik Sana, Vanessa Castañeda, Jose Galindo, **Deidra Hodges,** "Effects of Processing Parameters on Zinc Oxide Thin Films Prepared by Single Solution Deposition," *MRS Advances*, 2016
14. Karim, H., Sarker, M. R. H., Shahriar, S., Shuvo, M. A. I., Delfin, D., **Hodges, D. R.**, Tseng, T.-L. B., Roberson, D. A., Love, N. D., Lin, Y, "Feasibility study of thermal energy harvesting using lead free pyroelectrics", *Smart Materials and Structures, 25*(5), 055022, 2016.
15. Aleksey Bolotnikov, Kim Ackley, Giuseppe S. Camarda, Carly Cherches, Yonggang Cui, Gianluigi De Geronimo, Jack Fried, **Deidra Hodges**, Anwar Hossain, Wonho Lee, George Mahler, Maxwell Maritato, Matthew Petryk, Utpal Roy, Cynthia Salwen, Emerson Vernon, Ge Yang, and Ralph James, "An array of virtual Frisch-grid CdZnTe detectors and a front-end ASIC for large-area position-sensitive gamma-ray cameras", *Review of Scientific Instruments*, 2015.

- Conference Proceedings
  1. **D. Hodges**, L. V. Frias, A. De La Rosa, A. I. Leyva, and X. Tong, *Synchrotron and optical probing of mixed lead halide perovskites for photovoltaics* vol. 11474: SPIE, 2020.
  2. **D. Hodges**, S. Shahriar, C. Camarillo, C. Maldonado, Y. Ramirez, V. Rodriguez, *et al.*, "Synchrotron and optical probing of hybrid organic-inorganic perovskite halides for photovoltaics," in *2019 IEEE 46th Photovoltaic Specialists Conference (PVSC)*, 2019, pp. 1170-1174.

3. C. Enriquez, **D. Hodges**, A. De La Rosa, L. V. Frias, Y. Ramirez, V. Rodriguez, *et al.*, "Perovskite Solar Cells," in *2019 IEEE 46th Photovoltaic Specialists Conference (PVSC)*, 2019, pp. 1157-1160.
3. Irakli Chakaberia; Mircea Cotlet; Merlin Fisher-Levine; **Diedra R. Hodges**; Jayke Nguyen; Andrei Nomerotski; "Time stamping of single optical photons with 10 ns resolution". *Proc. SPIE Advanced Photon Counting Techniques XI*, 102120Q, May 2017.
4. Nazia Sharmin, J. Lopez, **Deidra Hodges**, Shaimum Shahriar, Venassa Castaneda, and Aditya Kumar, "Degradation of perovskite samples over time," *Bulletin of the American Physical Society*, vol. 61, 2016.
5. Shaimum Shahriar, Cheik Sana, Jose Galindo, Donato Kava, **Deidra Hodges**, Edison Castro, Robert Cotta, David Buck, and Luis Echegoyen, "Characterization and Analysis of Structural and Optical Properties of Perovskite Thin Films" in *42th IEEE Photovoltaic Specialists Conference Proceedings*, New Orleans, LA, 2015.
6. Jose Galindo, Donato Kava, Shaimum Shahriar, Cheik Sana, Edison Castro, Robert Cotta, David Buck, and Luis Echegoyen and **Deidra Hodges**, "Low Cost Spin Coating Fabrication of Efficient Perovskite Thin Film Layers" in *42th IEEE Photovoltaic Specialists Conference Proceedings*, New Orleans, LA, 2015.
7. **Deidra Hodges**, Cheik Sana, Shaimum Shahriar, Jose Galindo, Donato Kava, Edison Castro, Robert Cotta, David Buck, and Luis Echegoyen "Earth Abundant and Nontoxic Material for Low Cost, Thin Film Solar Cells" *in 2015 IEEE Conference on Technologies for Sustainability (SusTech)*, Ogden, Utah, 2015.
8. Okhio, Cyril, **Hodges, Deidra R**., Black, Jennifer. (2010). Review of literature on nanofluid flow and heat transfer properties. *Cyber Journals: Multidisciplinary Journals in Science and Technology, Journal of Selected Areas in Nanotechnology (JSAN), 1,* 1–8.
9. **Hodges, Deidra R**., Jones, B., Moseley, T., Love, A., Burke, C., Jones, E., Tyx, I., Chaulogain, M., Johnson, O., "Development of CZTS Thin Films by Non-vacuum, Liquid-based Techniques for Efficient, Low-cost CZTS Solar Cells", in *39th IEEE Photovoltaic Specialists Conference Proceedings*, Tampa, FL, 2013.
10. **Hodges, Deidra R.,** Palekis, V., Bhandaru, S., Singh, K., Morel, D. L., Stefanakos, L., "Mechanical properties and adhesion of CdTe/CdS thin film solar cells deposited on flexible foil substrates". *MRS Proceedings, 1165*, 1165–M02, 2009.
11. Palekis, Vasellis, **Hodges, Deidra R.**, Morel, D. L., Stefanakos, L., Ferekides, C. S., "Structural Properties of CdTe Thin Films for Solar Cell Applications Deposited on Flexible Foil Substrates". *MRS Proceedings, 1165*, 1165–M08, 2009.
12. Palekis, Vasillis, Guntur, V., **Hodges, Deidra R.**, Morel, D., Stefanakos, E., Ferekides, C., "Substrate based CdTe solar cells fabricated on metallic foils: Device, material, and processing issues*", in Photovoltaic Specialists Conference (PVSC) 37th IEEE*, (pp. 002779–002783), 2011.
13. Palekis, Vasillis, Shen, Donna, **Hodges, Deidra R.**, Bhandaru, S., Stefanakos, E., Morel, D., Ferekides, C., "Structural properties of CdTe and ZnTe thin films deposited on flexible foil substrates", *Photovoltaic Specialists Conference (PVSC) 35th IEEE*, (pp. 001960–001963), 2010.
14. Shen, Dona, Palekis, V., **Hodges, Deidra R.**, Bhandaru, S., Guntur, V., Stefanakos, E., Morel, D., Ferekides, C., "Tellurides as back contacts for substrate CdTe thin film solar

cells on flexible foil substrates", *Photovoltaic Specialists Conference (PVSC) 35th IEEE,* (pp. 001973–001976), 2010.

15. **Hodges, Deidra R.,** Palekis, Vasillis, Shen, Dona, Singh, K., Bhandaru, S., Stefanakos, E., Morel, D., Ferekides, C., "Development of back contacts for CdTe thin film solar cells deposited on flexible foil substrates". (pp. 001649–001653), 2009.
16. Zhao Hehong, T. M. Razykov, **Deidra Hodges,** A. Farah, C. S. Ferekides, and D. Morel, "Introduction of Sb in CDTE and its effect on CDTE solar cells," in *Photovoltaic Specialists Conference, PVSC '08. 33rd IEEE,* 2008, pp. 1-5.

- Invited Presentations
  1. SPIE Organic, Hybrid, and Perovskite Photovoltaics XXI Conference, San Diego, CA, August 23-27, 2020.
  2. BNL CFN, Upton, NY, "Perovskite Photovoltaics and Gamma-ray Radiation Detectors Research Highlights", 2014-2019.
  3. miniCAST Night at the Museum Lightning Talks Energy Sustainability and Photovoltaics October 19, 2018.
  4. SUNY Canton, *Women in Engineering*, May 16, 2018.
  5. WIN, Thin Film Photovoltaics, Renewable Energy & Sustainability April 5, 2018.
  6. Florida International University Fall 2017 Seminar Series Perovskite PV, X-ray and Gamma-ray Detectors November 17, 2017.
  7. USF College of Engineering and NREC Seminar Perovskite PV, X-ray and Gamma-ray Detectors October 31, 2017.
  6. AVS 64th International Symposium, Tampa, FL, "Synchrotron-Based X-ray Spectroscopy Studies of Inorganic-Organic Hybrid Perovskite Materials Surfaces and Properties", 2017.
  7. DOE/ NREL HOPE, Golden, CO, "Understanding the power of PV and how our research will be used", 2014, 2016, 2019.
  8. BNL Visiting Faculty Program (VFP), Upton, NY, "Perovskite PV, X- and γ–ray Detectors", 2014-2019.
  9. IEEE Technologies for Sustainability, Ogden, Utah, "Earth Abundant and Nontoxic Material for Low Cost, Thin Film Solar Cells", 2015.
  10. AVS 62nd International Symposium, San Jose, CA, "Spin Coating Thin Film CZTS for Efficient, Low-Cost Solar Cells on Flexible Glass Substrates", 2015.

- Contributed Presentations
  1. **Deidra Hodges**, Shaimum Shahriar, Clara Camarillo, Carlos Maldonado, Yves Ramirez, Victor Rodriguez, Tahmina Akter, Geoffrey Saupe, Garth Williams, Juergen Thieme, Fernando Camino, Mingxing Li, Mircea Cotlet, Nusnin Akter, J. Anibal Boscoboinik, Luis Ocampo, and Aleksey Bolotnikov, "Synchrotron-Based X-ray Spectroscopy Studies of Inorganic-Organic Hybrid Perovskite Materials Surfaces and Properties", in *46th IEEE Photovoltaic Specialists Conference Proceedings*, in Chicago, IL, 2019. N**ominated for Best Poster award.**

2. **Deidra Hodges**, Kelly Schutt, Bernard Wenger, Shaimum Shahriar, Clara Camarillo, Carlos Maldonado, Yves Ramirez, Victor Rodriguez, Tahmina Akter, Geoffrey Saupe, Garth Williams, Juergen Thieme, Fernando Camino, Mingxing Li, Mircea Cotlet, Nusnin Akter, J. Anibal Boscoboinik, Luis Ocampo, Aleksey Bolotnikov and Henry J. Snaith, "Synchrotron-Based X-ray Spectroscopy Studies of Inorganic-Organic Hybrid Perovskite Materials Surfaces and Properties", *11th International Conference on Inelastic X-ray Scattering (IXS2019)*, Stony Brook University, NY, 2019.
3. Angel De La Rosa, "Fabrication of Single Perovskite Solar Cells and Projection to Increase V_{oc} via SnO_2 Experimentation", *11th International Conference on Inelastic X-ray Scattering (IXS2019)*, Stony Brook University, NY, 2019
4. Luis Valerio, "Analysis of Device Fabrication's Process for Optimization of Perovskite Solar Cells", *11th International Conference on Inelastic X-ray Scattering (IXS2019)*, Stony Brook University, NY, 2019
5. RICE University: Materials Today: Materials Science for the Next Two Decades Synchrotron and Optical Probing of Hybrid Organic-Inorganic Perovskite Halides for Photovoltaics September 27, 2018.
6. **Deidra Hodges**, Shaimum Shahriar, Venassa Castaneda, Aditya Kumar, Valarie Vidal, Manuel Martinez, Nazia Garcia, Jazmin Munoz, and Jenny Lopez, "Synchrotron-Based X-ray Spectroscopy Studies of Inorganic-Organic Hybrid Perovskite Materials Surfaces and Properties", *AVS 64th International Symposium*, Tampa, FL 2017.
7. Jose Galindo, Chiek Sana, Shaimum Shahriar, Donato Kava, Manuel Martinez, Vanessa Castañeda, **Deidra Hodges**, "Room Temperature Processed CuSCN Hole Transportation Layers for the Use in Perovskite Based Solar Cells," *MRS Spring Meeting*, Phoenix, Arizona, 2016.
8. MRS 2016 Spring Meeting, Phoenix, AZ, 2016.
9. 42nd IEEE Photovoltaics Specialists Conference, New Orleans, LA, 2015.

RESEARCH IN PROGRESS

o Funded Research

1. Hodges, Deidra R (PI), "Synchrotron and Optical Probing of Hybrid Organic-Inorganic Perovskite Halides for All-Perovskite Triple Junction (a-P3J) Tandem Photovoltaics", Sponsored by the **Sloan Foundation**, **$10,000**, Aug. 1, 2019 – May 31, 2020.
2. Hodges, Deidra R (Co-PI), Ramana, Chintalapalle (PI), "Acquisition of an Atomic Layer Deposition System to Realize Advanced High Electrical Strength Materials for Extreme Environment Applications," **$590,000**. Sponsored by **ARO**, (June 21, 2019 - Present). Equipment grant.
3. Hodges, Deidra R (Co-PI), "Investigation and Study of Hybrid Perovskite Halides for X- and Gamma-ray Detectors and Photovoltaics" Sponsored by **Dept. of Education**, **$49,954**. (June 1, 2019 - August 30, 2019), Supplement through Dept. of Education MSEIP, Villa, Elsa (PI).
4. Hodges, Deidra R (Co-PI), "Hybrid Inorganic-Organic Perovskite Halides Thin-Film Photovoltaics Co-PI," Sponsored by **NSF**, **$63,307**, (May 1, 2018 - August 30, 2018), Supplement through NSF LSAMP, Flores, Benjamin C (PI).
5. Hodges, Deidra R (Co-PI), "Hybrid Inorganic-Organic Perovskite Halides Thin-Film Photovoltaics," Sponsored by **NSF**, **$52,755**. (May 1, 2017 - August 30, 2017), Supplement through NSF LSAMP, Flores, Benjamin C (PI).

6. Hodges, Deidra R (PI), "Investigation of Hybrid Inorganic-Organic Perovskite Halides: Materials Structure and Property Relationships for Photovoltaics," **$5,000**. Sponsored by **UTEP URI** (February 1, 2019 - August 30, 2019).
7. Hodges, Deidra R (Key Personnel), Misra, Devesh (PI), "Acquisition of an Advanced Thermal Analysis and Imaging System for Integration with Interdisciplinary Research and Education in Low Density Organic-Inorganic Materials," Sponsored by **ARO**, $**494,532**. (June 27, 2016 - Present), Equipment grant.
8. Hodges, Deidra R (Key Personnel), Lopez, Jorge A (PI), "Surface Characterization of Materials," Sponsored by **ARO**, **$404,514**. (June 1, 2016 - Present), Equipment grant.
9. Hodges, Deidra R (Co-PI), "An Integrated Mechanical, Testing and Characterization System for Thin-Engineered Materials Subjected to Ultra-High-Cycled Fatigue," **UTEP Research Initiative**, **$20,000**. (August 30, 2016), Stewart, Calvin (PI).
10. Hodges, Deidra R (Co-PI), "Hybrid Inorganic-Organic Perovskite Halides Thin-Film Photovoltaics," Sponsored by **NSF**, **$46,268**. (May 1, 2016 - August 30, 2016), Supplement through NSF LSAMP, Flores, Benjamin C (PI).
11. Hodges, Deidra R (PI), "Investigation of Hybrid Inorganic-Organic Perovskite Halides: Materials Structure and Property Relationships for Photovoltaics," **$5,000**. Sponsored by **UTEP URI** (November 1, 2015 - August 30, 2016).
12. Hodges, Deidra R (PI), "MRI: Acquisition of a Thin-Film Materials Deposition System," Sponsored by **NSF**, Federal, **$204,150**. (September 1, 2012 - August 31, 2013).
13. Hodges, Deidra R (PI), "CZTS Thin-Films and Solar Cells by Liquid-Based Techniques," Sponsored by **NSF**, Federal, **$175,000**. (August 15, 2011 - July 31, 2013).

o Other Research – The following peer-reviewed proposals were approved by BNL Center for Functional Nanomaterials (CFN), a user-oriented nanoscience research facility. No cost access was provided to specified instruments, facilities, techniques and Scientists in support of the PI's perovskite thin-film photovoltaics research. Additionally, most recently, no cost access was provided to the National Synchrotron Light Source (NSLS II) in support of the PI's research.

1. Hodges, Deidra R (PI), "Nanoscale Advanced X-ray and Optical Probing, Spectroscopy, Microscopy and the Nanoscience of Hybrid Inorganic-Organic Perovskites Halides for Thin Film Photovoltaics," BNL Center for Functional Nanomaterials (CFN). (May 1, 2019 - December 2020).
2. Hodges, Deidra R (PI), "Nanoscale Advanced X-ray and Optical Probing, Spectroscopy, Microscopy and the Nanoscience of Hybrid Inorganic-Organic Perovskites Halides for Thin Film Photovoltaics," BNL Center for Functional Nanomaterials (CFN). (January 1, 2017 - April 30, 2018).
3. Hodges, Deidra R (PI), "Advanced Optical and Spectroscopy and Microscopy Probing and the Nanoscience of Hybrid Inorganic-Organic Perovskites Halides for Thin Film Photovoltaics," BNL Center for Functional Nanomaterials (CFN). (July 1, 2016 - August 30, 2016).
4. Hodges, Deidra R (PI), "Nanoscale Advanced X-ray Probing and Spectroscopy and the Nanoscience of Hybrid Inorganic-Organic Perovskites Halides for Thin Film Photovoltaics," BNL Center for Functional Nanomaterials (CFN). (July 1, 2016 - August 30, 2016).

TEACHING ACCOMPLISHMENTS

- New (3) and Existing (2) Courses Developed:

1. **EE3325 - Applied Quantum Mechanics for EE**
   An introductory course designed to provide students with a fundamental understanding of (1) electron energy, electron/photon interaction, and electron energy transitions; (2) electromagnetic wave theory and quantization of photon energy; (3) laser theory and operation; and (4) advanced applications such as quantum dots, zener diodes and resonant tunneling diodes. This includes applying boundary conditions to solve the time-independent Schrödinger's equation, normalization of the wave function, and applying fundamental solutions such as the infinite potential well (particle-in-a-box) and finite potential well to laser, quantum dot and tunneling applications.

2. **EE4377/EE5381 - Applied Photovoltaics**
   Semiconductors have emerged as the most promising class of materials that can convert sunlight directly into electrical energy. This course presents the fundamental principles of the solar energy conversion process and the most common cell technologies are discussed. A range of semiconductor materials are discussed for their potential use in photovoltaic applications, considering the material properties that affect the device performance, including efficiency, cost and environmental conditions (e.g., terrestrial or space applications and duration of sunshine), and the availability and toxicity of the raw materials. This course will also cover a range of fundamental problems and the relationship between the physics, material science, and technology aspects of solar cell development. Students will learn the fundamental and quantitative principles of the solar energy, as well as its potential economic and societal impact.

3. **EE4395/EE5380 - Renewable Energy and Energy Sustainability**
   Energy is a major key to industrial development and a worldwide economy. Constantly growing demand for energy that relies on a finite supply of fossil fuels, presents challenges for scientists, engineers and governments to explore and develop alternative sources of energy that are continuous, renewable and environmentally friendly. This course provides important knowledge about many aspects of renewable energy sources. This course assesses the current and potential future energy systems, covers resources, extraction, conversion, and end-use, and emphasizes meeting regional and global energy in the 21st century in a sustainable manner. Students will learn the fundamental and quantitative principles of the renewable energy options, as well as their potential economic and societal impact.

4. **EE4395/EE5390 - Semiconductor Material and Device Characterization**
   Semiconductor material and device characterization has continued to advance with the development of new techniques and the improvements in existing techniques. This course presents the fundamental principles of many of the characterization techniques used in the semiconductor industry. Concepts and theory underlying the techniques are reviewed, and

selected experimental results are presented. Emphasis is on techniques employing electrical, optical and physical/chemical characterization, including scanning probe techniques: X-ray fluorescence, contactless lifetime/diffusion length measurements, and charged-based techniques including transmission electron microscopy through the use of focused ion beam sample preparation.

5. **EE4350/EE5390 - Device Electronics for Integrated Circuits**

The impact of integrated circuits (ICs) and semiconductor devices on engineering and on the broader society continues to grow. ICs contain tens-of-millions of active devices on a chip. The majority of chips are formed of silicon and the majority of devices are metal-oxide-semiconductor (MOS) field-effect transistors (MOSFETS), which displaced the formerly dominant bipolar junction transistors (BJTs). This course provides an overview of the physical electronics of semiconductors, silicon technology, IC fabrication, *pn* junctions, bipolar transistors, and MOSFETS.

- Teaching Evaluations

Below is the summary of teaching evaluations listing the overall instructor and course evaluations.

- Instructor overall evaluation: range 4.7 to 5.0; **average 4.94**
- Course overall evaluation: range 4.5 to 5.0; **average 4.81**

Semester	Course	Enrl	Resp	Instr Ovr	CrseOvr
Spring 2019	EE3325	70	44	Av.6/1/2019	6/1
	EE4377	31	21	Av.6/1/2019	6/1
	EE5381	11	11	Av.6/1/2019	6/1
Fall 2018	EE3325	66	18	5	5
	EE4395	25	10	5	4.909
	EE5380	5	1	5	4.909
Spring 2018	EE3325	66	18	5	4.888
	EE4350	29	9	4.9166	4.75
	EE5390	6	3	4.9166	4.75
Fall 2017	EE3325	63	10	5	4.7
	EE4395	21	4	5	5
	EE5380	8	3	5	5
Spring 2017	EE3325	42	10	4.8	4.5
	EE4395	23	8	5	5
	EE5390	9	3	5	5
Fall 2016	EE3325	63	14	4.7857	4.5714
	EE5380	16	14	4.9285	4.7142
	EE4395	28	14	4.9285	4.7142
Spring 2016	EE3325	50	17	4.7058	4.6470
	EE5390	12	12	5.0000	5.0000
	EE4395	18	12	5.0000	5.0000

Fall 2015	EE3325	49	20	4.9500	4.5500
	EE5390	11	7	4.8571	4.4285
	EE4395	17	7	4.8571	4.4285
Spring 2015	EE5390	9	7	5.0000	5.0000
	EE4395	19	7	5.0000	5.0000
Fall 2014	EE3325	41	27	4.9629	4.8518

Comment #1: Spring 2018 EE3325
The content is easy to follow along, and it was found beneficial to do the in-class examples as a class. I felt that this class further stimulated my interest in electrical engineering. *** Excellent instructor, knows what she is talking about and likes it. It looks like she likes to teach and challenge students. She cares for her students but is strict at the same time. You can see that she enjoys when the students question what she is teaching. Meaning that she makes the students to be more involved in the class. *** Amazing professor and teaching methods were great. *** Loved this course and the professor!

Comment #2: Fall 2017 EE3325
The class was very interesting and engaging. The professor kept us engaged with the content and always had new ways of teaching us about the material. *** I absolutely loved Dr. Hodges class. I went to every single class waking up at 6:30am every day happy to go to class because she was such an awesome lecturer and made class fun every single class.

- Honors and Awards in Teaching
  - UTEP Electrical and Computer Engineering Class of 2019 Nicest Professor Award.
  - UTEP College of Engineering Dean's Award for Excellence in Teaching, 2017.
  - UTEP Electrical and Computer Engineering Class of 2016 Best Professor Award.
  - SPSU Teacher of the Year Award, 2012.

SERVICE AND HONORS

- Professional Honors, Prizes, Fellowships
  - 46^{th} IEEE PVSC June 16-21, 2019, Chicago, IL. **Nominated for best poster.**
  - Department – Faculty Marshall of Students for the College of Engineering, May 2017
  - Department – Administered the Oath at the Assembly of the Engineers, 2015-2018.
  - USF Presidential Leadership Award.
  - Alfred P. SLOAN and F.E.F. McKnight Doctoral Fellowships Awards.
  - Martin Marietta Manned Space Systems Thomas Jefferson Cup Award and Independent Research and Development of the Year Award.

- UTEP Committees Served
  - University – Search committee member for the New Athletic Director
  - College – Tau Beta Pi Engineering Honor Society, Faculty Advisor, 9/2015-present.
  - Department (MMBM) –Search committee member, (8/16/2019-present)
  - Department –Alternate to the Faculty Senate, (9/2019 – present)
  - Department –Library Faculty Departmental Liaison, (9/1/2017-present)
  - Department – Energy, Electromagnetic Fields, and Devices (EFD), (9/1/2014-present)

- Membership in Professional Societies

  Professional Memberships: Institute of Electrical and Electronics Engineer (IEEE), Institute of Nuclear Materials Management (INMM), Electron Device Society (EDS), Materials Research Society (MRS) and American Society for Engineering Education (ASEE).

- Other Professional Activities and Public Service

1. **Editor -** Editor of Elsevier's *Materials Science in Semiconducting Processing (MSSP)*. https://www.journals.elsevier.com/materials-science-in-semiconductor-processing/editorial-board/assist-prof-deidra-r-hodges-phd
2. **Harvard University** – 2019 Minority Faculty Development Workshop, *Engineering a World of Difference: Policy and Practice*, Sept. 18-21, 2019. **Invited participant.**
3. **Dept. of Education, Washington, DC** – MSEIP CCEM Capacity Building Grant Conference, Oct. 27-29, 2019. **Invited speaker** (did not speak due to insufficient time).
4. **National Renewable Energy Laboratory (NREL)** Hands-on Photovoltaic Experience (HOPE) and Faculty Development Workshops, July 2019, July 2016 and June 2014. **Invited talks and panelist.**
5. **National Science Foundation (NSF) ECCS –** July 7-9, 2019. **Invited Panelist.**
6. **Brookhaven National Laboratory (BNL) Center for Functional Nanomaterials (CFN) – Proposal reviewer.** July 5-7, 2019.
7. **EXAFS 2018 Short Course: Intro to X-ray Absorption Spectroscopy**, BNL, November 6-8, 2019. **Selected attendee.**
8. BNL Center for Functional Nanomaterials (CFN) **Ambassador**, (8/1/2018 – present)
9. Southern New Mexico Dust Conference with Department of Geological Sciences, Las Cruces, NM, April 17, 2019. **Attendee.**
10. 2018 NSF EFRI Workshop: Convergence and Interdisciplinarity in Advancing Larger Scale Research, May, 14, 2018. **Attendee.**
11. Dept. of Energy Consolidated Nuclear Research Reviewer, NSF Panelist Reviewer, and Journal Referee for Thin Solid Films Journal, SPIE Optical Engineering and Journal of Applied NanoScience. **Reviewer.**
12. Conference Session Chairs for the 5th Southwest Energy Science and Engineering Symposium, and the College of Engineering Research Forum. **Session Chair.**
13. College of Engineering Tau Beta Pi (TBP) FACULTY Advisor; hosted a district conference 5/2017 at UTEP. Chapter recipient of an endowment from the National TBP organization.
14. UTEP Order of the Engineer Ceremony – administration of the Obligation speaker.
15. Participated in a Whitehouse STEM seminar at Tuskegee, at the request of NREL, with plans to develop URM in STEM at NREL collaboration.
16. UTEP collaborations with faculty in Mechanical Engineering (Calvin Stewart, Yirong Lin, Pavana Prabhakar), Physics (Felicia Manciu and Jorge Lopez), and Metallurgy (Binata

Joddar and Devesh Misra), and external collaborations with BNL (Radiation Detection, NSLS II, and CFN), and NREL Hands-on Photovoltaics and Faculty Development.

17. Worked with the PREM supporting 6 students (1 GR, 4 UG and 1 UCSB). Attended a PREM meeting at NSF in Washington, DC and attended a PREM conference at UCSB.
18. Attended professional development workshops: 1) NREL, 2) WoC conference at Stanford University and NSF's MFDW in Washington, DC.
19. Invited to use the BNL National Synchrotron Light Source II Beamline 5-ID Submicron Resolution X-ray Spectroscopy (SRX). Performed both XANES and XRF synchrotron radiation analysis of perovskite and cadmium zinc telluride materials for solar cells and radiation detectors.
20. Traveled to Carnegie Mellon University with former Interim Dean Ferregut and a group of College of Engineering faculty, to identify and develop collaborative opportunities with CMU faculty.

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CURRICULUM VITAE

NAME: Ying Liu, MD, PhD

JOB TITLE: Associate Professor
McGovern Medical School at UTHealth

WORK ADDRESS: Center for Stem Cell and Regenerative Medicine, IMM
1825 Pressler St., SRB630G
Houston, TX 77030

UNDERGRADUATE EDUCATION:

B.S. M.S. (Equivalent to M.D.) Medicine, 1996
Combined program of BS-MS in Medicine
Peking University Health Science Center
Beijing, China

GRADUATE EDUCATION:

Doctor of Philosophy, 2003
University of Utah School of Medicine
Salt Lake City, UT

POSTGRADUATE TRAINING:

Clerkship/Internship, 1994-1996
Peking University First Hospital
Beijing, China

Residency, Internal Medicine, 1996-1998
Peking University First Hospital
Beijing, China

Postdoctoral Fellowship, 2003-2006
National Institute on Aging, National Institutes of Health
Baltimore, MD

ACADEMIC & ADMINISTRATIVE APPOINTMENTS:

Graduate Research Assistant, 1999-2001
University of Utah
Salt Lake City, UT

Graduate Research Assistant, 2001-2003
Laboratory of Neurosciences
National Institute on Aging, NIH
Baltimore, MD

Postdoctoral Fellow, 2003-2006
National Institute on Aging, NIH
Baltimore, MD

Scientist, 2006-2008
Primary and Stem Cell Systems
Invitrogen Corporation (Presently Thermo Fisher Scientific)
Carlsbad, CA

Senior Scientist, 2008-2009
Primary and Stem Cell Systems

Invitrogen Corporation (Presently Thermo Fisher Scientific)
Carlsbad, CA

Professional Scientific Collaborator, 2009-2011
The Scripps Research Institute
Center for Regenerative Medicine, Department of Chemical Physiology
La Jolla, CA

Assistant Project Scientist, 2009-2011
Department of Reproductive Medicine
University of California, San Diego
La Jolla, CA

Assistant Professor, 2011-2020
Department of Neurosurgery
McGovern Medical School at UTHealth
Houston, TX

Assistant Professor (Joint appointment), 2011-2020
Center for Stem Cell and Regenerative Medicine, Institute of Molecular Medicine
McGovern Medical School at UTHealth
Houston, TX

Research Scientist, 2011-present
Mischer Neuroscience Institute
Houston, TX

Regular Member, 2012-present
The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences
Houston, TX

Investigator, 2012-Present
Senator Lloyd and B.A. Bentsen Center, Institute of Molecular Medicine
McGovern Medical School at UTHealth
Houston, TX

Associate Professor, 2020-present
Department of Neurosurgery
McGovern Medical School at UTHealth
Houston, TX

Associate Professor, 2020-present (Joint appointment)
Center for Stem Cell and Regenerative Medicine, Institute of Molecular Medicine
McGovern Medical School at UTHealth
Houston, TX

PROFESSIONAL ORGANIZATIONS (AND COMMITTEES OF THESE):

REGIONAL:
Gulf Coast Consortia Regenerative Medicine Consortium
Mission Connect-TIRR Foundation

NATIONAL:
Society for Neuroscience
The American Society of Gene & Cell Therapy

INTERNATIONAL:
International Society for Stem Cell Research

HONORS AND AWARDS:

Peking University Health Science Center Scholarship, China, 1991; 1992

Molecular Biology Program Fellowship, University of Utah, 1998

Science and Technology Advancement Awards, Ministry of Education, China, 1999

NIH Outstanding Graduate Award, National Institutes of Health, 2004

Intramural Research Training Award, National Institute on Aging, NIH, 2005

Robert Packard Center for ALS Research Award, 2007

Finalist for CONNECT Most Innovative Product Awards (lead contributing scientist), 2008

Tools and Technology Award. California Institute for Regenerative Medicine (CIRM), 2009

Senator Lloyd and B.A. Bentsen Center for Stroke Research Award, 2012

TIRR Foundation Mission Connect Research Award, 2014

Craig H. Neilsen Research Award, 2015

TIRR Foundation Mission Connect Research Award, 2017

Outstanding Scholar Award, Department of Neurosurgery, McGovern Medical School at UTHealth, 2018

Dean's Teaching Excellence Awards, McGovern Medical School at UTHealth, 2020

HONORS AND AWARDS WON BY LIU LAB MENTEES:

Dr. Shenglan Li, Mission connect Annual Symposium, Best poster award (2nd place), December 6, 2013

Mr. Tai Truong, Intern, Summer Research Program Fellowship, Office of Educational Programs, UTHealth-Houston, May 2014

Dr. Shenglan Li, Inaugural Gulf Coast Consortium Regenerative Medicine Symposium, excellent poster selected for oral presentation October 3, 2014

Ms. Ruhi Buddharaju, Intern, Summer Research Program Fellowship, Office of Educational Programs, UTHealth-Houston, May 2019

EDITORIAL POSITIONS:

Associate Editor. Stem Cell Studies (eISSN 2038-9566, PAGEPress, Pavia, Italy) 2010-2014

Associate Editorial Board, American Journal of Stem Cells (ISSN: 2160-4150, e-Century Publishing Corporation, Wisconsin, USA), 2013-Present

Guest editor, Special issue on "Transcriptional and genomic control of stem cells in development and cancer". Stem Cells International, Hindawi Publishing Corporation, 2016-2017

Editorial Board, Scientific Reports, 2019-present

SERVICE ON NATIONAL GRANT REVIEW PANELS, STUDY SECTIONS, COMMITTEES:

Ad hoc Grant Reviewer, The Wellcome Trust/DBT India Alliance: Early Career Fellowship, 2009

Ad hoc Grant Reviewer, University of Michigan Geriatrics Center Pilot Grant, Nathan Shock Center for Aging Research, 2014

Ad hoc Grant Reviewer, National Centre for the Replacement Refinement & Reduction of Animals in Research, U.K., 2015

Ad hoc Grant Reviewer, Motor Neurone Disease Association, U.K., 2016

Grant Panel Reviewer, New York State Stem Cell Science (NYSTEM). Translation, Engineering and Technology Review Panel, 2016

Ad hoc Grant Reviewer, Action for A-T, Ataxia Telangiectasia Research Foundation, U.K., 2019

Ad hoc Grant Reviewer, Israel Science Foundation, Israel, 2019

Ad hoc Grant Reviewer, Center for Clinical and Translational Sciences Pilot Project Awards Program, UTHealth, 2019

Judge Panel, American Physician-Scientists Association South Regional Meeting Neuroscience Poster Session, October 24, 2020

Ad hoc Reviewer for: *Nucleic Acid Research, Trends in Molecular Medicine, Stem Cells, Stem Cells Translational Medicine, Scientific Reports, Developmental Biology, Experimental Neurology, The FEBS Journal, FEBS Letters, Journal of Neurochemistry, PLoS One, BMC Genomics, Frontiers in Bioscience, Stem Cell Studies, Stem Cell Research & Therapy, Journal of Neuroscience Research, Future Neurology, Molecular Therapy, Theriogenology, Stem Cell Reviews and Reports, Stem Cells and Development, Biology Open, Stem Cells International, International Journal of Molecular Sciences, The Neuroscientist, Journal of Clinical Medicine, Protein & Cell*

SERVICE ON McGOVERN MEDICAL SCHOOL at UTHEALTH COMMITTEES:

Committee member for faculty recruitment for Center for Stem cell and Regenerative Medicine at IMM, 2014-2015

Committee member for Research faculty recruitment for Department of Neurosurgery, 2014-2015

Interviewer for Medical School Admission committee, 2014-2015

Committee member for faculty recruitment for Center for Stem cell and Regenerative Medicine at IMM, 2015-2016

Committee member for Research faculty recruitment for Department of Neurosurgery, 2015-2016

Interviewer for Medical School Admission committee, 2015-2016

Committee member for faculty recruitment for Center for Stem cell and Regenerative Medicine at IMM, 2016-2017

Committee member for Research faculty recruitment for Department of Neurosurgery, 2016-2017

Faculty senator, University of Texas Health Science Center at Houston Faculty Senate, 2016- 2018

Committee member for faculty recruitment for Center for Stem cell and Regenerative Medicine at IMM, 2017-2018

Committee member for Research faculty recruitment for Department of Neurosurgery, 2017-2018

Committee member for McGovern Medical School Student Evaluations and Promotions Committee (SEPC), University of Texas Health Science Center at Houston, September 2019-August 2021.

SERVICE ON GRADUATE SCHOOL COMMITTEES:

Reviewer and interviewer for The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2015-2016

Reviewer and interviewer for The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2018-2019

Advisory Committee member for Ms. Chrystine Gallegos, Master degree candidate at The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2019-

Interviewer for MD/PhD program admission, 2019-2020 (October 2019)

Advisory Committee member for Ms. Emily Mendez, MD/PhD program candidate at The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2019- (Approved 1/8/2020)

Interviewer for GSBS program admission, 2020 (January 31, 2020)

Social hour GSBS Visitation, round 1 for GSBS program admission, 2020 (January 31, 2020)

Program dinner GSBS Visitation, round 1 for GSBS program admission, 2020 (January 31, 2020)

SPONSORSHIP OF CANDIDATES FOR POSTGRADUATE DEGREE:

Served as instructing mentor for Anna E. McCann, M.S. candidate, June 2010-March 2011, CIRM Intern. California Polytechnic State University, San Luis Obispo. California Institute for Regenerative Medicine Bridges Program at the Scripps Research Institute. Ms. McCann has since been awarded M.S. and admitted to the PhD program at the Washington University.

Served as co-mentor for Di Jia, PhD candidate of Harbin Medical University, China, while she worked as a Visiting Student in my lab from 2017-2018. Dr. Jia was award PhD in May 2018 and is currently a Faculty member at Harbin Medical University, China.

Serving as co-mentor for Jiayun Wu, PhD candidate of Beijing University of Chinese Medicine, while she works as a Visiting Student in my lab (2019-2021).

Co-mentor for research project for Bradley Budde, MD. Resident of Neurosurgery. Dr. Budde is supported by an R25 grant and I have been serving as co-mentor for his research. Jan 2020-present.

SPONSORSHIP OF POSTDOCTORAL FELLOWS:

Jianbo Wu, PhD, August 2012-October 2013, Postdoctoral fellow. Current position: Instructor, UTHealth McGovern Medical School, Institute of Molecular Medicine

Shenglan Li, MD, October 2013-September 2017, Postdoctoral fellow. Current position: Research Scientist, UTHealth McGovern Medical School

Seung H. Yang, MD, September 2014-February 2016, Visiting scholar, current position: Associate Professor, St. Vincent's Hospital, the Catholic University of Korea, Suwon, South Korea

Dali Li, MD, PhD, October 2016-February 2018, Postdoctoral fellow. Current position: Research Investigator, MD Anderson Cancer Center

CURRENT TEACHING RESPONSIBILITIES:

Instructor, hESC culture workshops, National Institutes of Health. July 2004-January 2006.

Instructor, hESC training course, The Buck Institute for Age Research. October 2006.

Instructor, CSUPERB stem cell training course, California State University, Fullerton. January 2007

Instructor, GS04 1072, Principles of Stem Cell Biology, 2013 Fall semester, 2.0 credits, Brian Davis, Course Director, The University of Texas Graduate School of Biomedical Sciences

Instructor, GS04 1072, Principles of Stem Cell Biology, 2014 Fall semester, 2.0 credits, Brian Davis, Course Director, The University of Texas Graduate School of Biomedical Sciences

Instructor, GS04 1072, Principles of Stem Cell Biology, 2017 Spring semester, 2.0 credits, Brian Davis, Course Director, the University of Texas MD Anderson Cancer Center, UTHealth Graduate School of Biomedical Sciences

Instructor, GS04 1072, Principles of Stem Cell Biology, 2018 Fall semester, 2.0 credits, Brian Davis, Course Director, the University of Texas MD Anderson Cancer Center, UTHealth Graduate School of Biomedical Sciences

Instructor, monthly journal clubs in the Liu lab for 1-2 undergraduate (summer) students, 2-3 postdoctoral fellows, 1-2 research associates, 2012-2019

Faculty judge, 2nd Brown Foundation Institute of Molecular Medicine research trainee retreat, June 29, 2012

Faculty judge, 2012 Mission connect scientific symposium, December 7, 2012

Faculty judge, 2013 Mission connect scientific symposium, December 16, 2013

Faculty judge, 4th Brown Foundation Institute of Molecular Medicine research trainee retreat, July 18, 2014

Faculty judge, Annual medical school retreat poster session, UTHealth-Houston, October 8, 2014

Faculty judge, 2014 Mission connect scientific symposium, December 5, 2014

Faculty judge, 2015 Mission connect scientific symposium, December 4, 2015

Faculty judge, 2016 Mission connect scientific symposium, December 2, 2016

Speaker, Workshop on Precision Genome Editing. Houston, Texas, December 4, 2015

Faculty judge, 2015 Neuroscience Poster Session, December 5, 2015

Faculty judge, 2016 Neuroscience Poster Session, December 3, 2016

Faculty judge, 2017 Mission connect scientific symposium, December 1, 2017

Faculty judge, 2017 Neuroscience Poster Session, December 2, 2017

Faculty judge, 2018 Mission connect scientific symposium, November 30, 2018

Faculty judge, 2018 Neuroscience Poster Session, December 1, 2018

Faculty judge, 2019 Mission connect scientific symposium, December 6, 2019

Faculty judge, 2019 Neuroscience Poster Session, December 7, 2019

Problem Based Learning (PBL), Facilitator, August 5th, 2019 - present, McGovern Medical School, UTHealth, 4 hours per week

Faculty judge, 2020 UTHealth NRC Virtual Neuroscience Poster Session. February 26-27, 2021

MENTORING ACTIVITIES:

Anna E. McCann, M.S candidate, June 2010-March 2011, Intern, California Polytechnic State University, San Luis Obispo, California Institute for Regenerative Medicine (CIRM) Bridges Program. Current position: Senior Clinical Trial Management Associate at Gilead Sciences

Seema Patel, Undergraduate student at San Diego State University, California Institute for Regenerative Medicine (CIRM) Bridges Program. Research trainee.

Di Jia, PhD candidate of Harbin Medical University, China. Di worked as a Visiting Student in my lab from 2017-2018. Current position: Faculty member at Harbin Medical University, China.

Tai Truong, May-August 2014, Intern, Summer Research Program, Office of Educational Programs, UTHealth-Houston. Current position: Medical Student, Upstate Medical University, Syracuse, New York

Yipei Karen He, June-August 2014, Intern, Summer Research Program, Office of Educational Programs, UTHealth-Houston. Co-mentor, with Dr. Laura Smith Callahan

Cheng Ma, June-August 2014, Intern, Summer Research Program, Office of Educational Programs, UTHSC Houston. Co-mentor with Dr. Laura Smith Callahan

Seung H. Yang, MD, September 2014-February 2016, Visiting scholar, currently Associate Professor, St. Vincent's Hospital, the Catholic University of Korea, Suwon, South Korea

Anqi Zhang, MS, January 2016-July 2016, Visiting scholar

Chrystine Gallegos, BS, 5/8/2019-present, member of MS Advisory Committee, The University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences

Ruhi Buddharaju, May 20- July 26, 2019, Intern, Summer Research Program, Office of Educational Programs, UTHealth-Houston. Current position: Sophomore, Rice University, Houston, TX

Jiayun Wu, June 2019-. PhD candidate of Beijing University of Chinese Medicine. Jiayun works as a Visiting Student that I co-mentor in my lab.

Bradley Budde, MD. Jan 2020-present. Resident of Neurosurgery. Dr. Budde is supported by an R25 grant and I have been serving as co-mentor for his research

CURRENT GRANT SUPPORT:

P.I. Ying Liu, M.D. Ph.D.
NIH NINDS
"Reconnecting the injured cervical spinal cord by transplanted human iPSC-derived neural progenitors"
$1,684,375; 2019-2024

P.I. Wenbo Li, PhD
Co-I: Ying Liu, M.D. Ph.D

NIH NHLBI
“Beyond gene dosage: Understanding Down syndrome via 4D genome organization”
$351,125 (Liu Lab portion) ; 2020-2025

P.I. Peng Jiang, Ph.D.
P.I. of subaward (Co-I): Ying Liu, MD, PhD
NIH NINDS
“Novel functions of Olig2 in regulating human interneuron production in health and disease”
$95,856 (Liu Lab Portion) ; 2018-2021

P.I. Qilin Cao, M.D.
Co-I. Ying Liu, MD, Ph.D.
NIH NINDS
“In vivo reprogramming of reactive astrocyte and chemogenetic approach for SCI repair”
$34,925 (Liu Lab Portion) ; 2017-2022

P.I. Radbod Darabi, M.D., Ph.D.
Co-I. Ying Liu, MD, Ph.D
NIH NIAMS
“Study of skeletal muscle differentiation in human iPS cells by knock-in reporters”
$4,125 (Liu Lab Portion); 2016-2021

PAST GRANT SUPPORT

P.I. Ying Liu, M.D. Ph.D.
Mission Connect/TIRR Foundation
“Developing clinically relevant stem cell therapy for spinal cord injury”
$100,000; 2018-2019

P.I. Ying Liu, M.D. Ph.D.
Mission Connect/TIRR Foundation
“Development of autologous stem cells for the treatment of spinal cord injury”
$150,000; 2017-2019

P.I. Ying Liu, M.D. Ph.D.
Mission Connect/TIRR Foundation
“Targeting CSPG receptors in grafted neural progenitors in SCI mice”
$60,000; 2017-2019

P.I. Ying Liu, M.D. Ph.D.
Craig H. Neilsen Foundation
“Direct conversion of reactive astrocytes into myelinogenic oligodendrocytes”
$299,965; 2015-2017

P.I. Ying Liu, M.D. Ph.D.
Mission Connect/TIRR Foundation
“Human iPSC derived astrocyte progenitors in treating acute and subacute spinal cord injury”
$60,000; 2014-2017

P.I. Ying Liu, M.D. Ph.D.
The Staman Ogilvie Fund
“Use patient-specific iPSC neural derivatives in treating spinal cord injury.”
$1,300,000; 2011-2016

P.I. Consuelo Walss-Bass, Ph.D.
Co-I. Ying Liu, MD, Ph.D
U. T. System BRAIN Initiative

"Generation of human derived neurons for the study of psychiatric disorders"
$20,096; 2015-2016

P.I. Ying Liu, M.D. Ph.D.
Flow Cytometry Core at UTHSC CPRIT Supported use
"The role of Sox2 in chemoresistance in GBM cells"
~$3,960; 2015-2016

P.I. Laura Smith-Callahan, Ph.D.
Co-I. Ying Liu, M.D. Ph.D.
Mission Connect/TIRR Foundation
"Optimization of tissue engineering matrices for SCI treatment"
$5,500; 2014-2016

P.I. Laura Smith-Callahan, Ph.D.
Co-I. Ying Liu, M.D. Ph.D.
Senator Lloyd and B.A. Bentsen Center for Stroke Research
"Advanced Artificial Extracellular Matrix for Treatment of Chronic Stroke"
$13,750; 2012-2015

P.I. Ying Liu, M.D. Ph.D. and Jiaqian Wu, Ph.D.
Senator Lloyd and B.A. Bentsen Center for Stroke Research
"Identification of therapeutic targets to increase neuronal differentiation efficiency of hiPSC-derived NSCs in treating stroke"
$150,000; 2012-2015

P.I. Ying Liu, M.D. Ph.D.
NIH NIAMS
"Generation of neural lineage reporters in integration-free human induced pluripotent stem cells"
$105,000; 2012-2013

P.I. Ying Liu, M.D. Ph.D.
Flow Cytometry Core at UTHSC CPRIT Supported use
"Human iPSC-based reconstruction of glioblastoma multiforme (GBM)"
~$3,960; 2014-2015

P.I. Ying Liu, M.D. Ph.D.
California Institute for Regenerative Medicine (CIRM)
"Generation of disease models for neurodegenerative disorders in hESCs by gene targeting"
$720,000; 2009-2011

P.I. Samuel Pfaff, Ph.D.
Co-I (of subcontract at Life Technologies, Inc). Ying Liu, M.D. Ph.D.
California Institute for Regenerative Medicine (CIRM)
"Stem cell-derived astrocyte precursor transplants in amyotrophic lateral sclerosis"
$100,000; 2010-2014
*Note: transferred to Life Tech colleague upon moving to UCSD

P.I. Ying Liu, M.D. Ph.D.
Robert Packard Center for ALS Research
"Generating a human motoneuron and oligodendrocyte reporter line by homologous recombination in hESCs"
$75,000; 2007-2009

P.I. Karoline W. Schjetne, Ph.D., Pauline Lieu, Ph.D. & Ying Liu, M.D. Ph.D.
Invitrogen (Collaborative Research Compacts Grant)

"Using Dynabeads for isolation of human embryonic stem cells, neural precursors, and neurons" $5,000; 2008-2009

PUBLICATIONS:

A. Abstracts

(1) *Liu, Y.*, Wu, Y., Lee, J. C., Xue, H., and Rao, M. S. Generation of oligodendrocyte and astrocyte precursors during development. Society for Neuroscience 32nd Annual meeting, Orlando, FL, November. 2002

(2) *Liu, Y.* and Rao, M. S. Olig genes are expressed in a heterogeneous population of precursor cells in the developing spinal cord. Society for Neuroscience 33rd Annual meeting, New Orleans, LA, November. 2003

(3) Choi, Y., Atouf, F., Ta, M., *Liu, Y.*, Rao, M., and Lumelsky, N. Phenotypic characterization of in vitro-derived pancreatic islet-like cell clusters. American Diabetes Association 63rd Scientific Sessions, New Orleans, LA, June 2003

(4) *Liu, Y.*, Han, S. S., Wu, Y. Tuohy, T. M., Xue, H., Cai, J., Sherman, L. S., Fischer, I., and Rao, M. S. CD44 expression identifies astrocyte restricted precursor cells. International Society for Stem Cell Research 2nd Annual meeting, Boston, MA, June 2004

(5) *Liu, Y.*, Cai, J., Chen, J., Miura, T., Amable, R., Luo, Y. Loring, JF, Freed, WJ, Rao, MS, and Zeng, X. Defining the stem cell and embryoid body state of hESC. International Society for Stem Cell Research 3rd annual meeting, San Francisco, CA, June 2005

(6) *Liu, Y.*, Thyagarajan, B., Lakshmipathy, U., Xue, H., Lieu, P., Fontes, A., MacArthur, C. C., Scheyhing, K., Rao, M. S., and Chesnut, J. D. Generation of a platform human embryonic stem cell line using PhiC31 family of integrases at a predetermined genomic location. Stem Cells on the Mesa 3rd annual meeting, La Jolla, CA, November 2008

(7) Xue, H., Wu, S., Papadeas, S., Spusta, S., Swistowska, A. M., MacArthur, C. C., Mattson, M. P., Maragakis, N. J., Capecchi, M., Rao, M. S., Zeng, X., and *Liu, Y.* Generating a targeted neuroglial reporter line via homologous recombination in human embryonic stem cells. International Society for Stem Cell Research 7th Annual meeting, Barcelona, Spain, July 2009

(8) Xue, H., Garitaonandia, I., Jiang, P., Tran, H., MacArthur, C., Rao, M. S., Deng, W., Laurent, L. C., Loring, J. F., and *Liu, Y.* Gene targeting in human pluripotent stem cells. International Society for Stem Cell Research 8th Annual meeting, San Francisco, CA, June 2010

(9) McCann, A., Xue, H., Garitaonandia, I., Tran, H., Laurent, L. C., Loring, J. F., and *Liu, Y.* Gene targeting in human embryonic stem cells and induced pluripotent stem cells. Stem Cell Meeting on the Mesa, La Jolla, CA, December 2010

(10) Peterson, S. E., Xue, H., Tran, H., McCann, A. E., Schell, J.P., Garitaonandia, I., Lynch, C. L., Parast, M. M., Jiang, P., Chen, C., Schmidt, U., Deng, W., Laurent, L. C., Loring, J. F., and *Liu, Y*. Spontaneous rescue of Trisomy 21 fibroblasts during reprogramming. International Society for Stem Cell Research 10th Annual meeting, Yokohama, Japan, June 2012

(11) Liao, X, Xue, H, Guo, S, Trivedi, N, *Liu, Y*, Loring, J, Laurent, L (2012) MicroRNA signatures and functions of in vitro generated pancreatic beta islet cells. ISSCR 10th Annual meeting, Yokohama, Japan, June 2012.

(12) Touboul, T, *Liu, Y*, Xue, H, Fakunle, E, Peterson, S, Laurent, L.3, Loring, J (2012) Stable expression of GFP in engineered human embryonic stem cell lines during hepatocytes differentiation ISSCR 10th Annual meeting, Yokohama, Japan, June 2012.

(13) Jiang, P., Chen, C., *Liu, Y*., Zhang, Q. Deng, W. Human embryonic stem cell-derived Olig2+ progenitor-specific astroglial cells protect ischemic brain and improve functional outcome. (2012) 42nd Society for Neuroscience annual meeting, New Orleans, LA. November 2012

(14) Chen, C., Jiang, P., *Liu, Y**.,Deng, W*. Modeling neuron-astrocyte interactions in Down Syndrome using human induced pluripotent stem cells (2012) 42nd Society for Neuroscience annual meeting, New Orleans, LA. November 2012

(15) Chen, C., Jiang, P., *Liu, Y.,* Deng, W. Human iPSC-derived astrocytes protect against white matter injury and promote remyelination in a mouse model of periventricular leukomalacia. San Diego, CA. November 2013

(16) Li, S, Zheng, Y., Xue, H., Cao, Q, *Liu, Y.* Transplantation of purified neural progenitors derived from non-invasive, integration-free urine iPSCs to a mouse spinal cord injury model. Mission connect annual symposium, December, 2013

(17) *Liu, Y.* Modeling Down Syndrome with iPSCs: an Update. University of Texas Health Science Center at Houston IMM Center for Stem Cell and Regenerative Medicine center meeting, May 13, 2014
(18) Li, S, Xue, H., Wu, JB, *Liu, Y*. Development of CRISPR/Cas9 lineage reporters for differentiation and purification of transcription factor-defined neural progenitors from human pluripotent stem cells. Gulf Coast Consortia Cluster for Regenerative Medicine 2014 Symposium. October, 2014
(19) Chen, C., Jiang, P., Pleasure, D., *Liu, Y*., Deng, W. The novel role of OLIG2 gene function in interneuron development revealed in a hiPSC model of Down syndrome. 44th Society for Neuroscience annual meeting, Washington DC, November 2014
(20) Li, S, Xue, H., Wu, JB, *Liu, Y*. Development of neural lineage knock-in reporters from human iPSC using CRISPR/Cas9 system. Mission Connect annual symposium, December, 2014
(21) Li, S, Xue, H., Wu, JB, *Liu, Y*. Efficient generation of NEUROG2 hiPSC knockin reporter by CRISPR/Cas9. NeuroRegeneration Collaborative Symposium, Houston, TX, September 1-2, 2015
(22) Mosley M, Lim H, Chen J, Yang, Y-H, Li S, *Liu Y*, Smith Callahan LA. Effect of Young's Modulus on Neural Differentiation of Human Induced Pluripotent Stem Cell Derived Neural Stem Cells. Poster at 10th World Biomaterials Congress. Montreal, Canada. May 2016
(23) Yang S, Li S, Lu G, Xue H, Kim DH, Zhu JJ, *Liu Y*. DRES-08. Metformin overcomes temozolomide resistance of glioma cells by modulating the SOX2 pathway. Neuro Oncol (2016) 18 (suppl_6): vi53. DOI: https://doi.org/10.1093/neuonc/now212.218 Published: 07 November 2016. 21st Annual scientific meeting and education day of the Society for Neuro-oncology, Scottsdale, Arizona November 17 - 20, 2016
(24) Li S, Xue H, *Liu Y*. Targeting CSPG signaling in human iPSC neural grafts for SCI repair. Mission connect annual symposium, Houston, Texas, December 8, 2017
(25) Perera TH, *Liu Y*, Smith Callahan LA. IKVAV, LRE and GPQGIWGQ alter extracellular matrix degradation and enzyme expression leading to axon extension in encapsulated human iPSC derived neural stem cells ISSCR 2019 Annual Meeting, Los Angeles, California, June 26-29, 2019.
(26) Li S, Xue AZ, Smith Callahan LA, Cao Q, *Liu Y*. Targeting CSPG signaling in human iPSC neural grafts for spinal cord injury repair. ISSCR 2019 Annual Meeting, Los Angeles, California, June 26-29, 2019.

B. Refereed Original Articles in Journals

1) *Liu, Y.*, Virshup, D. M., White, R. L., and Hsu, L. C. (2002). Regulation of BRCA1 phosphorylation by interaction with protein phosphatase 1alpha. *Cancer Res* 62, 6357-6361.
2) *Liu, Y.*, Wu, Y., Lee, J. C., Xue, H., Pevny, L. H., Kaprielian, Z., and Rao, M. S. (2002). Oligodendrocyte and astrocyte development in rodents: an in situ and immunohistological analysis during embryonic development. *Glia* 40, 25-43.
3) Luo, Y., Cai, J., *Liu, Y.*, Xue, H., Chrest, F. J., Wersto, R. P., and Rao, M. (2002). Microarray analysis of selected genes in neural stem and progenitor cells. *J Neurochem* 83, 1481-1497.
4) Mayer-Proschel, M., *Liu, Y.*, Xue, H., Wu, Y., Carpenter, M. K., and Rao, M. S. (2002). Human neural precursor cells - an in vitro characterization. *Clin Neurosci Res* 2, 58-69.
5) Lee, J., Wu, Y., Qi, Y., Xue, H., *Liu, Y.*, Scheel, D., German, M., Qiu, M., Guillemot, F., Rao, M., and Gradwohl, G. (2003). Neurogenin3 participates in gliogenesis in the developing vertebrate spinal cord. *Dev Biol* 253, 84-98.
6) Wu, Y., *Liu, Y.*, Levine, E. M., and Rao, M. S. (2003). Hes1 but not Hes5 regulates an astrocyte versus oligodendrocyte fate choice in glial restricted precursors. *Dev Dyn* 226, 675-689.
7) Brimble, S. N., Zeng, X., Weiler, D. A., Luo, Y., *Liu, Y.*, Lyons, I. G., Freed, W. J., Robins, A. J., Rao, M. S., and Schulz, T. C. (2004). Karyotypic stability, genotyping, differentiation, feeder-free maintenance, and gene expression sampling in three human embryonic stem cell lines derived prior to August 9, 2001. *Stem Cells Dev* 13, 585-597.
8) Han, S. S., *Liu, Y.*, Tyler-Polsz, C., Rao, M. S., and Fischer, I. (2004). Transplantation of glial-restricted precursor cells into the adult spinal cord: survival, glial-specific differentiation, and preferential migration in white matter. *Glia* 45, 1-16.
9) *Liu, Y.*, Han, S. S., Wu, Y., Tuohy, T. M., Xue, H., Cai, J., Back, S. A., Sherman, L. S., Fischer, I., and Rao, M. S. (2004). CD44 expression identifies astrocyte-restricted precursor cells. *Dev Biol* 276, 31-46.
10) *Liu, Y.*, and Rao, M. S. (2004). Olig genes are expressed in a heterogeneous population of precursor cells in the developing spinal cord. *Glia* 45, 67-74.

11) Tuohy, T. M., Wallingford, N., *Liu, Y.*, Chan, F. H., Rizvi, T., Xing, R., Bebo, B., Rao, M. S., and Sherman, L. S. (2004). CD44 overexpression by oligodendrocytes: a novel mouse model of inflammation-independent demyelination and dysmyelination. *Glia* 47, 335-345.
12) Zeng, X., Chen, J., *Liu, Y.*, Luo, Y., Schulz, T. C., Robins, A. J., Rao, M. S., and Freed, W. J. (2004). BG01V: a variant human embryonic stem cell line which exhibits rapid growth after passaging and reliable dopaminergic differentiation. *Restor Neurol Neurosci* 22, 421-428.
13) Back, S. A., Tuohy, T. M., Chen, H., Wallingford, N., Craig, A., Struve, J., Luo, N. L., Banine, F., *Liu, Y.*, Chang, A., Trapp, B. D., Bebo, B. F., Jr., Rao, M. S., and Sherman, L. S. (2005). Hyaluronan accumulates in demyelinated lesions and inhibits oligodendrocyte progenitor maturation. *Nat Med* 11, 966-972.
14) Maitra, A., Arking, D. E., Shivapurkar, N., Ikeda, M., Stastny, V., Kassauei, K., Sui, G., Cutler, D. J., *Liu, Y.*, Brimble, S. N., Noaksson, K., Hyllner, J., Schulz, T. C., Zeng, X., Freed, W. J., Crook, J., Abraham, S., Colman, A., Sartipy, P., Matsui, S., Carpenter, M., Gazdar, A. F., Rao, M., and Chakravarti, A. (2005). Genomic alterations in cultured human embryonic stem cells. *Nat Genet* 37, 1099-1103.
15) Talbott, J. F., Loy, D. N., *Liu, Y.*, Qiu, M. S., Bunge, M. B., Rao, M. S., and Whittemore, S. R. (2005). Endogenous Nkx2.2+/Olig2+ oligodendrocyte precursor cells fail to remyelinate the demyelinated adult rat spinal cord in the absence of astrocytes. *Exp Neurol* 192, 11-24.
16) Bibikova, M., Chudin, E., Wu, B., Zhou, L., Garcia, E. W., *Liu, Y.*, Shin, S., Plaia, T. W., Auerbach, J. M., Arking, D. E., Gonzalez, R., Crook, J., Davidson, B., Schulz, T. C., Robins, A., Khanna, A., Sartipy, P., Hyllner, J., Vanguri, P., Savant-Bhonsale, S., Smith, A. K., Chakravarti, A., Maitra, A., Rao, M., Barker, D. L., Loring, J. F., and Fan, J. B. (2006). Human embryonic stem cells have a unique epigenetic signature. *Genome Res* 16, 1075-1083.
17) Cai, J., Chen, J., *Liu, Y.*, Miura, T., Luo, Y., Loring, J. F., Freed, W. J., Rao, M. S., and Zeng, X. (2006). Assessing self-renewal and differentiation in human embryonic stem cell lines. *Stem Cells* 24, 516-530.
18) Cai, J., Shin, S., Wright, L., *Liu, Y.*, Zhou, D., Xue, H., Khrebtukova, I., Mattson, M. P., Svendsen, C. N., and Rao, M. S. (2006). Massively parallel signature sequencing profiling of fetal human neural precursor cells. *Stem Cells Dev* 15, 232-244.
19) Josephson, R., Sykes, G., *Liu, Y.*, Ording, C., Xu, W., Zeng, X., Shin, S., Loring, J., Maitra, A., Rao, M. S., and Auerbach, J. M. (2006). A molecular scheme for improved characterization of human embryonic stem cell lines. *BMC Biol* 4, 28.
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C. Invited Articles (Reviews, Editorials, etc.) in Journals

1) *Liu, Y.*, and Rao, M. S. (2003). Transdifferentiation--fact or artifact. *J Cell Biochem* 88, 29-40.
2) *Liu, Y.,* and Rao, M. (2003). Oligodendrocytes, GRPs and MNOPs. *Trends Neurosci* 26, 410-412.
3) *Liu, Y.,* and Rao, M. S. (2004). Glial progenitors in the CNS and possible lineage relationships among them. Biol Cell 96, 279-290.
4) Magnus, T., *Liu, Y.,* Parker, G. C., and Rao, M. S. (2008). Stem cell myths. *Philos Trans R Soc Lond B Biol Sci* 363, 9-22.

D. Chapters

1) *Liu, Y.*, and Rao, M. (2005). Transdifferentiation in the nervous system, In Neural Development and Stem Cells (New Jersey: Humana Press), pp. 249-266.
2) Wu, Y., *Liu, Y.*, Chesnut, J. D., and Rao, M. S. (2008). Isolation of neural stem and precursor cells from rodent tissue. *Methods Mol Biol* 438, 39-53.
3) *Liu, Y.*, Lakshmipathy, U., Ozgenc, A., Thyagarajan, B, Lieu, P., Fontes, A., Xue, H., Scheyhing, K., MacArthur, C., and Chesnut, J. D. (2010). hESC engineering by integrase-mediated chromosomal targeting. human stem cell protocols, Methods in Molecular Biology 584, pp 229-268 Turksen, K. (ed.). DOI 10.1007/978-1-60761-369-5_13, Humana Press, a part of Springer Science+Business Media, LLC
4) *Liu, Y.* and Rao, M. S. (2011). Gene targeting in human pluripotent stem cells. Methods and Protocols. Schwartz, P. H, and Wesselschmidt R (eds). Humana Press, a part of Springer Science+Business Media, LLC. *Methods Mol Biol*. 2011;767:355-367.
5) Han, S, McCann, A, Laurent, LC, Loring JF, and *Liu, Y.* (2011) Improving gene targeting efficiency in human pluripotent stem cells. in Primary and stem cells: gene transfer technologies and applications. First edition. Lakshmipathy, U & Thyagarajan, B (eds). pp211-225, John Wiley & Sons, Inc.

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7) Han, S. *Liu, Y.* (2012) Gene targeting by homologous recombination in human pluripotent stem cells. In *Human Stem Cell Manual*, J.F. Loring & S.E. Peterson (eds):, Second edition. pp 485-498, Elsevier Inc.
8) *Liu, Y.* Wagner, K, and Lakshmipathy, U. (2013) Stable transfection using episomal vectors to create modified human embryonic stem cells. In *Pluripotent Stem Cells: Methods and Protocols, Methods in Molecular Biology* Lakshmipathy, U & Vemuri, M, C. (eds.) vol. 997, DOI 10.1007/978-1-62703-348-0_21, Springer Science+Business Media New York

E. Other Professional Communications

1. Presentations (by local, regional, national, international)

(1) *Liu, Y.* Genetic engineering of human embryonic stem cells. Whitehead Postdoctoral Association Symposium. Cambridge, MA, November 30, 2006
(2) *Liu, Y.* Gene expression profile of neural stem cells and glia. In the section of "hESC-derived Neural Stem Cells". 40th Winter Conference For Brain Research, Snowmass, CO, February 2, 2007
(3) *Liu, Y.* Chromosomal targeting in hESCs using the phiC31 family of integrases. 4th Annual Christopher Reeve "Hot Topics" in Stem Cell Biology Satellite Symposium at the 37th Society for Neuroscience Annual Meeting, San Diego, CA, November 5, 2007
(4) *Liu, Y.* Genetic engineering of human embryonic stem cells to predetermined genomic sites. Molecular Medicine Tri-Conference, Pre-conference Short Course. San Francisco, CA, February 24, 2009
(5) *Liu, Y.* A targeted neuroglial reporter line generated by homologous recombination in human embryonic stem cells. Shriners Hospital For Children Northern California, Institute for Pediatric Regenerative Medicine, University of California, Davis. Sacramento, CA, May 7, 2009
(6) *Liu, Y.* Neural differentiation using human embryonic stem cells and induced pluripotent stem cells. Maine Medical Center Research Institute, Portland, Maine, April 8, 2010
(7) *Liu, Y.* Modeling developing brain with human ES and iPSCs. Department of Physiology, University of Hong Kong, Pokfulam, Hong Kong, May 11, 2010
(8) *Liu, Y.* Modeling development and disease using human pluripotent stem cells. Cedars-Sinai Regenerative Medicine Institute, Los Angeles, California, May 27, 2010
(9) *Liu, Y.* Disease modeling with patient pluripotent stem cells, Drexel University College of Medicine, Philadelphia, Pennsylvania, June 2, 2010
(10) *Liu, Y.* Potential application of hESC and hiPSC for neural repair. University of Texas Health Science Center at Houston, Houston, Texas, Feb 14, 2011
(11) *Liu, Y.* Genetic correction of SOD1 point mutations in ALS patient derived iPS cells. 40th Society for Neuroscience Annual Meeting, Nanosymposium Session 729, Gene therapy for diseases of the brain. San Diego, CA, November 17, 2010
(12) *Liu, Y.* Neural derivatives from patient induced pluripotent stem cells in treating spinal cord injury. 2012 University of Texas Health Science Center at Houston Medical School retreat, October 9, 2012
(13) *Liu, Y.* Neural protective effect of Olig2+ cell derived astrocytes—implications of novel roles of Olig2 in neurogenesis and neuroprotection. China Agricultural University. Beijing, China. December 31, 2012
(14) *Liu, Y.* Potential clinical applications of patient induced pluripotent stem cells. University of Texas Health Science Center at Houston IMM Faculty retreat, June 4, 2013
(15) *Liu, Y.* Modeling Down Syndrome with iPSCs. University of Texas Health Science Center at Houston IMM Center for Stem Cell and Regenerative Medicine center meeting, Houston, TX, June 4, 2013
(16) *Liu, Y.* Disease modeling using iPSCs for pediatric diseases. Peking University First Hospital. Beijing, China, August 5, 2013
(17) *Liu, Y.* Developing induced pluripotent stem cells into disease models and therapeutics, University of Texas Health Science Center at Houston IMM Center for Stem Cell and Regenerative Medicine center meeting, Houston, Texas, October 28, 2013
(18) *Liu, Y.* Identification of Therapeutic Targets to Increase Neuronal Differentiation Efficiency of hiPSC-derived NSCs in Treating Stroke. Bentsen stroke center, Houston, Texas, November 5, 2013
(19) Li, S, *Liu, Y.* Transplantation of purified neural progenitors derived from non-invasive, integration-free urine iPSCs to a mouse spinal cord injury model Mission connect annual symposium, Houston, Texas, December 6, 2013

(20) *Liu, Y.* Modeling Down Syndrome with iPSCs: an Update. University of Texas Health Science Center at Houston IMM Center for Stem Cell and Regenerative Medicine center meeting, Houston, Texas, May 13, 2014
(21) Li, S, *Liu, Y*. Development of CRISPR/Cas9 lineage reporters for differentiation and purification of transcription factor-defined neural progenitors from human pluripotent stem cells. Gulf Coast Consortia Cluster for Regenerative Medicine 2014 Symposium. Houston, Texas, October 3, 2014
(22) *Liu, Y.* Genetic causes of neural and cardiac defects in Down syndrome. University of Texas Health Science Center at Houston IMM Faculty Retreat, The Woodlands, Texas, October 16, 2014
(23) *Liu, Y.* Translational prospects of stem cell therapy for spinal cord injury and disease modeling using iPSCs. Institute for Regenerative Medicine, Texas A&M Health Science Center, College of Medicine at Scott & White, Temple, Texas, December 18, 2014
(24) *Liu, Y.* Stem cell therapy for spinal cord injury and disease modeling using iPSCs. DSR Seminar, Baylor College of Medicine, Houston Texas, March 13, 2015
(25) *Liu, Y.* Stem cell therapy for spinal cord injury and disease modeling using patient-specific iPSCs Human Genetics Center Seminar Series, School of Public Health, University of Texas Health Science Center at Houston, Houston, Texas, April 20, 2015
(26) *Liu, Y.* Human iPSC derived astrocyte progenitors in treating spinal cord injury. Platform presentation Mission Connect Review of Science. Houston, Texas, May 14, 2015
(27) *Liu, Y.* Disease modeling using human iPSCs. Department of Neurology, University of Texas Health Science Center at Houston, Houston, Texas, October 28, 2015
(28) *Liu, Y.* Efficient generation of human iPSC NEUROG2 knockin reporters by the CRISPR system. Workshop on Precision Genome Editing. Organized by Rice University, Baylor College of Medicine, MD Anderson Cancer Center, UT Health Science Center at Houston, Texas A&M Health Science Center. Houston, Texas, December 4, 2015
(29) *Liu, Y.* Transplantation of human iPS cell-derived neural progenitors in promoting functional recovery after spinal cord injury. Mission connect/TIRR Foundation meeting, Houston, Texas, May 13, 2016
(30) *Liu, Y.* Down syndrome disease modeling using iPSCs. Department of Psychiatry & Behavioral Sciences, University of Texas Health Science Center at Houston, Houston, Texas, November 7, 2016
(31) *Liu, Y.* Stem cell therapy for spinal cord injury using patient-specific iPSCs. Gulf Coast Consortia (GCC) Regenerative Medicine Symposium. Houston, Texas, April 21, 2017
(32) *Liu, Y.* Patient-specific iPSCs for SCI. Review of Science, Mission Connect, Houston, Texas, May 3, 2018
(33) *Liu, Y.* Simultaneous overexpression of transcription factors with CRISPR in iPSCs. Gulf Coast Consortia Jr. Faculty Extravaganza. Houston, Texas, November 29, 2018
(34) *Liu, Y*. Stem cell therapy for spinal cord injury with human iPSC-derived NSCs. Rutgers University, Piscataway, New Jersey, May 15, 2019
(35) *Liu, Y.* Neural stem cells from iPSCs for the treatment of spinal cord injury. China Agricultural University, Beijing, China, May 31, 2019
(36) *Liu, Y.* Developing clinically relevant stem cell therapy for spinal cord injury. Mission Connect Review of Science. Houston, Texas, April 23-24, 2020 (was invited but meeting cancelled due to Covid)

2. Non-refereed Publications

Liu, Y. Treating spinal cord injury using human iPSC derived neural progenitor populations. NRC Newsletter, Volume 20, Number 2, Spring 2015

F. PATENTS

(1) Rao, M. S., Mujtaba, T., Wu, Y. and *Liu, Y*. Pure populations of astrocyte restricted precursor cells and methods for isolation and use thereof. U.S. Patent Application #10/502,224 U.S. Patent No. 8,673,292, Canadian Patent No. 2,473,749.

(2) Chesnut, J., Thyagarajan, B., Taliana, A., Lieu, P., Rao, M., Bennett, R., Burrier, R., Lakshmipathy, U., *Liu, Y*. Composition and methods for genetic manipulation and monitoring of cell lines U.S. Patent Application #12/016,415, 13/448,290

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Higher Education

Georgia Institute of Technology — Atlanta, GA
Ph.D. in Computer Science — 2004
- Outstanding Dissertation Award
- Thesis: Q-Fabric: System Support for Continuous Online Quality Management
- Advisor: Professor Karsten Schwan

Vienna University of Technology — Vienna, Austria
Diplom-Ingenieur (M.S. in Computer Science/Engineering) — 1998
- Graduated with Distinction
- Thesis: A TTP-Based Measuring System
- Advisor: Professor Hermann Kopetz

Experience

- **University of Notre Dame** (Notre Dame, IN)
  - **Department of Computer Science and Engineering** — 2019 - date
    Professor of Computer Science and Engineering
  - **Lucy Family Institute for Data & Society** — 2020 - date
    Associate Director
  - **Applied Analytics & Emerging Technologies Lab** — 2020 - date
    Founding Director
  - **Pulte Institute for Global Development** — 2019 - date
    Faculty Fellow
  - **iNDustry Labs** — 2020 - date
    Faculty Affiliate
  - **Institute for Precision Health** — 2015 - date
    Affiliated Faculty
  - **Center for Civic Innovation** — 2018 - date
    Affiliated Faculty
  - **Department of Computer Science and Engineering** — 2010 - 2019
    Associate Professor of Computer Science and Engineering
  - **Wireless Institute, University of Notre Dame** (Notre Dame, IN) — 2010 - 2012
    Executive Board Member
  - **Department of Computer Science and Engineering** — 2004 - 2010
    Assistant Professor of Computer Science and Engineering
- **Graz University of Technology** (Graz, Austria) — 2018 - 2019
  Fulbright Scholar & Visiting Professor
- **Georgia Institute of Technology** (Atlanta, GA) — 1998 - 2002
  Research and Teaching Assistant

- **Vienna University of Technology** (Vienna, Austria) 1997 - 1998
  Junior Lecturer
- **Universitat Politècnica de Catalunya** (Barcelona, Spain) 1997
  Erasmus Exchange Student
- **City University of New York (City College)** (New York, NY) 1996
  Exchange Student
- **Vienna University of Technology** (Vienna, Austria) 1994 - 1995
  Teaching Assistant

Industrial and Other Non-Academic Experience

- **HealthyPoints, LLC (South Bend, IN)** 2013 - date
  Co-founder and Chief Technology Officer
- **Call Light, LLC (Carmel, IN)** 2020 - date
  Co-founder
- **PatientsVoices, LLC (Kansas City, MO)** 2018 - date
  Consultant
- **Contect, Inc. d/b/a SpeechLight, Inc. (Chicago, IL)** 2013 - 2019
  Co-founder and Scientific Advisor
- **Emerald Active, LLC (South Bend, IN)** 2014 - 2017
  Co-founder
- **CloverApps, LLC (South Bend, IN)** 2010 - 2015
  Co-founder
- **Corporación Universitaria de Ibagué** (Ibagué, Colombia) 1998
  Summer Intern
- **Computer Associates** (Vienna, Austria) 1998
  Part-time Software Developer
- **Inter-American Development Bank** (Washington, DC) 1997
  Summer Intern
- **Philips iR3 Videowerk** (Vienna, Austria) 1995
  Summer Intern
- **Krone Ges.m.b.H.** (Vienna, Austria) 1993
  Electrical Engineer (financial transaction systems)

Honors and Awards

- **Fulbright U.S. Scholar (Graz University of Technology Visiting Professor)** 2018 - 2019
- **Faculty Fellow, John A. Kaneb Center for Teaching and Learning** 2017 - 2019
- **First Place in Startup South Bend-Elkhart/Elevate Ventures** (Healthy Points, LLC) 2018
- **Edmund P. Joyce, C.S.C. Award for Excellence in Undergraduate Teaching** 2017
- **7th Audio/Visual Emotion Challenge, Winner of Depression Detection Task** 2017
- **IEEE Access Multimedia Contest, Winner** 2014
- **Meritorious Service Award, IEEE Computer Society** 2014
- **Best Paper Award, MobiHealth** 2020

- **ISCA Best Student Paper Award Nomination, INTERSPEECH** 2019
- **Best Paper Nomination, ICHI** 2016
- **Best Paper Award, HotPlanet** 2013
- **Best Student Paper Award, SensorKDD** 2012
- **Best Graduate Student Poster Award, Richard Tapia Celebration of Diversity in Computing Conference** 2008
- **Semifinalist in McCloskey Business Plan Competition** (Emerald Active, LLC) 2014
- **First Place in McCloskey Business Plan Competition** (Contect, Inc.) 2013
- **IEEE ICCCN Leadership Award** 2011
- **IBM Real-Time Innovation Award** 2008
- **NSF CAREER Award** 2006
- **Outstanding Doctoral Dissertation Award** 2005
  Awarded by the College of Computing of the Georgia Institute of Technology
- **Nomination for ACM Outstanding Dissertation Award** 2005
- **IBM Ph.D. Research Fellowship** 2002 - 2004
  Mentor: Dr. Hubertus Franke (IBM T. J. Watson Research Center)
- **Scholarship for Excellent Performance as a Student** 1998
  Awarded by the Faculty of Technical and Natural Sciences
  of the Vienna University of Technology
- **Scholarship for Excellent Performance as a Student** 1998
  Awarded by the Rector of the Vienna University of Technology
- **Info-Academy Award** 1997
  Awarded by Computer Associates
- **Erasmus Scholarship** 1996
  Scholarship for an exchange semester at the Universitat Politècnica de Catalunya
- **Joint Study Scholarship** 1995 - 1996
  Scholarship for an exchange semester at the City University of New York

Professional Memberships

- **Institute of Electrical and Electronics Engineers (IEEE)**, senior member 1997 - date
  IEEE Computer Society
  IEEE Communications Society
  Technical Committee on Real-Time Systems
- **Association for Computing Machinery (ACM)**, senior member 1997 - date
  SIGOPS Membership
  SIGMOBILE Membership
  SIGBED Membership
  SIGCOMM Membership
  SIGKDD Membership
- **USENIX (The Advanced Computing Systems Association)**, full member 1997 - date
- **American Association for the Advancement of Science**, member 2009 - date
- **Institute for Computer Sciences, Social-Informatics, and Telecommunications Engineering**, member 2009 - date
- **Austrian Computer Society (OCG)**, member 2004 - date

Technical Publications

Doctoral Thesis

- Christian Poellabauer, **"Q-Fabric: System Support for Continuous Online Quality Management"**, Georgia Institute of Technology, April 2004.

Books and Monographs

1. Waltenegus Dargie and Christian Poellabauer, **"Fundamentals of Wireless Sensor Networks: Theory and Practice"** (textbook; translated into Chinese and Persian), Wiley-Blackwell, John Wiley and Sons, Ltd., September 2010.

Book Chapters (@ indicates graduate student)

1. Josh Siva[@] and Christian Poellabauer, **"Robot and Drone Localization in GPS-Denied Areas"**, The Philosophy of Mission-Oriented Wireless Sensor Networks, Habib Ammari, ed., pp. 597-631, Springer, September 2019.
2. Mehdi Golestanian[@], Joshua Siva[@], and Christian Poellabauer, **"Radio Frequency Based Indoor Localization in Ad-Hoc Networks"**, Ad Hoc Networks, Jesus Hamilton Ortiz and Alvaro Pachon de la Cruz, eds., InTech, ISBN 978-953-51-4924-8, 2017.
3. Pramita Mitra[@] and Christian Poellabauer, **"Asymmetric Link Routing in Location-Aware Mobile Ad-Hoc Networks"**, Advancing Embedded Systems and Real-Time Communications with Emerging Technologies, Seppo Virtanen Ed., IGI Global, 2014.
4. Christian Poellabauer, **"Range-Free Localization Techniques"**, The Art of Wireless Sensor Networks, Habib Ammari Ed., Springer, 2013.
5. Pramita Mitra[@] and Christian Poellabauer, **"Opportunistic Routing in Mobile Ad-Hoc Networks"**, Routing in Opportunistic Networks, Isaac Woungang Ed., Springer, 2013.
6. Nikhil Yadav[@] and Christian Poellabauer, **"Challenges of Mobile Health Applications in Developing Countries"**, E-Healthcare Systems and Wireless Communications: Current and Future Challenges, Mohamed Watfa Ed., IGI Global, 2011.
7. Pramita Mitra[@] and Christian Poellabauer, **"Routing in Asymmetric Wireless Ad-Hoc Networks"**, Handbook of Research on Next Generation Networks and Ubiquitous Computing, Samuel Pierre Ed., IGI Global, 2009.

Refereed Journal Publications (@ indicates graduate student)

1. Shikang Liu[@], Fatemeh Vahedian[@], David Hachen, Omar Lizardo, Christian Poellabauer, Aaron Striegel, and Tijana Milenkovic, **"Heterogeneous Network Approach to Predict Individuals? Mental Health"**, to appear in ACM Transactions on Knowledge Discovery from Data, 2020. (Impact factor 3.290)
2. Yuan Gong[@], Jian Yang[@], and Christian Poellabauer, **"Detecting Replay Attacks Using Multi-Channel Audio: A Neural Network-Based Method"**, IEEE Signal Processing Letters, vol. 27, pp. 920-924, 2020, doi:10.1109/LSP.2020.2996908. (Impact factor 4.180)
3. John Michael Templeton[@], Christian Poellabauer, and Sandra Schneider, **"Enhancement of Neurocognitive Assessments Using Smartphone Capabilities: A Survey"**, Journal of Medical Internet Research (JMIR) Mhealth and Uhealth, 2020. (Impact factor 4.945)

4. Jian Yang[@], Christian Poellabauer, Pramita Mitra, and Cynthia Neubecker, **"Beyond Beaconing: Emerging Applications and Challenges of BLE"**, Ad Hoc Networks vol. 97, no. 102015, February 2020. (Impact Factor: 3.643)

5. Sudip Vhaduri[@] and Christian Poellabauer, **"Multi-modal Biometric-based Implicit Authentication of Wearable Device Users"**, IEEE Transactions on Information Forensics and Security, April 2019. (Impact Factor: 6.211)

6. Mehdi Golestanian[@] and Christian Poellabauer, **"VariLoc: Path Loss Exponent Estimation and Localization Using Multi-Range Beaconing"**, IEEE Communications Letters, vol. 23, no. 4, pp. 724-727, April 2019. (Impact Factor: 3.457)

7. Shikang Liu, David Hachen, Omar Lizardo, Christian Poellabauer, Aaron Striegel, and Tijana Milenkovic, **"Network analysis of the NetHealth data: Exploring co-evolution of individuals' social network positions and physical activities"**, Applied Network Science, 3:45, November 2018.

8. Sudip Vhaduri[@] and Christian Poellabauer, **"Opportunistic Discovery of Personal Places Using Multi-source Sensor Data"**, IEEE Transactions on Big Data, September 2018. (Impact Factor: 5.67)

9. Jose Benedetto[@], Guillermo Valenzuela, Pablo Sanabria, Andres Neyem, Jaime Navon, and Christian Poellabauer, **"MobiCOP: A Scalable and Reliable Mobile Code Offloading Solution**, Wireless Communications and Mobile Computing, vol. 2018, Article ID 8715294, 2018.

10. Sudip Vhaduri[@] and Christian Poellabauer, **"Hierarchical Cooperative Discovery of Personal Places from Location Traces"**, IEEE Transactions on Mobile Computing, November 2017. (Impact factor 3.822)

11. Sudip Vhaduri[@] and Christian Poellabauer, **"Design Factors of Longitudinal Smartphone-based Health Surveys"**, Journal of Healthcare Informatics, volume 1, issue 1, pp. 52-91, June 2017. (Impact factor 3.210)

12. Megan K. O'Brien, Nicholas Shawen, Chaithanya K. Mummidisetty, Saninder Kaur, Xiao Bo[@], Christian Poellabauer, Konrad Kording, and Arun Jayaraman, **"Activity Recognition for Persons with Stroke using Mobile Phone Technology"**, Journal of Medical Internet Research, 19(5):e184, May 2017. (Impact factor 4.671)

13. Jian Yang[@], Christian Poellabauer, and Pramita Mitra, **"Using Bluetooth Low Energy for Dynamic Information-Sharing in Vehicle-to-Vehicle Communication"**, SAE International Journal of Passenger Cars - Electronic and Electrical Systems, vol. 10, no. 2017-01-1650, 2017.

14. Louis Daudet[@], Nikhil Yadav[@], Matthew Perez*, Christian Poellabauer, Sandra Schneider, and Alan Huebner, **"Portable mTBI Assessment Using Temporal and Frequency Analysis of Speech"**, Journal of Biomedical and Health Informatics, 2017. (Impact factor 3.850)

15. Pramita Mitra, Mehdi Golestanian[@], and Christian Poellabauer, **"Quality of Service Specifications in Small-Scale Proximity-Aware Mobile Sensor Sharing Frameworks"**, Journal on Mobile Information Systems, vol. 2016, Article ID 8186310, 2016.

16. Nikhil Yadav[@], Mehrdad Aliasgari[@], and Christian Poellabauer, **"Mobile Healthcare in an Increasingly Connected Developing World"**, International Journal of Privacy and Health Information Management (IJPHIM), 4(2), July-December 2016.

17. Zhen Tong[@], Hongsheng Lu[@], Martin Haenggi, and Christian Poellabauer, **"A Stochastic Geometry Approach to the Modeling of DSRC for Vehicular Safety Communication"**, IEEE Transactions on Intelligent Transportation Systems, 2016. (Impact factor 4.051)

18. Christian Poellabauer, Nikhil Yadav[@], Louis Daudet[@], Sandra Schneider, Carlos Busso, and Patrick Flynn, **"Challenges in Concussion Detection Using Vocal Acoustic Biomarkers"**, IEEE Access, vol. 3, pp. 1143-1160, July 2015. (Impact factor 3.557)

19. Pramita Mitra[@] and Christian Poellabauer, **"Efficient Group Communications in Location Aware Mobile Ad-Hoc Networks"**, Pervasive and Mobile Computing (Elsevier), 2013. (Impact factor 2.974)

20. Jun Yi[@], Christian Poellabauer, and Liqiang Zhang, **"Configurable Time Synchronization for Mobile Multihop Networks"**, Journal of Communications, Special Issue on Advances in Communications and Networking, 2013. (Impact factor: 3.753)

21. Pramita Mitra[@] and Christian Poellabauer, **"Efficient Group Communications in Location Aware Mobile Ad-Hoc Networks"**, Pervasive and Mobile Computing (Elsevier), 2012. (Impact factor 2.974)

22. Dinesh Rajan[@] and Christian Poellabauer, **"Cooperative Energy Management in Distributed Wireless Real-Time Systems**, Wireless Networks (Springer), 2011. (Impact factor 1.59)

23. Pramita Mitra[@] and Christian Poellabauer, **"Asymmetric Geographic Forwarding: Exploiting Link Asymmetry in Location Aware Routing"**, International Journal of Embedded and Real-Time Communication Systems (IJERTCS), 2011.

24. Jun Yi[@], Christian Poellabauer, Xiaobo Sharon Hu, and Liqiang Zhang, **"Minimum Bandwidth Reservations for Periodic Streams in Wireless Real-Time Systems**, IEEE Transactions on Mobile Computing, Volume 10, Number 4, April 2011. (Impact factor 3.822)

25. Nadine Shillingford[@] and Christian Poellabauer, **"A Framework for Route Configurability in Power-Constrained Wireless Mesh Networks"**, Ad Hoc Networks Journal, Volume 8, Number 8, 857-871, November 2010. (Impact factor 3.151)

26. Hongsheng Lu[@] and Christian Poellabauer, **"Balancing Broadcast Reliability and Transmission Range in VANETs"**, Mobile Computing and Communications Review, Volume 14, Number 4, Oktober 2010. (Impact factor: 3.57)

27. Chris Miller[@] and Christian Poellabauer, **"Reliable and Efficient Reprogramming in Sensor Networks"**, ACM Transactions on Sensor Networks, 2010. (Impact factor 5.55)

28. Jun Yi[@], Christian Poellabauer, Xiaobo Sharon Hu, Thidapat Chantem, Liqiang Zhang, **"Dynamic Channel Reservations for Wireless Multihop Communication"**, Mobile Computing and Communications Review, Volume 14, Number 3, July 2010. (Impact factor: 3.57)

29. Jun Yi[@] and Christian Poellabauer, **"Real-Time Multicast for Wireless Multihop Networks"**, Elsevier Journal on Computers and Electrical Engineering, Special Issue on Emerging Wireless Networks, 2009.

30. Thidapat Chantem[@], X. Sharon Hu, Christian Poellabauer, Jun Yi[@], and Liqiang Zhang, **"Network-Aware, Energy-Conscious, Fair Service for Real-Time Applications on Multiprocessor SoC"**, ACM SIGBED Review, Volume 7, Number 1, January 2010.

31. Christian Poellabauer, Dinesh Rajan[@] and Russell Zuck*, **"LD-DVS: Load-Aware Dual-Speed Dynamic Voltage Scaling"**, International Journal of Embedded Systems, Vol. 4, No. 2, pp. 112-126, 2009.

32. David Salyers[@], Yingxin Jiang[@], Aaron Striegel, and Christian Poellabauer, **"JumboGen: Dynamic Jumbo Frame Generation for Network Performance Scalability"**, ACM Computer Communications Review (CCR), October 2007. (Impact factor 3.81)

33. Christian Poellabauer and Karsten Schwan, **"Flexible Cross-Domain Event Delivery for Quality-Managed Multimedia Applications"**, ACM Transactions on Multimedia Computing, Communications and Applications (TOMCCAP), Vol. 1, No. 3, August 2005. (Impact factor 2.28)

34. Richard West, Yuting Zhang, Karsten Schwan, and Christian Poellabauer, **"Dynamic Window-Constrained Scheduling of Real-Time Streams in Media Servers"**, IEEE Transactions on Computers, Vol. 53, No. 6, pp. 774-659, 2004. (Impact factor 2.916)

35. Sandip Agarwala, Christian Poellabauer, Jiantao Kong, Karsten Schwan, and Matthew Wolf, **"System-Level Resource Monitoring for Distributed Applications"**, Journal of Grid Computing, Vol. 1, No. 3, 2003. (Impact factor 1.556)

Refereed Conference and Workshop Publications ([@] indicates graduate student)

1. Yugyeong Kim, Sudip Vhaduri, and Christian Poellabauer, **"Understanding College Students' Phone Call Behaviors Towards a Sustainable Mobile Health and Wellbeing Solution"**, Proceedings of the 3rd International Conference on Systems Engineering (CIIS), Virtual Conference, November 2020.

2. Louis Daudet[@], Christian Poellabauer, and Sandra Schneider, **"Experiences in Designing a Mobile Speech-Based Assessment Tool for Neurological Diseases"**, Proceedings of the 9th EAI International Conference on Wireless Mobile Communication and Healthcare (MobiHealth), Virtual Conference, November 2020.

3. John Michael Templeton[@], Christian Poellabauer, and Sandra Schneider, **"Design of a Mobile-Based Neurological Assessment Tool for Aging Populations"**, Proceedings of the 9th EAI International Conference on Wireless Mobile Communication and Healthcare (MobiHealth), Virtual Conference, November 2020 **(Best Paper Award)**.

4. Jian Yang[@], Christian Poellabauer, Pramita Mitra, Abhishek Sharma, Cynthia Neubecker, and Arpita Chand, **"Generating Contextual Trajectories From User Profiles"**, Proceedings of the 3rd ACM SIGSPATIAL International Workshop on GeoSpatial Simulation (GeoSim), Virtual Conference, November 2020.

5. Chih-You Chen[@], Sudip Vhaduri, and Christian Poellabauer, **"Estimating Sleep Duration from Temporal Factors, Daily Activities, and Smartphone Use"**, IEEE Computer Society Signature Conference on Computers, Software and Applications (COMPSAC), Virtual Conference, July 2020.

6. Josh Siva[@] and Christian Poellabauer, **"Connection-Oriented BLE Traffic Servicing Characteristics on Android Devices"**, IEEE ComSoc International Communications Quality and Reliability Workshop, Virtual Conference, May 2020.

7. Shikang Liu[@], David Hachen, Omar Lizardo, Christian Poellabauer, Aaron Striegel, and Tijana Milenkovic, **"The Power of Dynamic Social Networks to Predict Individuals' Mental Health"**, Proceedings of the 2020 Pacific Symposium on Biocomputing (PSB), The Big Island, Hawaii, January 2020.

8. Bryan Xia[@], Yuan Gong[@], Yizhe Zhang, and Christian Poellabauer, **"Second-order Non-local Attention Networks for Person Re-identification"**, Proceedings of the 2019 International Conference on Computer Vision (ICCV), Seoul, Korea, October-November 2019.

9. Yuan Gong[@], Jian Yang[@], Jacob Huber*, Mitchell MacKnight*, and Christian Poellabauer, **"ReMASC: Realistic Replay Attack Corpus for Voice Controlled Systems"**, Proceedings of the 20th Annual Conference of the International Speech Communication Association (INTERSPEECH), Graz, Austria, September 2019 **(ISCA Best Student Paper Award Nomination)**.

10. Josh Siva[@], Jian Yang[@], and Christian Poellabauer, **"Connection-less BLE Performance Evaluation on Smartphones"**, Proceedings of the 16th International Conference on Mobile Systems and Pervasive Computing (MobiSPC), August 2019, Halifax, Canada.

11. Yuan Gong[@], Boyang Li, Christian Poellabauer, and Yiyu Shi, **"Real-time Adversarial Attacks"**, Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI), Macao, China, August 2019.

12. Yuan Gong[@] and Christian Poellabauer, **"Crafting Adversarial Examples for Speech Paralinguistics Applications"**, Proceedings of the DYnamic and Novel Advances in Machine Learning and Intelligent Cyber Security (DYNAMICS) Workshop, San Juan, Puerto Rico, December 2018.

13. Yuan Gong[@] and Christian Poellabauer, **"Deep Obfuscation: Precise Masking of Sensitive Information to Protect Against Machine Learning Adversaries"**, Proceedings of the 2018 Annual Computer Security Applications Conference Poster Session, San Juan, Puerto Rico, December 2018.

14. Jose Benedetto[@], Pablo Sanabria, Andres Neyem, Jaime Navon, Christian Poellabauer, and Bryan Xia[@], **"Deep Neural Networks on Mobile Healthcare Applications: Practical Recommendations"**, Proceedings of the 12th International Conference on Ubiquitous Computing and Ambient Intelligence (UCAmI), Punta Canta, Dominican Republic, December 2018.

15. Afzal Hossain[@] and Christian Poellabauer, **"Efficient Location Sensing in Longitudinal Cohort Studies"**, Proceedings of 43rd IEEE Conference on Local Computer Networks (LCN), Chicago, IL, October 2018.

16. Yuan Gong[@] and Christian Poellabauer, **Impact of Aliasing on Deep CNN-Based End-to-End Acoustic Models"**, Proceedings of InterSpeech 2018, Hyderabad, India, September 2018.

17. Yuan Gong[@], Hasini Yatawatte[@], Christian Poellabauer, Sandra Schneider and Susan Latham, **"Automatic Autism Spectrum Disorder Detection Using Everyday Vocalizations Captured by Smart Devices"**, Proceedings of the 9th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB), Washington, DC, August-September 2018.

18. Mehdi Golestanian[@], Hongsheng Lu, Christian Poellabauer, and John Kenney, **"RSSI-Based Ranging for Pedestrian Localization"**, Proceedings of the 88th IEEE Vehicular Technology Conference (VTC2018-Fall), Chicago, IL, August 2018.

19. Yuan Gong[@] and Christian Poellabauer, **"Protecting Voice Controlled Systems Using Sound Source Identification Based on Acoustic Cues"**, Proceedings of the 27th International Conference on Computer Communications and Networks (ICCCN), Hangzhou, China, July-August 2018.

20. Hasini Yatawatte[@], Christian Poellabauer, Sandra Schneider, and Susan Latham, **"Deviations of Acoustic Low-Level Descriptors in Speech Features of a Set of Triples, One With Autism"**, Proceedings of the 40th International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Honolulu, HI, July 2018.

21. Sudip Vhaduri[@] and Christian Poellabauer, **"Opportunistic Discovery of Personal Places Using Smartphone and Fitness Tracker Data"**, Proceedings of the Sixth IEEE International Conference on Healthcare Informatics (ICHI 2018), New York, NY, June 2018.

22. Pablo Sanabria[@], Jose Benedetto[@], Andres Neyem, Jaime Navon, and Christian Poellabauer, **"Code Offloading Solutions for Audio Processing in Mobile Healthcare Applications: A Case Study"**, Proceedings of the 5th IEEE/ACM International Conference on Mobile Software Engineering and Systems, Gothenburg, Sweden, May 2018.

23. Yuan Gong[@] and Christian Poellabauer, **"An Overview of Vulnerabilities of Voice Controlled Systems"**, Proceedings of the 1st International Workshop on Security and Privacy for the Internet-of-Things (IoTSec), Orlando, FL, April 2018.

24. Sudip Vhaduri[@] and Christian Poellabauer, **"Implicit Authentication in Wearables Using Multiple Biometrics"**, Proceedings of the 1st International Workshop on Security and Privacy for the Internet-of-Things (IoTSec), Orlando, FL, April 2018.

25. Xiao Bo[@], Christian Poellabauer, Megan K. O'Brien, Chaithanya Krishna Mummidisetty, and Arun Jayaraman, **"Detecting Label Errors in Crowd-Sourced Smartphone Sensor Data"**, Proceedings of the 3rd International Workshop on Social Sensing (SocialSens), Orlando, FL, April 2018.

26. Sudip Vhaduri[@] and Christian Poellabauer, **"Impact of Different Pre-Sleep Phone Use Patterns on Sleep Quality"**, Proceedings of the 15th International Conference on Wearable and Implantable Body Sensor Networks, Las Vegas, NV, March 2018.

27. Yuan Gong[@] and Christian Poellabauer, **"Topic Modeling Based Multi-modal Depression Detection"**, Proceedings of the 7th Audio/Visual Emotion Challenge and Workshop (AVEC), Mountain View, CA, October 2017. **(Depression Challenge Winner)**

28. Sudip Vhaduri[@] and Christian Poellabauer, **"Reliable Wearable-User Authentication Using Phsyiological and Behavioral Metrics"**, Proceedings of the IEEE 28th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC), Montreal, QC, Canada, October 2017.

29. Yuan Gong[@] and Christian Poellabauer, **"Continuous Assessment of Children's Emotional States using Acoustic Analysis"**, Proceedings of the 5th IEEE International Conference on Healthcare Informatics (ICHI), Park City, UT, August 2017.

30. Xiao Bo[@], Alan Huebner, Christian Poellabauer, Megan K. O'Brien, Chaithanya Krishna Mummidisetty, and Arun Jayaraman, **"Evaluation of Sensing and Processing Parameters for Human Action Recognition"**, Proceedings of the 5th IEEE International Conference on Healthcare Informatics (ICHI), Park City, UT, August 2017.

31. Sudip Vhaduri[@] and Christian Poellabauer, **"Towards Reliable Wearable-User Identification (Extended Abstract)"**, Proceedings of the Doctoral Consortium at ICHI 2017, Park City, UT, August 2017.

32. Jian Yang[@], Christian Poellabauer, Pramita Mitra, Jayanthi Rao, and Cynthia Neubecker, **"BlueNet: BLE-Based Ad-Hoc Communications Without Predefined Roles"**, Proceedings of the 2017 IEEE Smart World Congress (SmartWorld 2017), San Francisco, CA, August 2017.

33. Sudip Vhaduri[@], Christian Poellabauer, Aaron Striegel, Omar Lizardo, and David Hachen, **"Discovering Places of Interest Using Sensor Data from Smartphones and Wearables"**, Proceedings of the IEEE Ubiquitous Intelligence and Computing (UIC) Conference, East Bay, Silicon Valley, CA, August 2017.

34. Louis Faust[@], Rachael Purta[@], David Hachen, Aaron Striegel, Christian Poellabauer, Omar Lizardo, Nitesh Chawla, **"Exploring Compliance: Observations from a Large Scale Fitbit Study"**, Proceedings of the 2nd International Workshop on Social Sensing (SocialSens), Pittsburgh, PA, April 2017.

35. Sudip Vhaduri[@], Andrew Munch*, and Christian Poellabauer, **"Assessing Health Trends of College Students Using Smartphones"**, Proceedings of the IEEE-NIH 2016 Special Topics Conference on Healthcare Innovations and Point-of-Care Technologies, Cancun, Mexico, November 2016.

36. Sudip Vhaduri[@] and Christian Poellabauer, **"Human Factors in the Design of Longitudinal Smartphone-based Wellness Surveys"**, Proceedings of the IEEE International Conference on Healthcare Informatics (ICHI), Chicago, IL, October 2016. **(Best Paper Nomination)**

37. Mehdi Golestanian[@] and Christian Poellabauer, **"A Constraint-Based Routing Algorithm for Cognitive Ad-hoc Networks"**, Proceedings of the 9th IEEE International Workshop on Selected Topics in Wireless and Mobile Computing, New York, NY, October 2016.

38. Afzal Hossain[@] and Christian Poellabauer, **"Challenges in Building Continuous Smartphone Sensing Applications"**, Proceedings of the 9th IEEE International Workshop on Selected Topics in Wireless and Mobile Computing, New York, NY, October 2016.

39. Rachael Purta[@], Stephen Mattingly[@], Lixing Song[@], Omar Lizardo, David Hachen, Christian Poellabauer, and Aaron Striegel, **"Experiences Measuring Sleep and Physical Activity Patterns Across a Large College Cohort With Fitbits"**, Proceedings of the 20th International Symposium on Wearable Computing, Heidelberg, Germany, September 2016.

40. Fei Tao+, Louis Daudet[@], Christian Poellabauer, Sandra Schneider, and Carlos Busso, **"A Portable Automatic PA-TA-KA Syllable Detection System to Derive Biomarkers for Neurological Disorders"**, Proceedings of InterSpeech 2016, San Francisco, CA, September 2016.

41. Sudip Vhaduri[@] and Christian Poellabauer, **"Cooperative Discovery of Personal Places from Location Traces"**, Proceedings of the 25th International Conference on Computer Communication and Networks (ICCCN), Waikoloa, Hawaii, August 2016.

42. Mehdi Golestanian[@] and Christian Poellabauer, **"Localization in Heterogeneous Wireless Sensor Networks Using Elliptical Range Estimation"**, Proceedings of the International Conference on Computing, Networking and Communications (ICNC), Kauai, Hawaii, February 2016.

43. Vijay Gupta, Christian Poellabauer, and Greg Madey, **"Distributed DDDAS Through Receding Horizon Control"**, Proceedings of the Workshop on Architectural Support and Middleware for InfoSymbiotics / Dynamic Data Driven Applications Systems (DDDAS), Bangalore, India, December 2015.

44. Sudip Vhaduri[@] and Christian Poellabauer, **"Design and Implementation of a Remotely Configurable and Manageable Well-being Study"**, Proceedings of the EAI International Conference on Smart Wearable Devices and IoT for Health and Wellbeing Applications (SWIT-Health), Toronto, Canada, October 2015.

45. Juuso Nurmio, Ethiopia Nigussie, and Christian Poellabauer, **"Equalizing Energy Distribution in Sensor Nodes through Optimization of RPL"**, Proceedings of the 15th IEEE International Conference on Computer and Information Technology (CIT-2015), Liverpool, England, UK, October 2015.

46. Mehdi Golestanian[@] and Christian Poellabauer, **"Joint Route Discovery and Localization in Heterogeneous Wireless Sensor Networks"**, Proceedings of the 4th IEEE Annual International Workshop on Mission-Oriented Wireless Sensor Networking (IEEE MiSeNet), Dallas, TX, October 2015.

47. Nikhil Yadav[@], Christian Poellabauer, Louis Daudet[@], Tomas Collins[@], Shane McQuillan[@], Patrick Flynn, and Sandra Schneider, **"Portable Neurological Disease Assessment Using Temporal Analysis of Speech"**, Proceedings of the 6th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics, Atlanta, GA, September 2015.

48. Christian Poellabauer, Nikhil Yadav[@], Patrick Flynn, and Sandra Schneider, **"Using Speech Analysis for TBI Detection"**, Proceedings of INFORMS Healthcare, Nashville, TN, June 2015.

49. Nikhil Yadav[@], Louis Daudet[@], Christian Poellabauer and Patrick Flynn, **"Noise Management in Mobile Speech Based Health Tools"**, IEEE Healthcare Innovation and Point-of-Care Technologies (HIPOCT), Seattle, Washington, October 2014.

50. Christopher Miller[@] and Christian Poellabauer, **"Configurable Integrated Monitoring System for Mobile Devices"**, Proc. of the 11th International Conference on Mobile Systems and Pervasive Computing (MobiSPC), Niagara Falls, Canada, August 2014.

51. Gaurav Bansal, Hongsheng Lu[@], John B. Kenney, and Christian Poellabauer, **"Assigning Safety Message Priority Based on Vehicle Dynamics"**, 20th ITS World Congress, Tokyo, Japan, October 2013.

52. Aaron Striegel, Shu Liu[@], Lei Meng[@], Christian Poellabauer, David Hachen, and Omar Lizardo, **"Lessons Learned from the NetSense Smartphone Study"**, 5th HotPlanet Workshop, Hong Kong, August 2013. **(Best Paper Award)**.

53. Salvador Aguinaga[@] and Christian Poellabauer, **"Stealthy Health Sensing to Objectively Characterize Motor Movement Disorders"**, 3rd International workshop on Sensor Networks for Intelligence Gathering and Monitoring, Halifax, Nova Scotia, Canada, June 2013.

54. Gaurav Bansal, Hongsheng Lu[@], John Kenney, and Christian Poellabauer, **"Error Model based Adaptive Rate Control for Vehicle-to-Vehicle Communications"**, Tenth ACM International Workshop on VehiculAr Inter-NETworking, Systems, and Applications (ACM VANET 2013), Taipei, Taiwan, June 2013.

55. Michael Falcone*, Nikhil Yadav[@], Christian Poellabauer, and P. Flynn, **"Using Isolated Vowel Sounds for Classification of Mild Traumatic Brain Injury"**, 38th IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2013), Vancouver, Canada, May 2013.

56. Nikhil Yadav[@] and Christian Poellabauer, **"An Architecture for Personalized Health Information Retrieval from Credible Websites"**, International Workshop on Smart Health and Wellbeing (SHB), Maui, Hawaii, October-November 2012.

57. Pramita Mitra[@] and Christian Poellabauer, **"Emergency Response in Smartphone-Based Mobile Ad-Hoc Networks"**, Proceedings of the International Workshop on Mobile Consumer Health Care Networks, Systems and Services (MobiCHeSS), Ottawa, Canada, June 2012.

58. Greg Madey, M. Brian Blake, and Christian Poellabauer, **"Applying DDDAS Principles to Command, Control and Mission Planning for UAV Swarms"**, International Conference on Computational Science (ICCS), Omaha, Nebraska, June 2012.

59. Salvador Aguinaga[@] and Christian Poellabauer, **"Method for Privacy-Protecting Display and Exchange of Emergency Information on Mobile Devices"**, International Conference on Collaboration Technologies and Systems (CTS 2012), Denver, Colorado, May 2012.

60. Timothy Wright and Christian Poellabauer, **"Improved Mobile Device Security through Privacy Risk Assessment and Visualization"**, ICDE Workshop on Secure Data Management on Smartphones and Mobiles, Washington, DC, April 2012.

61. Pramita Mitra[@] and Christian Poellabauer, **"Service Sharing in Mobile Sensing Systems"**, Proceedings of the Joint Workshop on Complex Networks and Pervasive Group Communication (in conjunction with GLOBECOM 2011), Houston, TX, December 2011.

62. Hongsheng Lu[@] and Christian Poellabauer, **"Analysis of Application-Specific Broadcast Reliability for Vehicle Safety Communications"**, Proceedings of the 8th ACM International Workshop on Vehicular Internetworking (VANET), Las Vegas, NV, September 2011.

63. Thidapat Chantem[@], Jun Yi[@], Shengyan Hong[@], X. Sharon Hu, Christian Poellabauer, and Liqiang Zhang, **"An Online Holistic Scheduling Framework for Energy-Constrained Wireless Real-Time Systems"**, Proceedings of the 17th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA), Toyama, Japan, August 2011.

64. Jun Yi[@], Christian Poellabauer, and Liqiang Zhang, **"Mobi-Sync: Configurable Time Synchronization for Mobile Multihop Networks"**, Proceedings of the 20th International Conference on Computer Communication Networks (ICCCN), Maui, Hawaii, August 2011.

65. Hongsheng Lu[@] and Christian Poellabauer, **"Balancing Broadcast Reliability and Transmission Range in VANETs**, Proceedings of the 2nd IEEE Vehicular Networking Conference (VNC), Jersey City, NJ, December 2010.

66. Christopher Miller[@], Sarah Chasins*, Carolyn Farris*, Justin Varner*, Curtis Carmony*, Christian Poellabauer, and Aaron Striegel, **"An Integrated Monitoring System for Mobile Phones"**, Proceedings of the 1st International Workshop on Sensing for App Phones (PhoneSense), Zurich, Switzerland, November 2010.

67. Nadine Shillingford[@] and Christian Poellabauer, **"On Improving the Agility and Quality of Adaptation in QoS-Aware Routing"**, Proceedings of the 1st Networking Networking Women Workshop (in conjunction with ACM Mobicom 2010), Chicago, IL, September 2010.

68. Thidapat Chantem[@], X. S. Hu, Christian Poellabauer, Jun Yi[@], and Liqiang Zhang, **"Network-Aware, Energy-Conscious, Fair Service for Real-Time Applications on Multiprocessor SoC"**, Refereed Work-in-Progress at the 30th IEEE Real-Time Systems Symposium (RTSS), Washington, DC, December 2009.

69. Jeffrey Hemmes[@], Douglas Thain, and Christian Poellabauer, **"Cooperative Localization in GPS-Limited Urban Environments"**, Proceedings of the First International Conference on Ad Hoc Networks (AdHocNets), Niagara Falls, Canada, September 2009.

70. Chris Miller[@] and Christian Poellabauer, **"A Decentralized Approach to Minimum-Energy Broadcasting in Static Ad Hoc Networks"**, Proceedings of the 8th International Conference on Ad Hoc Networks and Wireless (ADHOC NOW), Murcia, Spain, September 2009.

71. Sean McRoskey*, Jim Notwell*, Nitesh Chawla, and Christian Poellabauer, **"Mining in a Mobile Environment"**, Proceedings of the Third International Workshop on Knowledge Discovery from Sensor Data (SensorKDD), Paris, France, June 2009. **(Best student paper award)**

72. Nadine Shillingford[@] and Christian Poellabauer, **"Customized Routing in Mesh Networks"**, Proceedings of the First IEEE WoWMoM Workshop on Hot Topics in Mesh Networking (HotMESH), Kos, Greece, June 2009.

73. Jun Yi[@], Christian Poellabauer, Xiaobo Sharon Hu, Jeff Simmer*, and Liqiang Zhang, **"Energy-Conscious Co-Scheduling of Tasks and Packets in Wireless Real-Time Environments"**, Proceedings of the 15th IEEE Real-Time and Embedded Technology and Applications Symposium, San Francisco, CA, April 2009.

74. David C. Salyers[@], Aaron D. Striegel, and Christian Poellabauer, **"Opportunistic Wireless Broadcast (OWB): Dynamic Redundancy Detection in the Wireless Medium"**, Proceedings of the 8th IEEE International Workshop on Wireless Local Networks (WLN), Montreal, Canada, October 2008.

75. Dinesh Rajan[@], Christian Poellabauer, Xiaobo Sharon Hu, Liqiang Zhang, and Kathleen Otten*, **"Wireless Channel Access Reservation for Embedded Real-time Systems"**, Proceedings of the International Conference on Embedded Software (EMSOFT), Atlanta, GA, October 2008.

76. David Salyers[@], Aaron Striegel, and Christian Poellabauer, **"A Light Weight Method for Maintaining Clock Synchronizaion for Networked Systems"**, Proceedings of the 17th International Conference on Computer Communications and Networks (Wireless Platform - Applications and Testbeds Track), St. Thomas, U.S. Virgin Islands, August 2008.

77. Chris Miller[@] and Christian Poellabauer, **"PALER: A Reliable Transport Protocol for Code Distribution in Large Sensor Networks"**, Proceedings of the 5th IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON), San Francisco, CA, June 2008.

78. David C. Salyers[@], Aaron D. Striegel, and Christian Poellabauer, **"Wireless Reliability: Rethinking 802.11 Packet Loss"**, Proceedings of the 9th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (short paper), Newport Beach, CA, June 2008.

79. Kyle O'Brien*, David C. Salyers[@], Aaron D. Striegel, and Christian Poellabauer, **"Power and Performance Characteristics of USB Flash Drives"**, Proceedings of the 9th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (short paper), Newport Beach, CA, June 2008.

80. Jeffrey Hemmes[@], Christian Poellabauer, and Douglas Thain, **"On-Demand Transient Data Storage and Backup in Mobile Systems"**, Proceedings of the Military Communications Conference (MILCOM), Orlando, FL, October 2007.

81. Pramita Mitra[@], Christian Poellabauer, and Shivajit Mohapatra, **"Stability Aware Routing: Exploiting Transient Route Availability in MANETs"**, Proceedings of the High Performance Computation Conference (HPCC), Houston, TX, September 2007.

82. Dinesh Rajan[@], Christian Poellabauer, Andrew Blanford*, and Bren Mochocki[@], **"Cooperative Dynamic Voltage Scaling using Hierarchical Slack Distribution in Distributed Real-Time Systems"**, Proceedings of the 4th Annual International Conference on Mobile and Ubiquitous Systems (Mobiquitous), Philadelphia, PA, August 2007.

83. Nadine Shillingford[@], David Salyers[@], Christian Poellabauer, and Aaron Striegel, **"Energy- and Latency-Aware Routing in Multi-Homed Wireless Ad Hoc Networks"**, Proceedings of the 4th Annual International Conference on Mobile and Ubiquitous Systems (Mobiquitous), Philadelphia, PA, August 2007.

84. Pramita Mitra[@], Christian Poellabauer, and Shivajit Mohapatra, **"On Improving Dynamic Source Routing for Intermittently Available Nodes in MANETs"**, Proceedings of the 4th Annual International Conference on Mobile and Ubiquitous Systems (Mobiquitous, short paper), Philadelphia, PA, August 2007.

85. Dinesh Rajan[@] and Christian Poellabauer, **"Adaptive Fragmentation for Latency Control and Energy Management in Wireless Real-time Environments"**, Proceedings of the International Conference on Wireless Algorithms, Systems and Applications (WASA), Chicago, IL, August 2007.

86. Jeffrey Hemmes[@], Douglas Thain, Christian Poellabauer, Christopher Moretti[@], Phil Snowberger[@], and Brendan McNutt*, **"Lessons Learned Building TeamTrak: An Urban/Outdoor Mobile Ad Hoc Network Testbed"**, Proceedings of the International Conference on Wireless Algorithms, Systems and Applications (WASA), Chicago, IL, August 2007.

87. Bren Mochocki[@], Dinesh Rajan[@], Xiaobo Sharon Hu, Christian Poellabauer, Kathleen Otten*, and Thidapat Chantem[@], **"Network-Aware Dynamic Voltage and Frequency Scaling"**, Proceedings of the 13th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS), Bellevue, WA, April 2007.

88. Douglas Thain and Christian Poellabauer, **"Experience With A Literate Approach to Computer Science"**, Proceedings of the 36th Annual Frontiers in Education Conference, San Diego, CA, October 2006.

89. Dinesh Rajan[@], Christian Poellabauer, and Nitesh Chawla, **"Resource Access Pattern Mining for Dynamic Energy Management"**, Proceedings of the Workshop on Autonomic Computing: A New Challenge for Machine Learning, Berlin, Germany, September 2006.

90. Dinesh Rajan[@], Russell Zuck[@], and Christian Poellabauer, **"Workload-Aware Dual-Speed Dynamic Voltage Scaling"**, Proceedings of the 12th IEEE International Conference on Embedded and Real-Time Systems and Applications (RTCSA 2006, short paper), Sydney, Australia, August 2006.

91. Karsten Steinhaeuser[@], Nitesh V. Chawla, and Christian Poellabauer, **"Towards Learning-based Sensor Management"**, Proceedings of the First Workshop on Tackling Computer Systems Problems with Machine Learning Techniques (SysML), Saint-Malo, France, June 2006.

92. Christian Poellabauer, Tao Zhang[@], Santosh Pande, and Karsten Schwan, **"An Efficient Frequency Scaling Approach for Energy-Aware Embedded Real-Time Systems"**, Proceedings of the International Conference on Architecture of Computing Systems (ARCS), Innsbruck, Austria, March 2005.

93. Christian Poellabauer, Leo Singleton*, and Karsten Schwan, **"Feedback-Based Dynamic Frequency Scaling for Memory-Bound Real-Time Applications"**, Proceedings of the 11th Real-Time and Embedded Technology and Applications Symposium (RTAS), San Francisco, CA, March 2005.

94. Leo Singleton*, Christian Poellabauer, and Karsten Schwan, **"Monitoring of Cache Miss Rates for Accurate Dynamic Voltage and Frequency Scaling"**, Proceedings of the 12th Annual Multimedia Computing and Networking Conference (short paper), San Jose, CA, January 2005.

95. Christian Poellabauer and Karsten Schwan, **"Energy-Aware Traffic Shaping for Wireless Real-Time Applications"**, Procedings of the 10th Real-Time and Embedded Technology and Applications (RTAS), Toronto, Canada, May 2004.

96. Zhongtang Cai[@], Greg Eisenhauer, Christian Poellabauer, Karsten Schwan, and Matthew Wolf, **"IQ-Services: Resource-Aware Middleware for Heterogeneous Applications"**, Proceedings of the 13th Heterogeneous Computing Workshop (HCW 2004), Santa Fe, NM, April 2004.

97. Christian Poellabauer and Karsten Schwan, **"Energy-Aware Media Transcoding in Wireless Systems"**, Proceedings of the Second IEEE International Conference on Pervasive Computing and Communications (PerCom), Orlando, FL, March 2004.

98. Christian Poellabauer, Karsten Schwan, Sandip Agarwala[@], Ada Gavrilovska[@], Greg Eisenhauer, **"Service Morphing: Integrated System- and Application-Level Service Adaptation in Autonomic Systems"**, Proceedings of the 5th Annual International Workshop on Active Middleware Services (AMS 2003), Seattle, Washington, June 2003.

99. Sandip Agarwala[@], Christian Poellabauer, Jiantao Kong[@], Karsten Schwan, and Matthew Wolf, **"Resource-Aware Stream Management with the Customizable dproc Distributed Monitoring Mechanisms"**, Proceedings of the 12th IEEE International Symposium on High Performance Distributed Computing (HPDC-12), Seattle, Washington, June 2003.

100. Karsten Schwan, Christian Poellabauer, Greg Eisenhauer, Santosh Pande, and Calton Pu, **"InfoFabric: Adaptive Services in Distributed Embedded Systems"**, Proceedings of the IEEE Workshop on Large Scale Real-Time and Embedded Systems (in conjunction with RTSS 2002), Austin, TX, December 2002.

101. Hasan Abbasi[@], Christian Poellabauer, Gregory Losik*, Karsten Schwan, and Richard West[@], **"A Quality-of-Service Enhanced Socket API in GNU/Linux"**, Proceedings of the 4th Real-Time Linux Workshop, Boston, Massachusetts, December 2002.

102. Christian Poellabauer, Hasan Abbasi[@], and Karsten Schwan, **"Cooperative Run-time Management of Adaptive Applications and Distributed Resources"**, Proceedings of the 10th ACM Multimedia Conference, Juan-les-Pins, France, December 2002.

103. Christian Poellabauer and Karsten Schwan, **"Power-Aware Video Decoding using Real-Time Event Handlers"**, Proceedings of the 5th International Workshop on Wireless Mobile Multimedia (WoWMoM), Atlanta, Georgia, September 2002.

104. Christian Poellabauer and Karsten Schwan, **"Kernel Support for the Event-based Cooperation of Distributed Resource Managers"**, Proceedings of the 8th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 2002), San Jose, California, September 2002.

105. Fabian E. Bustamante[@], Christian Poellabauer, and Karsten Schwan, **"AIMS: Robustness Through Sensible Introspection (Extended Abstract)"**, Proceedings of the 10th ACM SIGOPS European Workshop, Saint-Emilion, France, September 2002.

106. Jasmina Jancic[@], Christian Poellabauer, Karsten Schwan, Matthew Wolf, and Neil Bright, **"dproc - Extensible Run-Time Resource Monitoring for Cluster Applications"**, Proceedings of the International Conference on Computational Science (ICCS '02), Amsterdam, The Netherlands, April 2002.

107. Christian Poellabauer, Karsten Schwan, Greg Eisenhauer, and Jiantao Kong[@], **"KECho - Event Communication for Distributed Kernel Services"**, Proceedings of the International Conference on Architecture of Computing Systems (ARCS'02), Karlsruhe, Germany, April 2002.

108. Christian Poellabauer, Karsten Schwan, and Richard West[@], **"Coordinated CPU and Event Scheduling for Distributed Multimedia Applications"**, Proceedings of the 9th ACM Multimedia Conference, Ottawa, Canada, October 2001.

109. Christian Poellabauer, Karsten Schwan, and Richard West[@], **"Lightweight Kernel/User Communication for Real-Time and Multimedia Applications"**, Proceedings of the 11th

International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV), Port Jefferson, NY, June 2001.

110. Christian Poellabauer, Karsten Schwan, Richard West[@], Ivan Ganev[@], Neil Bright, and Gregory Losik*, **"Flexible User/Kernel Communication for Real-Time Applications in ELinux"**, Proceedings of the Workshop on Real Time Operating Systems and Applications and Second Real Time Linux Workshop (in conjunction with RTSS 2000), Orlando, FL, November 2000.

111. Richard West[@] and Christian Poellabauer, **"Analysis of a Window-Constrained Scheduler for Real-Time and Best-Effort Packet Streams"**, Proceedings of the 21st IEEE Real-Time Systems Symposium (RTSS 2000), Orlando, FL, November 2000.

112. Richard West[@], Karsten Schwan, and Christian Poellabauer, **"Scalable Scheduling Support for Loss and Delay Constrained Media Streams"**, Proceedings of the 5th IEEE Real-Time Technology and Applications Symposium (RTAS 1999), pp. 24–33, Vancouver, Canada, June 1999.

Refereed Work-In-Progress and Poster Publications ([@] indicates graduate student)

1. Joshua Siva[@], Abrar Ahmed, and Christian Poellabauer, **"Energy Consumption and Parameter Effects for BLE Performance on Smartphones (Poster)"**, Proceedings of the 8th Greater Chicago Area Systems Research Workshop, May 2019.

2. Louis Daudet[@], Sandra Schneider, and Christian Poellabauer, **"Using an Objective Mobile Based Instrument for the Detection of Speech Features in Parkinson's Disease (Poster)"**, Proceedings of the American Speech-Language-Hearing Association (ASHA) Convention, Boston, MA, November 2018.

3. Yuan Gong[@], Kevin Shin*, and Christian Poellabauer, **"Improving LIWC Using Soft Word Matching (Poster)"**, Proceedings of the 9th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (ACM-BCB), Washington, DC, August-September 2018.

4. Shikang Liu[@], David Hachen, Omar Lizardo, Christian Poellabauer, Aaron Striegel, and Tijana Milenkovic, **"Exploring Co-Evolution between Individuals' Social Networks and Physical Activities in NetHealth Data (Poster)"**, Proceedings of the 26th Conference on Intelligent Systems for Molecular Biology, Chicago, IL, July 2018.

5. Mehdi Golestanian[@], Christian Poellabauer, and Nitesh Chawla, **"Poster: RSSI-Based Pedestrian Localization Using Artificial Neural Networks**, Proceedings of the ACM International Workshop on Connected and Automated Vehicle Mobility (CarSys), Snowbird, UT, October 2017.

6. Megan K. O'Brien, Chaithanya Mummidisetty, Xiao Bo[@], Christian Poellabauer, and Arun Jayaraman, **"Quantifying Community Mobility After Stroke Using Mobile Phone Technology (Poster)"**, Proceedings of the 2017 ACM International Joint Conference on Pervasive and Ubiquitous Computing (Ubicomp), Maui, Hawaii, September 2017.

7. Bryan Xia[@], Louis Daudet[@], Christian Poellabauer, and Sandra Schneider, **"Using Speech for the Diagnosis of Mild Traumatic Brain Injuries"**, Proceedings of the ACRM 93rd Annual Conference (Poster), Chicago, IL, October - November 2016.

8. Hasini Yatawatte[@], Christian Poellabauer, and Susan Latham, **"Automated Capture of Naturalistic Child Vocalizations for Health Research"**, Proceedings of the 7th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (Poster), Seattle, WA, October 2016.

9. Suwen Lin[@], Vijay Gupta, Greg Madey, and Christian Poellabauer, **"A DDDAS Approach to Sensor Trajectory Generation"**, Proceedings of the InfoSymbiotics/DDDAS Conference (Abstract), Hartford, Connecticut, August 2016.

10. Mehdi Golestanian[@] and Christian Poellabauer, **"Poster: Indoor Localization using Multi-Range Beaconing"**, Poster at the 17th International Symposium on Mobile Ad Hoc Networking and Computing, Paderborn, Germany, July 2016.

11. Pramita Mitra[@] and Christian Poellabauer, **"Beyond Talk, Text, Web and Apps: Sensor Sharing in Smartphone-based Mobile Ad-Hoc Networks"**, Refereed Poster at the Grace Hopper Celebration of Women in Computing Conference, Baltimore, MD, October 2012.

12. Pramita Mitra[@] and Christian Poellabauer, **"Efficient Group Communication and Service Sharing in Mobile Environments"**, Refereed Poster at the Richard Tapia Celebration of Diversity in Computing Conference, San Francisco, CA, April 2011.

13. Hongsheng Lu[@] and Christian Poellabauer, **Reliable Broadcasting in VANETs Using Power Control"**, Refereed Poster at the 16th Annual International Conference on Mobile Computing and Networking (Mobicom), Chicago, IL, September 2010.

14. Jun Yi[@], Christian Poellabauer, X. Sharon Hu, Thidapat Chantem, and Liqiang Zhang,**"Energy Efficient Real-Time Communication for Wireless Multihop Networks"**, Refereed Poster at the 16th Annual International Conference on Mobile Computing and Networking (Mobicom), Chicago, IL, September 2010.

15. Tam Chantem[@], X. Sharon Hu, Christian Poellabauer, Jun Yi[@], and Liqiang Zhang, **"Network-Aware, Energy-Conscious, Fair Service for Real-Time Applications on Multiprocessor SoC"**, Refereed Work-in-Progress at the 30th IEEE Real-Time Systems Symposium (RTSS), Washington, DC, December 2009.

16. Pramita Mitra[@] and Christian Poellabauer, **"On Improving Performance and Reliability of Location Aware Routing in Asymmetric Networks"**, Refereed Poster at the Richard Tapia Celebration of Diversity in Computing Conference, Portland, Oregon, April 2009. Notes: **best graduate student poster award**.

17. Jun Yi[@], Christian Poellabauer, Xiaobo Sharon Hu, Dinesh Rajan[@], and Liqiang Zhang, **"Cooperative Network and Energy Management for Reservation-based Wireless Real-Time Environments"**, Refereed Work-in-Progress at the 14th IEEE Real-Time and Embedded Technology and Applications Symposium, St. Louis, MO, April 2008.

18. Nadine Shillingford[@] and Christian Poellabauer, **"Configurable Routing in Ad-Hoc Networks"**, Refereed Poster at the Ninth Workshop on Mobile Computing Systems and Applications (HotMobile), Napa Valley, CA, February 2008.

19. Jeffrey Hemmes[@], Douglas Thain, and Christian Poellabauer, **"Work In Progress - Integrating Undergraduate Research and Education with the TeamTrak Mobile Computing System"**, Proceedings of the Frontiers in Education Conference (FIE), Milwaukee, WI, October 2007.

20. Christian Poellabauer and Timothy Durnan[@], **"The Case for Altruistic Resource Management"**, Refereed Poster at the 20th Symposium on Operating Systems Principles (SOSP), Brighton, UK, October 2005.

21. Timothy Durnan[@] and Christian Poellabauer, **"DDVS: Distributed Dynamic Voltage Scaling"**, Refereed Work-in-Progress at the 20th Symposium on Operating Systems Principles (SOSP), Brighton, UK, October 2005.

22. Douglas Thain and Christian Poellabauer, **"A Literate Approach to Graduate Computer Science Education"**, Proceedings of IEEE Frontiers in Education (Work-in-Progress), Indianapolis, IN, October 2005.

Technical Reports

1. N. Shillingford[@] and C. Poellabauer, **"Multi-QoS Multipath Routing in Wireless Mesh Networks"**, Technical Report: TR-2010-06, University of Notre Dame, August 2010.
2. Chris Miller[@] and Christian Poellabauer, **"A Decentralized Approach to Minimum-Energy Broadcasting in Static Ad Hoc Networks"**, Technical Report: TR-2009-02, University of Notre Dame, April 2009.
3. Jun Yi[@], Christian Poellabauer, Xiaobo Sharon Hu, Thidapat Chantem[@], and Liqiang Zhang, **"Resource-Efficient Dynamic Channel Reservations for Real-Time Streams in Wireless Multihop Networks"**, Technical Report: TR-2009-01, University of Notre Dame, April 2009.
4. Jeffrey Hemmes[@], Douglas Thain, and Christian Poellabauer, **"A Practical Approach to Cooperative Localization in GPS-Limited Urban Environments"**, Technical Report: TR-2008-14, University of Notre Dame, October 2008.
5. Dinesh Rajan[@], Christian Poellabauer, Xiaobo Sharon Hu, Liqiang Zhang, and Kathleen Otten*, **"Channel Access Reservation Strategies for Wireless Real-time Systems"**, Technical Report: TR-2008-04, University of Notre Dame, March 2008.
6. Nadine Shillingford[@] and Christian Poellabauer, **"Configurable Routing in Ad-Hoc Networks"**, Technical Report: TR-2008-03, University of Notre Dame, March 2008.
7. David Salyers[@], Aaron Striegel, and Christian Poellabauer, **"Wireless Reliability: Rethinking 802.11 Packet Loss"**, Technical Report: TR-2007-06, University of Notre Dame, November 2007.
8. Jeffrey Hemmes[@], Douglas Thain, Christian Poellabauer, Christopher Moretti[@], Phil Snowberger[@], and Brendan McNutt*, **"Lessons Learned Building TeamTrak: An Urban/Outdoor Mobile Ad Hoc Network Testbed"**, Technical Report: TR-2007-02, University of Notre Dame, May 2007.
9. David Salyers[@], Yingxin Jiang[@], Aaron Striegel, and Christian Poellabauer, **"Dynamic Jumbo Frame Generation for Network Performance Scalability"**, Technical Report: TR-2006-10, University of Notre Dame, July 2006.
10. Dinesh Rajan[@], Russell Zuck[@], and Christian Poellabauer, **"A Dual Speed Approach to Workload Aware Voltage Scaling"**, Technical Report: TR-2006-05, University of Notre Dame, May 2006.
11. Richard West[@], Karsten Schwan, and Christian Poellabauer, **"Dynamic Window-Constrained Scheduling for Real-Time Media Streaming"**, Technical Report 2003-014, Boston University, 2003.
12. Jasmina Jancic[@], Christian Poellabauer, Karsten Schwan, Matthew Wolf, and Neil Bright, **"dproc - Extensible Run-Time Resource Monitoring for Cluster Applications"**, Technical Report: GIT-CC-02-02, Georgia Institute of Technology, 2002.
13. Christian Poellabauer and Karsten Schwan, **"Implicit Quality Channels (IQC): Distributed Quality Management for Multi-Party Real-Time Applications"**, Technical Report: GIT-CC-01-13, Georgia Institute of Technology, 2001.
14. Christian Poellabauer, Karsten Schwan, and Richard West[@], **"Coordinated CPU and Event Scheduling for Distributed Multimedia Applications"**, Technical Report: GIT-CC-01-05, Georgia Institute of Technology, 2001.

15. Christian Poellabauer, Karsten Schwan, and Richard West[@], **"Flexible Event Delivery for Kernel Extensions in ELinux"**, Technical Report: GIT-CC-00-36, Georgia Institute of Technology, 2000.

16. Richard West[@] and Christian Poellabauer, **"Analysis of a Window-Constrained Scheduler for Real-Time and Best-Effort Packet Streams"**, Technical Report: GIT-CC-00-20, Georgia Institute of Technology, 2000.

17. Richard West[@] and Christian Poellabauer, **"An Optimal, On-Line Window-Constrained Scheduler for Real-Time, Heterogeneous Activities"**, Technical Report: GIT-CC-99-11, Georgia Institute of Technology, 1999.

18. Richard West[@], Karsten Schwan, and Christian Poellabauer, **"Scalable Scheduling Support for Loss and Delay Constrained Media Streams"**, Technical Report: GIT-CC-98-29, Georgia Institute of Technology, 1998.

Other Publications

1. Christian Poellabauer, **"A TTP-Based Measuring System"**, Master's Thesis, Technical University of Vienna, Austria, April 1998.

2. Christian Poellabauer, **"Monitoring and Integration of Object Oriented FIELDBUS Devices"**, Master's Thesis, Universitat Politècnica de Catalunya, Spain, June 1996.

Invited Presentations and Panels

- Texas A&M University - Kingsville, "Opportunities and Challenges of Speech-Based IoT", October 2020.
- Technical University of Graz, "Speech-Based Internet-of-Things", May 2019.
- Complexity Science Hub Vienna, "Speech as Barometer of the Brain", May 2019.
- Technical University of Graz, "Mobile and Wearable Sensing", March 2019.
- ACCelerate: ACC Smithsonian Creativity and Innovation Festival, Presenter, Washington, DC, October 2017.
- Ford Research, "Speech as Barometer of the Brain", April 2017.
- Computing Research Association (CRA) Computing Community Consortium (CCC) Workshop Member, December 2016.
- Computing Community Consortium CCC Panelist on "Discovery and Innovation in Smart and Pervasive Health", December 2016.
- National Neurotrauma Society, "Speech as Biomarker for TBI", June/July 2014.
- Rehabilitation Engineering & Assistive Technology Society of North America, "Translational Technologies to Enhance Manipulation and Mobility", March 2014.
- National Science Foundation Research Experience for Undergraduates "REU Logistics" Panel, March 2010.
- National Science Foundation Research Experience for Undergraduates "REU Logistics" Panel, March 2009.

- University of Carlton, Ottawa, ON, Canada, "Towards Predictable and Efficient Wireless Real-Time Networks", May 2009.
- NSF "Bridges to Engineering Research – 2020 Workshop, North Carolina Agricultural and Technical State University, "QoS Management in Wireless Sensor Networks", March 2008.
- Motorola Labs, "Agile Networking: Configurable and Adaptive Ad-hoc Networks", July 2007.
- University of Notre Dame, School of Architecture, "Survey of Sensor Technologies", February 2006.
- Texas A&M, College Station, TX, "Q-Fabric: System Support for Continuous Online Quality Management", May 2004.
- University of Oregon, Eugene, OR, "Q-Fabric: System Support for Continuous Online Quality Management", May 2004.
- University of Notre Dame, "Q-Fabric: System Support for Continuous Online Quality Management", May 2004.
- University of New Mexico, Albuquerque, NM, "Q-Fabric: System Support for Continuous Online Quality Management", March 2004.
- Brown University, Providence, Rhode Island, "Q-Fabric: System Support for Continuous Online Quality Management", March 2004.
- University of California at Santa Cruz, Santa Cruz, CA, "Q-Fabric: System Support for Continuous Online Quality Management", March 2004.
- IBM T. J. Watson Research Center, Yorktown Heights, NY, "Q-Fabric: System Support for Continuous Online Quality Management", October 2003.

News Coverage

- Austria Presse Agentur (Natur und Technik), "How smart is our health?", 2019.
- Forbes, "Wearables and Smartwatches Offer Great Health Benefits Although Security Hurdles Arise", 2019.
- MSUToday "Diagnosing concussions with voice research", 2017.
- STAT News, "Can We Diagnose Disease from the Sound of a Voice?", 2016.
- Science Daily, "New Technology to Provide Insights into the Health of Students", 2016.
- Scientific American, "The Sound of Your Voice May Diagnose Disease", 2016.
- MIT Technology Review, "A Voice-Analysis App to Diagnose Concussions", 2013.
- Men's Journal, "The iPad Concussion Detector", 2013.
- Youtube, "Getting Ahead of the Problem: Concussion Diagnostic Tools" (over 8,700 views as of 2020), 2013.
- Gizmodo, "Concussions Can Be Diagnosed With a Simple App Now", 2013.
- Discovery Channel Canada (Daily Planet), "Concussion Detection", 2013.
- ABC News, "Researchers Create Voice-Analyzing App to Diagnose Concussions", 2013.

Grants and Contracts

Agency	Dates	Title	Role	Amount
National Science Foundation	2019-2022	CHS: Small: Emotion-Aware Internet-of-Things Based on Analysis of Speech and Physiological Data	Lead PI	$497,763
Department of Defense	2018-2022	Personalized Mobility Interventions Using Smart Sensor Resources for Lower Limb Prostheses Users	Lead PI (Sub-award)	$403,690
Ford Research	2018-2021	Hybrid Communications based Real-Time Notification for Vulnerable Road Participants	Sole PI	$150,000
National Science Foundation	2017-2019	SCC-Planning: Coordinated Autonomous Operation of UAVs	Lead PI	$100,000
Ford Research	2015-2018	Real-Time and Localized Map Augmentation using Publish/Subscribe V2V Communications Technology	Sole PI	$150,000
ND Office of Research	2018-2019	Undergraduate Research Experiences in Wildlife Conservation Engineering	Sole PI	$50,000
Gordon and Betty Moore Foundation	2017-2018	An Image Recognition Software Solution for the Painted Dog Conservation in Mozambique	Sole PI	$30,000
National Institutes of Health	2014-2019	NetHealth: Modeling the Co-Evolution of Social Networks and Health Behaviors	Co-PI	$2,913,061
Toyota InfoTechnology Center	2011-2019	Robust Vehicular Communications for Safety Applications	Sole PI	$245,000
National Science Foundation	2014-2018	CI-New: An Open Speech Data Repository for Medical Prediction and Assessment of Neurological Disorders	Lead PI	$636,643
National Science Foundation	2014-2017	EAGER: Feasibility of Using Speech as Biomarker for Concussions	Lead PI	$316,000
Advanced Diagnostics and Therapeutics Initiative	2015-2018	Using Speech as Biomarker for Autism Spectrum Disorder	Lead PI	$60,000

Agency	Dates	Title	Role	Amount
National Science Foundation	2015-2016	A Portable Real-Time Concussion Assessment Technology Using Acoustic Features of Human Speech	Lead PI (Subaward)	$77,500
Gordon and Betty Moore Foundation	2015-2016	A Next Generation "Anti-Predator Device"	Sole PI	$50,000
National Geographic Big Cats Initiative	2015-2016	Deployment of an Anti-Predator Device	Sole PI	$25,000
GE Health and National Football League	2014-2016	Head Health Challenge I	Lead PI	$300,000
Department of Education	2013-2017	Technologies to Evaluate and Advance Mobility and Manipulation (TEAMM) RERC	Lead PI (Subaward)	$193,859
Serim Research Corp.	2011-2016	Smartphone-Based Colorimetric Analysis of Medical and Food Safety Test Strips	Co-PI	$148,004
Air Force Office of Scientific Research (AFOSR)	2013-2014	A Dynamic Data Driven Application System for Command and Control of UAV Swarms	Lead PI	$170,848
Air Force Office of Scientific Research (AFOSR)	2014-2017	An adaptive distributed approach to DDDAS for surveillance missions with UAV swarms	Co-PI	$290,000
National Science Foundation	2010-2013	A Composable Hardware/Software Architecture for Instruction on Wireless Systems and Networks	Lead PI	$180,000
Motorola Foundation	2010-2011	Mobile Computing for Sustainability, Energy, and Environment	Lead PI	$50,000
National Science Foundation	2010-2015	SoCS: Explorations on the Effects of Pervasive Networking on Social Relationships and Resource Planning	Co-PI	$802,325
National Science Foundation	2011-2015	REU Site: Experimental Research on Wireless Networking	Lead PI	$354,628

Agency	Dates	Title	Role	Amount
IBM Real-Time Innovation Award	2008-2009	Co-Scheduling of CPU, Network, and Energy in Distributed Wireless Real-Time Systems	Sole PI	$20,000
National Science Foundation	2008-2010	Collaborative Research: Integrated Energy-Aware Resource Scheduling for Wireless Real-Time Systems	Lead PI	$221,156
Department of Defense	2008-2010	NDMesh: A Test Bed for Experimental Research and Education on Wireless Mesh Networks	Lead PI	$259,874
Motorola Labs	2008-2009	Mobile WiFi-based Content Sharing	Lead PI	$10,000
National Science Foundation	2008-2010	REU Site: Experimental Research on Wireless Networking	Lead PI	$300,000
National Science Foundation	2006-2011	CAREER: Judicious Resource Management in Wireless Systems	Sole PI	$400,000
National Science Foundation	2009	REU Supplemental Funding	Sole PI	$15,850
National Science Foundation	2008	REU Supplemental Funding	Sole PI	$12,000
National Science Foundation	2007	REU Supplemental Funding	Sole PI	$12,000
Department of Defense	2006-2007	A Testbed for Experimental Research on Sensor-Rich Wireless Systems	Lead PI	$195,213
Intel Corporation	2005-2006	IXP Development of Wireless Stealth Multicast	Lead PI	$25,300

Invention Disclosures and Patent Applications

- Christian Poellabauer et al., Systems and Methods for Using Isolated Vowel Sounds for Assessment of Mild Traumatic Brain Injury, Application number WO2014022659 A3, Filed August 1, 2013.
- Christian Poellabauer et al., Wearables for Emotion Detection, Provisional Patent Application (ND 17-002), August 2017.
- Christian Poellabauer et al., Continuous Wearable User Authentication, Provisional Patent Application (ND 18-013), August 2017.

Student Advisement

Current Graduate Students

- Louis Daudet, Ph.D. candidate (expected graduation: 2020)
- Xiao Ning, Ph.D. student (expected graduation: 2020)
- Afzal Hossain, Ph.D. student (expected graduation: 2022)
- Jian Yang, Ph.D. student (expected graduation: 2021)
- Josh Siva, Ph.D. student (expected graduation: 2022)
- John Templeton, Ph.D. student (expected graduation: 2022)
- Mahsa SN Mitcheff, Ph.D. student (expected graduation: 2025)

Past Graduate Students

- Yuan Gong (2020) - Ph.D., "Healthcare Applications and Security Concerns of Speech Processing Systems", MIT.
- Sudip Vhadhuri (2019) - Ph.D., "Machine Learning in Place Discovery, User Authentication, and Health Informatics", Fordham University.
- Sean Bo (2019), Ph.D., "Improving Human Action Recognition Using Regression Analysis and Data Cleaning", Facebook.
- Mehdi Golestanian (2019), Ph.D., "Radio Frequency (RF)-Based Localization", WeWork.
- Hongsheng Lu (2016) - Ph.D., "Safety-Critical Vehicular Communications", Toyota InfoTechnology Center.
- Nikhil Yadav (2015) - Ph.D., "Concussion Assessment Using Speech Analysis", St. John's University.
- Pramita Mitra (2013) - Ph.D., "Efficient and Reliable Group Communication in Mobile Ad-Hoc Networks", Ford Research.
- Christopher Miller (2013) - Ph.D., "Reliable and Efficient Reprogramming in Sensor Networks", Rose-Hulman Institute of Technology.
- Jun Yi (2012) - Ph.D., "Real-Time Wireless Communications", Amazon.com.
- Nadine Shillingford-Wondem (2010) - Ph.D., "A Framework for Configuration and Management of Quality-of-Service (QoS) in Wireless Mesh Networks", Rose-Hulman Institute of Technology.
- Jeffrey Hemmes (2009) - Ph.D., "Improving Data Availability in Mobile Applications Through Enhanced Cooperative Localization", co-advised with Dr. Douglas Thain, Air Force Institute of Technology (AFIT).
- M.S. Theses: Josh Siva (2020); Ryan Knowlton (2020); Haowei Zhang (2018); Dinesh Rajan (2014).

Engineering, Science & Technology Entrepreneurship Excellence Masters (ESTEEM) Advisees

- Alfonso Bosch, 2010-2011, "ECash: An International Money Transfer System that Controls How Money is Spent"
- Tyler Mikev, 2011-2012, "Smartphone-Based Colorimetric Analysis for Medical and Food Safety Test Strips"
- Finn Pegler, 2012-2013, "Tribe: A Device That Enhances The Action Sport Experience"
- Shane McQuillan, 2012-2013, "Contect: Concussion Detection Using Speech Analysis"
- Daniel Collins, 2013-2014, "CNVRS: An iPhone Application That Functions as a Platform for Social Conversation"

- John Vernon, 2014-2015, "NeuroTxT: A Speech Processing Application for Superior Diagnosis of Dysarthria and Other Neurological Disorders"
- Robert Lis, 2014-2015, "MedVisor: Medicine Information at your Fingertip"
- Davis DeFontes, 2016-2016, "Integrative Concussion Analytics and Data Processing"
- Marisa Cameron, 2016-2017, "Addressing Social Impairments in Autistic Children"
- Tsion Sadore, 2019-2020, "Wearable Security Technologies"

Undergraduate Research Advisement

- Fall 2020: Julia Blanchard, Julius Boateng, Bradley Budden, Megan Butler, Parker Chun, Sara Clarin, Patrick Creaven, Jorge Jose Daboub Silhy, Peter Davis, Reno Domel, Zakiya George, Michael Gharib, James Heneghan, Sarah Hwang, Seungwoo Lee, Wonseok Lee, Nicholas Locascio, Nolan McShea, Kevan O'Brien, Thomas O'Connor, Yize Qi, Harrison Snow, Joseph Sweilem, Christina Youn, Hongrui Zhang
- Spring 2020: Joshua Agron, Manuel Almeida Correia Nogueira De Brito, John Bailey, Lauren Bakke, Brian Cariddi, Joel Castro, John Dimpel, Gerry Fernandez, Danielle Galvao, Molly Giglia, John Gordley, Joseph Han, Michael Havighorst, James Heneghan, Shane Johnson, Ana Luisa Lamberto, Nicholas Marcopoli, Nicole Meickle, Ralph Moran, Sung Hyun Shin, Christina Youn
- Fall 2019: Joshua Agron, Manuel Almeida Correia Nogueira De Brito, John Bailey, Sarah Bsales, Paulina Camara, Jorge Jose Daboub Silhy, Matthew DaDamio, Patricia del Campillo, Megha Devaraj, John Dimpel, Michael Erdenberger, Gerry Fernandez, Danielle Galvao, Molly Giglia, Anthony Giuliano, John Gordley, Elijah Hager, Michael Havighorst, James Heneghan, Shane Johnson, Melka Konshie, Ana Luisa Lamberto, Kathleen Liebscher, Fiona McCarter, Nicole Meickle, John Meyer, Ralph Moran, Connor Ruff, Matthew Shan, Sung Hyun Shin, Jonathan Wenger, Christina Youn, Edward Yuan
- Spring 2019: Abrar Ahmed, Samuel Battalio, Paulina Camara, Anthony Giuliano, Elijah Hager, Olivia Hatch, Michael Havighorst, Sarah Hwang, Gavin Inglis, Wonseok Lee, Kathleen Liebscher, Stephen Meisenbacher, Robert Reutiman, Austin Sura, Philip Vlandis, Christina Youn, Yifan Yu, Molly Zachlin
- Fall 2018: Emma Ascolese, Samuel Battalio, Nicholas Fahrney, Chaterine FitzGibbons, Harry Gebremedhin, Anthony Giuliano, Elijah Hager, Jacob Huber, Melka Konshie, Wonseok Lee, Mitchell MacKnight, John Meyer, Austin Sura, Christina Youn, Yifan Yu
- Spring 2018: Royce Branning, Caroline Braun, Eric Fernandez Salas, Patrick Fischer, Seungjun Han, Collin Klenke, Jewon Oh, Noelle Rosa, Samantha Scaglione, Matthew Shan, Kevin Shin, Richard Stefanik, Auna Walton, Doug Smith, Philip Baumann, Lauren Ferrara, Kathleen Schermerhorn
- Fall 2017: Caroline Braun, Seungjun Han, Thomas Lynch, Kyle Miller, Mason Prosser, Samantha Scaglione, Kathleen Schermerhorn, Kevin Shin, Douglas Smith, Brianna Wilenius
- Summer 2017: Christopher Bury, Eric Michael Biscocho, Collin Klenke
- Spring 2017: Royce Branning, Caroline Braun, Shane Brosnan, Ryan Busk, Mimi Chen, Collin Klenke, Alison Lui, Ryan Michalec, Nicholas Pellegrino, Kwan Ho Herman Tong, Nicholas Ward
- Fall 2016: Alejandro Rafael Ayala, Christopher Clarizio, Jorge Diaz-Ortez, Daniel Galvao Guerra, Mikel Kota, Kathryn Kuenster, Anthony Narin, Kevin Trinh, Erin Turley
- Summer 2016: Patrick Schurr, Sam Cho, Will Badart, Matthew King, Luis Prieb, Jamie Maher, Andrew Munch, Henry Long, Erin Turley, Katricia Herring, Matthew Reilly,
- Spring 2016: Ryan Busk, John Considine, Daniel Finnegan, Katrina Gonzales, Benjamin Kennel, Daniel Kerrigan, George Krug, Lauren Kuta, Yucheng Lin, Henry Long, Patrick Myron, Nicholas Pellegrino, Matthew Perez, Maxwell Walsh, Jenna Wilson

- Fall 2015: Fernando Beletti, Yuxuan Chen, John Considine, Brynna Conway, Kimberly Marie Forbes, Jacob Gavin, Luigi Grazioso Rengifo, Zachary Janicki, Victoria Johnston, Ann Keenan, Courtney Kelly, Daniel Kerrigan, Keith Linnard, Lauren Kuta, Paul Lee, Xuanyi Li, Ryan Mackey, Weizhi Mao, Andrew Munch, Patrick Myron, Sarah Olson, Michael Parowski, Matthew Perez, Kevin Shin, Ryan Smick, Claire Sonderman
- Summer 2015: Matthew Perez, Robert Flores, Kim Forbes, Joseph Yoon, Joao Guilherme Daros Fidelis
- Spring 2015: Yuxuan Chen, Whitney Choo, Kimberly Marie Forbes, Katrina Gonzales, Nicholas Haydel, Victoria Johnston, So Yon Kwon, David Lewis, David Mattia, Matthew McKenzie, Anna McMahon, Jillian Montalvo, Vaishnav Murthy, John Ryan, Tyler Sammons, Natalie Sanders, Charles Shinaver, David Wu, Joseph Yoon
- Fall 2014: Yuxuan Chen, Spencer King, Jillian Montalvo, Edwin Onattu, Joseph Yoon, Adriana Rivera, Alejandra Aranguren
- Summer 2014: Andrew Gnott, William Gowans
- Spring 2014: Yuxuan Chen, Heather Fredrickson, William Gowans, Patrick Hansen, John Larson, Gerard Martinez, Jillian Montalvo
- Fall 2013: Emily Claps, Theodore Cogan, Patrick Hansen, John Larson, Gerard Martinez, Marshall Sprigg, Owen Zidar
- Summer 2013: Ryan Liebscher
- Spring 2013: Matthew Fitzgerald, Oliver Lamb
- Fall 2012: Michael Bau, Dominique Hightower, Henry Kim
- Spring 2012: Matthew Fitzgerald, Dominique Higgins, Henry Kim, Eli Kloswick, Casey O'Meilia, Gregory Reilly, David Schalkwijk Lopes
- Fall 2011: Gregory Reilly
- Fall 2010: Gregory Angle
- Spring 2010: John Langley
- Fall 2009: Michael Brickl
- Spring 2009: Michael Lehmann
- Fall 2008: Michael Lehmann, Brendan McNutt
- NSF REU Summer 2013 Participants: Mercedes Streeter (Monmouth College), Jennifer Hu (New Mexico State University), Arda Tugay (Rose Hulman Institute of Technology), Benjamin Mayhew (Macalester College), Mac Wibbels (University of Utah), Roger Tang (University of Massachussetts at Amherst), John McCann (University of Alabama in Huntsville), Alexander Wallar (University of St. Andrews)
- NSF REU Summer 2012 Participants: Jordan Niespodziany (DePauw University), Patrick Herrod (DePauw University), Michael Falcone (Youngstown State University), Benjamin Walker (Carleton College), Jasmine Dahilig (Loyola Marymount University), Natalya Hankewych (University of Florida), Christine Dierk (Elon University), Connor Bruso (University of Maryland), David Lopes (Notre Dame), Casey O'Meilia (Notre Dame), Ernesto Colon (The Cooper Union), Eli Kloswick (Notre Dame)
- NSF REU Summer 2011 Participants: Vincent Aguirre (DePauw University), Emily Bichler (DePauw University), Spencer Carroll (Emory University), Andrew Dammann (Villanova University), Ahmed El-Kishky (University of Tulsa), Joseph Fetsch (Notre Dame), Lyle Franklin (Ball State University), Kathryn Glowinski (St. Lawrence University), Willem Klein (Notre Dame), Anthony Maher (Notre Dame), Rebecca Negley (University of Pittsburgh), Curthis Northcutt (Vanderbilt University), Andrew Ofsonka (Notre Dame), Keishla Ortiz Lopez (University of Puerto Rico), Gregory Reilly (Notre Dame), Miya Schneider (Brown University), Samuel Suddath (Auburn University), Zachary Welch (Clemson University)

- NSF REU Summer 2010 Participants: Seth Ringling (Harding University), Carolyn Farris (University of Portland), Michael Schermerhorn (University of Rochester), Curtis Carmony (Bard College), Joksan Flores (Universidad del Turabo), Paul Monroe (University of Pittsburgh), Brandon Schlinker (San Jose State University), Sarah Chasins (Swarthmore College), Justin Varner (Penn State University), John Ndungu (University of Arkansa), Brandon Shrewsbury (University of West Georgia), Regina Ranstrom (Northeastern University), Alex Cohn (Grinnell College), Sara Aycock (Saint Mary's College)
- NSF REU Summer 2009 Participants: Mark Overholt (Bradley University), Sam Tucker (Carleton College), Chelsea Norman (University of Mississippi), Yashira Colon (University of Puerto Rico), Nicholas Keller (University of Maryland - Baltimore County), Simon Zhang (Cornell University), David Mittelman (University of Connecticut), Xi Zhang (Humboldt State University), Joshua Bradley (Morehead State University), Eric de Araujo (Bethel College), Noehliz Carrion (University of Puerto Rico), Elena Fiocca (College of Wooster)
- NSF REU Summer 2008 Participants: Andrew Thrasher (Anderson University), Matthew Shott (Hope College), Jessica Szweda (Centre College), Michael Souza (Longwood University), Matthew Tran (University of Connecticut), Damian Torres (University of Puerto Rico), James Notwell (Notre Dame), Jordan Brindza (University of Pennsylvania), Sean McRoskey (Notre Dame), Emmanuel Bello-Ogunu (Notre Dame)

Building Bridges Student Advisement

- Christian Martinez, 2019-2020
- Yahterie-Anne Sykes Ortiz, 2016-2017
- Esteban Rojas, 2011-2012

High School Student Advisement

- Matt King, Marian High School, 2011-2012
- Gracie Molnar, Marian High School, 2017-2018

Professional Activities

Journal Activities

- Editorial Board Member, Journal of Mobile Computing and Wireless Technology (JMCWT), since 2012
- Editorial Board Member, International Journal of Embedded and Real-time Communication Systems (IJERTCS), since 2009
- Guest Editorial Board Member, International Journal on Embedded Computing, 2006-2007
- Guest Editor, ACM Transactions on Autonomous and Adaptive Systems (Special Issue on Self-Adaptive and Self-Organizing Wireless Networking Systems), 2008-2009
- Guest Editor, International Journal of Wireless and Mobile Computing (IJWMC), 2008-2009

Conference Activities

- Track Co-Chair for the 29th International Conference on Computer Communications and Networks (ICCCN), Track on "Sensor/Embedded Networks and Pervasive Computing (SNPC)", Honolulu, HI, August 2020.
- Co-Chair of "Visions" Track of 6th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft), Montreal, Canada, May 2019.

- Steering Committee member for IEEE Intl. Workshop on Wireless Mesh and Ad Hoc Networks (WiMAN) 2010-2019.
- General Chair for the Intl. Conference on Computer Communications and Networks (ICCCN), Vancouver, Canada, August 2017.
- Track Chair for the 14th International Conference on Mobile Systems and Pervasive Computing (MobiSPC), Leuven, Belgium, July 2017.
- Track Co-Chair for the 12th IEEE International Conference on Embedded Software and Systems (ICESS), "Track on Emerging Embedded Applications and Interdisciplinary Topics", New York, NY, August 2015.
- Track Co-Chair for the 24th International Conference on Computer Communications and Networks (ICCCN), Track on "Sensor/Embedded Networks and Pervasive Computing (SNPC)", Las Vegas, NV, July/August 2015.
- Workshop Co-Chair for the 11th International Conference on Mobile Systems and Pervasive Computing (MobiSPC), Niagara Falls, Ontario, Canada, August 2014.
- Program Track Chair for the Intl. Conference on Computer Communications and Networks (ICCCN), Track on "Sensor/Embedded Networks and Pervasive Computing", Shanghai, China, July-August 2014.
- Technical Program Co-Chair for the Intl. Conference on Computer Communications and Networks (ICCCN) 2013.
- Workshop General Co-Chair for the Intl. Conference on Computer Communications and Networks (ICCCN) 2012.
- Program Track Chair for the Intl. Conference on Computer Communications and Networks (ICCCN), Track on "Sensor Networks, Embedded Systems, and Pervasive Computing" 2011.
- Steering Committee member for the Fourth IEEE Intl. Workshop on Wireless Mesh and Ad Hoc Networks (WiMAN) 2010.
- Program Co-Chair for Third IEEE International Workshop on Wireless Mesh and Ad Hoc Networks 2009.
- Program Co-Chair for Second IEEE International Workshop on Wireless Mesh and Ad Hoc Networks 2008.
- Session Chair for the 13th IEEE Real-Time and Embedded Technology and Applications Symposium 2007, the 4th Annual Intl. Conference on Mobile and Ubiquitous Systems 2007, and the First Intl. Conference on Ad Hoc Networks 2009.

Technical Program Committee (TPC) Member

- 41st IEEE International Conference on Distributed Computing Systems (ICDCS), Track on Security, Privacy and Trust in Distributed Systems, Washington, DC, July 2021.
- IEEE Wireless Communications and Networking Conference (WCNC), Nanjing, China, March and April 2021.
- Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI-21), Virtual Conference, February 2021.

- 10th International Joint Conference on Pervasive and Parallel Computing, Communication and Sensors (PECCS), Budapest, Hungary, November 2020.
- IEEE Wireless Communications and Networking Conference (WCNC), Seoul, Korea, April 2020.
- 25th IEEE International Conference on Parallel and Distributed Systems (ICPADS), Tianjin, China, 2019.
- 16th IEEE International Conference on Mobile Ad hoc and Smart Systems (IEEE MASS), Monterey, California, November 2019.
- 9th International Joint Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), Vienna, Austria, September 2019.
- International Conference on Computing, Networking and Communications (ICNC): Wireless Ad hoc and Sensor Networks, Honolulu, HI, February 2019.
- 15th IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS), Chengdu, China, October 2018.
- 8th International Joint Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), Porto, Portugal, July 2018.
- 20th IEEE International Conference on High Performance Computing and Communications (HPCC-2018), Exeter, England, UK, June 2018.
- Third International Workshop on Social Sensing, Orlando, FL, April 2018.
- 7th IEEE Annual International Workshop on Mission-Oriented Wireless Sensor and Cyber-Physical System Networking (MiSeNet 2018), Honolulu, Hawaii, April 2018.
- International Conference on Computing, Networking and Communications (ICNC): Wireless Ad Hoc and Sensor Network Symposium, Maui, Hawaii, March 2018.
- 14th IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS), Orlando, Florida, November 2017.
- 14th IEEE International Conference on Embedded Software and Systems (IEEE ICESS-17), Sydney, Australia, August 2017.
- 10th IEEE International Conference on Cyber, Physical, and Social Computing (CPSCom-2017), Exeter, England, UK, June 2017.
- Sixth IEEE Annual International Workshop on Mission-Oriented Wireless Sensor and Cyber-Physical System Networking (MiSeNet), Atlanta, GA, May 2017.
- International Conference on Embedded Wireless Systems and Networks (EWSN), Uppsala, Sweden, February 2017.
- IEEE International Conference on Cyber, Physical, and Social Computing, Chengdu, Sichuan, China, December 2016.
- Wireless Health 2016, National Institutes of Health, Bethesda, MD, October 2016.
- 13th IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS), Brasilia, Brazil, October 2016.

- International Conference on Pervasive and Embedded Computing, Lisbon, Portugal, July 2016.
- Global Conference on Wireless and Optical Communications, Malaga, Spain, June 2016.
- International Workshop on the Impact of Human Mobility in Pervasive Systems and Applications (PerMoby), Sydney, Australia, March 2016.
- International Conference on Embedded Wireless Systems and Networks (EWSN), Graz, Austria, February 2016.
- International Conference on Computing and Network Communications, Technopark, Trivandrum, India, December 2015.
- First International Workshop on Social Sensing, Dallas, TX, October 2015.
- International Workshop on the Impact of Human Mobility in Pervasive Systems and Applications (PerMoby), St. Louis, MO, March 2015.
- International Conference on Parallel Processing (ICPP), Paris, France, March 2015.
- 5th International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), Angers, France, February 2015.
- International Conference on Platform Technology and Service (PlatCon-15), Jeju, Korea, January 2015.
- 11th IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS), Philadelphia, PA, October 2014.
- 11th IEEE International Conference on Embedded Software and Systems (ICESS-2014), Paris, France, August 2014.
- 20th IEEE Real-Time and Embedded Technology and Application Symposium (RTAS), Berlin, Germany, May 2014.
- International Workshop on Cyber-Physical Systems Security (CPS-Sec), Marina Del Rey, CA, May 2014.
- Fourth International Conference on Wireless Communications, Vehicular Technology, Information Theory, and Aerospace and Electronic Systems (WirelessVITAE), Aalborg, Denmark, May 2014.
- 4th Intl. Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), Lisbon, Portugal, January 2014.
- IEEE GLOBECOM (Global Communications Conference), Ad-hoc and Sensor Networking Symposium, Atlanta, GA, December 2013.
- International Multi-Topic Conference (IMTIC), Mehran University, Jamshoro, Pakistan, December 2013.
- 15th IEEE International Conference on High Performance Computing and Communications (HPCC), Zhangjiajie, China, November 2013.
- 2nd ACM Annual International Workshop on Mission-Oriented Wireless Sensor Networking (ACM MiSeNet), Miami, FL, September-October 2013.
- 4th Intl. Conference on Emerging Ubiquitous Systems and Pervasive Networks, Niagara Falls, Ontario, Canada, October 2013.
- 10th ACM International Workshop on Vehicular Inter-Networking, Systems, and Applications (VANET), Taipei, Taiwan, June 2013.

- 1st International Symposium on Wireless Sensor Networks for Developing Countries, Jamshoro, Pakistan, April 2013.
- 3rd International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), Barcelona, Spain, February 2013.
- International Conference on Connected Vehicles and Expo (ICCVE), Beijing, China, December 2012.
- 21st IEEE International Conference on Computer Communications and Networks (ICCCN), Sensor Networks, Embedded Systems, and Pervasive Computing Track, Munich, Germany, August 2012.
- 9th ACM International Workshop on Vehicular Inter-Networking, Systems, and Applicatons (VANET), Low Wood Bay, Lake District, United Kingdom, June 2012.
- 3rd International Conference on Mobile, Ubiquitous, and Intelligent Computing, Vancouver, Canada, June 2012.
- IEEE International Conference on Communications (Ad-hoc and Sensor Networking Symposium), Ottawa, Canada, June 2012.
- 18th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS), Applications, Systems, RTOS and Tools Track, Beijing, China, April 2012.
- 2nd International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), Rome, Italy, February 2012.
- 8th IEEE International Conference on Embedded Software and Systems (ICESS), Changsha, China, November 2011.
- 9th IEEE/IFIP Intl. Conference on Embedded and Ubiquitous Computing (Sensor Networks Track), Melbourne, Australia, October 2011.
- 17th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA), Toyama, Japan, August 2011. International Workshop on Emerging Mobile Sensing Technologies, Systems, and Applications (MobiSense), San Francisco, CA, June 2011.
- 17th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS), Core Area, Chigaco, IL, April 2011.
- 1st International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS), Algarve, Portugal, March 2011.
- 6th International Conference on Mobile Ad-hoc and Sensor Networks (MSN'10), Hanzhou, China, December 2010.
- IEEE GLOBECOM (Global Communications Conference), Miami, FL, December 2010
- International Conference on Computer Communications and Networks (ICCCN), Internet Services, Architectures, and Protocols Track, Zurich, Switzerland, August 2010
- 3rd International Conference on Advances in Mesh Networks (MESH), Venice, Italy, July 2010
- ACM International Conference on Computing Frontiers, Bertinoro, Italy, May 2010
- Work-in-Progress Session of 30th IEEE Real-Time Systems Symposium, Washington, DC, December 2009

- 11th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), Lyon, France, November 2009
- 15th IEEE Intl. Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA), Embedded Systems Track, Beijing, China, August 2009
- International Conference on Computer Communications and Networks (ICCCN), Internet Services, Systems and Applications Track, San Francisco, August 2009
- The Second Intl. Conference on Advances in Mesh Networks (MESH), Athens, Greece, June 2009
- 8th International Workshop on Real-Time Networks (RTN), Dublin, Ireland, June 2009
- 5th International Wireless Communications and Mobile Computing Conference (IWCMC), Leipzig, Germany, June 2009
- IEEE International Conference on High Performance Computing and Communications (HPCC-09), Seoul, Korea, June 2009
- IEEE ICC Ad-Hoc and Sensor Networking Symposium, Dresden, Germany, June 2009
- IEEE ICC Wireless Networking Symposium, Dresden, Germany, June 2009
- 7th Annual Conference on Communication Networks and Services Research, Moncton, New Brunswick, May 2009
- International Conference on Embedded Software and Systems (ICESS), HangZhou Zhejiang, China, May 2009
- IEEE Wireless Communications and Networking Conference (WCNC), Budapest, Hungary, April 2009
- 6th IEEE Intl. Workshop on Mobile Peer-to-Peer Computing (MP2P), Galveston, TX, March 2009
- ACM Symposium on Applied Computing (Embedded Systems Track), Waikiki Beach, Honolulu, Hawaii, March 2009
- IFIP Intl. Conference on Embedded and Ubiquitous Computing (EUC), Shanghai, China, December 2008
- 14th IEEE International Conference on Embedded and Real-Time Computing and Applications (RTCSA), Taiwan, August 2008
- IEEE International Wireless Communications and Mobile Computing Conference (IWCMC), Chinia, Crete Island, Greece, August 2008
- IEEE International Conference on Communications (ICC), Beijing, China, May 2008
- 1st International Workshop on Mobile Device and Urban Sensing (MODUS), St. Louis, MO, April 2008
- Workshop on Radio Resource Management in Wireless Mesh Networks (RRMinMesh), Doha, Qatar, April 2008
- 11th International Conference on Principles of Distributed Systems, Guadeloupe, French West Indies, December 2007
- IFIP International Conference on Embedded and Ubiquitous Computing (EUC), Taipei, Taiwan, December 2007

- First Intl. Workshop on Wireless Mesh and Ad Hoc Networks (WiMAN), Honolulu, Hawaii, August 2007
- 13th IEEE International Conference on Embedded and Real-Time Computing and Applications (RTCSA), Korea, August 2007
- Computer and Network Security Symposium, Honolulu, Hawaii, August 2007
- 13th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS), Bellevue, WA, April 2007
- 12th IEEE International Conference on Embedded and Real-Time Computing and Applications (RTCSA), Sydney, Australia, August 2006
- ACM Multimedia 2005 (Short Paper Track), Singapore, November 2005
- 2nd Intl. Workshop on Power-Aware Real-Time Computing (PARC), Jersey City, NJ, September 2005

Departmental Committees

- Faculty Search Committee (Chair) 2019 - 2021
- Undergraduate Curriculum Committee 2005 - 2019
- Infrastructure (WWW) Committee 2007 - 2012
- Honor Committee 2006 - 2007
- Assessment Committee 2006 - 2010
- Graduate Studies Committee 2004 - 2007

University Committees

- Institutional Review Board (IRB) 2017 - date
- Limited Submissions Review Committee 2015 - date
- University Committee on Research and Sponsored Programs 2016 - 2019
- Graduate School Ethics Workshop Panelist 2018
- Global Gateway Faculty Research Grant (GGFRA) Review Committee 2018
- Working Group Member and Reviewer Blockchain Grants 2017 - 2018
- Rodney F. Ganey, Ph.D. Collaborative Community-based Research Grant Committee 2009

Teaching

- Fall 2020: **Graduate Operating Systems**, Graduate Core Course, 19 students
- Spring 2020: **Smart Health**, Senior/Graduate Elective, 26 students
- Fall 2019: **Graduate Operating Systems**, Graduate Core Course, 24 students
- Spring 2019: **Selected Topics Communications and Mobile Computing: Smart Health (Graz, Austria)**, Graduate Elective Course, 10 students

- Spring 2019: **Embedded Systems**, Senior/Graduate Elective Course (Graz, Austria), 35 students
- Fall 2018: **Graduate Operating Systems**, Graduate Core Course, 33 students
- Summer 2018: **Internet of Things**, Summer Engineering Program Berlin, 26 students
- Spring 2018: **Mobile Computing**, Senior/Graduate Elective, 24 students
- Fall 2017: **Graduate Operating Systems**, Graduate Core Course, 29 students
- Spring 2017: **Mobile Computing**, Senior/Graduate Elective, 22 students
- Fall 2016: **Graduate Operating Systems**, Graduate Core Course, 36 students
- Spring 2016: **Operating Systems Principles**, Junior Core Course, 107 students
- Fall 2015: **Mobile Computing**, Senior/Graduate Elective, 42 students
- Spring 2015: **Operating Systems Principles**, Junior Core Course, 94 students
- Fall 2014: **Mobile Computing**, Senior/Graduate Elective, 12 students
- Spring 2014: **Operating Systems Principles**, Junior Core Course, 71 students
- Fall 2013: **Mobile Computing**, Senior/Graduate Elective, 23 students
- Fall 2012: **Mobile Computing**, Senior/Graduate Elective, 36 students
- Spring 2012: **Operating Systems Principles**, Junior Core Course, 63 students
- Spring 2012: **Mobile Application Development**, Senior/Graduate Elective, 24 students
- Fall 2011: **Pervasive Health**, Senior/Graduate Elective, 18 students
- Spring 2011: **Operating Systems Principles**, Junior Core Course, 54 students
- Spring 2011: **Mobile Application Development**, Senior/Graduate Elective, 30 students
- Fall 2010: **Wireless Sensor Networks**, Senior/Graduate Elective, 8 students
- Spring 2010: **Operating Systems Principles**, Junior Core Course, 28 students
- Spring 2010: **Mobile Application Development**, Senior/Graduate Elective, 9 students
- Fall 2009: **Ubiquitous Computing**, Senior/Graduate Elective, 9 students
- Spring 2009: **Computer Networks**, Junior Elective, 28 students
- Fall 2008: **Mobile and Wireless Computing**, Senior/Graduate Elective, 23 students
- Spring 2008: **Computer Networks**, Junior Elective, 49 students
- Fall 2007: **Real-Time Systems**, Senior/Graduate Elective, 9 students
- Spring 2007: **Computer Networks**, Junior Elective, 48 students
- Fall 2006: **Real-Time Systems**, Senior/Graduate Elective, 17 students
- Spring 2006: **Computer Networks**, Junior Elective, 25 students
- Fall 2005: **Real-Time Systems**, Senior/Graduate Elective, 19 students
- Spring 2005: **Systems Programming**, Junior Elective, 20 students
- Fall 2004: **Survey on Advanced Computer Architectures**, Senior/Graduate Elective, 5 students

Curriculum Vitae

Date of Revision: 11/08/2020

Ting Wang, Ph.D.

Office address:	475 N. 5th Street BSPB Building Room E513 Phoenix, AZ 85004-2230
Office Phone:	(602) 827-2739
Email:	twang@email.arizona.edu
Place of Birth:	Jintan, China (in 1979)
Citizenship:	USA
Sex:	Male
Race:	Chinese
Marital status:	married to Wenli Ma, PhD, with two children Grace and Brian

Chronology of Education

B.S., Biochemistry, (1997-2001)
Nanjing University, Nanjing, Jiangsu, China

Ph.D., Pharmaceutical Sciences, (2001-2005)
University of South Carolina, Columbia, SC

Postdoctoral Training, Endothelial Biology, (2005-2010)
University of Chicago, Chicago, IL

Chronology of Employment

2017-	Associate Professor (Tenured in 2019) Department of Internal Medicine, College of Medicine-Phoenix, University of Arizona, Phoenix, AZ
2017-	Scientific Director, Pulmonary Endothelial Research College of Medicine-Phoenix, University of Arizona
2017-	Associate Professor, Clinical and Translational Sciences (Joint Appointment)
2017-	Associate Professor of Medicine (Joint Appointment) Department of Medicine, College of Medicine-Tucson
2017-	Associate Professor of Physiological Sciences (Joint Appointment)
2014-2017	Assistant Professor of Physiological Sciences (Joint Appointment)
2013-2017	Assistant Professor of Medicine (Tenure Eligible) Division of Pulmonary, Allergy, Critical Care, & Sleep Medicine, Department of Medicine, College of Medicine-Tucson, University of Arizona, Tucson, AZ
2010-2013	Research Assistant Professor Section of Pulmonary and Critical Care, Department of Medicine, University of Illinois at Chicago, Chicago, IL
2005-2010	Postdoctoral Fellow (Vascular Biology and Pulmonary Biology) Department of Medicine, University of Chicago, Chicago, IL
2001-2005	Research Assistant College of Pharmacy, University of South Carolina, Columbia, SC

Honors and Awards

1998 Jinshiyuan Scholarship, *Nanjing University, China*
2004 PCT patent WO/2005/046676 "Treatment or prevention of cardiovascular and respiratory disorders with novel substituted cyclic AMP-specific phosphodiesterase inhibitors"
2005 Graduate Student of the Year Award, *University of South Carolina*
2005 Graduate Teaching Assistant Award, *University of South Carolina*
2008 Travel Award, *Central Society for Clinical Research*
2008 DOM Research Day Award, *Department of Medicine, University of Chicago*
2009 Travel Award, *Central Society for Clinical Research*
2011 Travel Award, *Central Society for Clinical Research*
2012 Parker B Francis Fellowship, *PBK Family Foundation*
2012 Best Abstract Award, *University of Illinois Hospital and Health Science System*
2013 Travel Award, *Central Society for Clinical and Translational Research*
2013 AFMR Scholar Award, *American Federation for Medical Research*
2014 K-Award, *Central Society for Clinical and Translational Research*
2015 K-Award, *Central Society for Clinical and Translational Research*
2018 US patent US10300036B2 "Compositions and methods for treating and preventing lung injury"
2019 US Patent Application 20190276889 "Systems and methods for characterizing sepsis"

Service/Outreach

National/international outreach

2006 Member, *American Heart Association*
2007 Member, *American Association of College of Pharmacy*
2007 Member, *Sigma Xi Scientific Research Society*
2009-11 Member, *American Federation for Medical Research*
2016- Member, *Society of Toxicology*
2019-20 President, *Mountain West Regional Chapter of the Society of Toxicology (MWSOT)* [and also 2017-18 Vice President Elect, 2018-19 Vice President, 2020-21 Past President]

National/international grant review

2014 Grant reviewer (ad hoc), PSI Foundation (Canada)
2018 Member, NIH Special emphasis panel ZRG1 CVRS-Q (80) A, Cardiovascular and Respiratory Sciences
2019 Member, NIH Special emphasis panel ZRG1 CVRS-G (80) A, Respiratory

Other committees (Editorial Board)

2013- Editorial Board Member, *Journal of Pollution Effects & Control*
2014- Editorial Board Member, *Austin - Critical Care Journal*
2014- Editorial Board Member, *International Journal of Respiratory and Pulmonary Medicine*

Other committees (University of Arizona)

2014- Member, Southwest Environmental Health Sciences Center
2015-17 Assistant Investigator, Arizona Respiratory Center
2015-18 Member, Program Committee, GIDP-Physiological Sciences
2015-17 Member, Analytic Faculty User Committee, Office of Research and Development, Senior Vice President of Research.
2016-17 Faculty member, University of Arizona KEYS High School Summer Internship Program
2017-20 Member, University of Arizona IACUC committee

Other committees (UA College of Medicine of Phoenix)

2017- Member, University of Arizona College of Medicine-Phoenix Space Committee
2018- Member, COM-Phoenix Research Senate Committee
2018- Member, COM-Phoenix Research Symposium Steering Committee
2019- Member, COM-Phoenix Molecular Analysis Core Facility Advisory Committee
2019- Member, COM-Phoenix Pathology Core Facility Planning Committee
2019- Member, COM-Phoenix MD/PhD Admission Committee

Other committees (UA Department of Internal Medicine)

2017- Member, Department of Internal Medicine Promotions Committee, UA College of Medicine-Phoenix
2017- Chair host, "Science in the Desert" Biomedical Science Research Seminar Series, UA College of Medicine-Phoenix
2018-19 Member, Department of Internal Medicine Standing Search Committee for Faculty. Successful recruitment of the following Faculty
    1. Zhiyu Dai, PhD, Assistant Professor
    2. Suyun Huang, MD, PhD, Professor and Assistant Dean
    3. Sudhakar Ammanamanchi, PhD, Research Assistant Professor
    4. Michael Bryer-Ash, MD, Professor and Chief, Division of Endocrinology
    5. Sriram Iyengar, PhD, Professor and Director, Clinical Outcomes Research
2018-19 Member, Chief of Pulmonary and Critical Care Division Search Committee. Successful recruitment of Dr. Marilyn Glassberg, the first Chief Division of Pulmonary, Critical Care, & Sleep Medicine, Vice Chair of Diversity/Inclusion, Senior Director of Clinical Research Strategy & Growth.
2018- Member, Department of Internal Medicine Research Committee
2018- Member, DOIM Biospecimen Core (DMC) Executive Committee
2018- Member, Internal Medicine Outcomes Research Core Executive Committee
2020- Member, Chief of Gastroenterology Division Search Committee.

Reviewer activities:

Advances in Medical Sciences
Air Quality, Atmosphere & Health
American Journal of Nephrology
American Journal of Respiratory Cell and Molecular Biology
Biomedicine & Pharmacotherapy
BMC Medical Genomics
BMJ Open Respiratory Research
Cancer Control
Cell & Tissue Research
Combinatorial Chemistry & High Throughput Screening
Current Molecular Pharmacology
Drug Target Insights
EBiomedicine
Emerging Microbes & Infections
Environmental and Molecular Mutagenesis
Environmental Health Perspective
European Journal of Pharmacology
Experimental Lung Research
Experimental and Molecular Pathology
Free Radical Biology and Medicine

Innate Immunity
International Immunopharmacology
International Journal of Biological Macromolecules
International Journal of Environmental Health Research
International Journal of Oncology
Journal of Biomedicine and Biotechnology
Journal of Chromatography B
Journal of Diabetes and its Complications
Journal of Molecular Cell Biology
Laboratory Investigation
Life Sciences
Microvascular Research
Molecular and Cellular Biochemistry
Molecular Immunology
Molecular Medicine Reports
Nanomedicine
Oncology Letters
Oncology Reports
Oncotarget
Oxidative Medicine and Cellular Longevity
Pharmacological Reports
PLoS One
Pulmonary Circulation
Scientific Reports (Nature)
Tohoku Journal of Experimental Medicine

Education activities: Teaching and Mentoring

Courses at UArizona

Fall 2015	PS 700-020 Research Methodology Physiological Sciences (Laboratory)
Fall 2015	PS 700-025 Research Methodology Physiological Sciences (Laboratory)
Fall 2015	PS 900-009 Research (Independent Study)
Spring 2016	PS 900-010 Research (Independent Study)
Spring 2016	PS 920-006 Dissertation (Independent Study)
Spring 2016	CTS 900 section 006-IND (54597) Research (Independent Study)
Fall 2016	CTS 900-001 Research (Independent Study)
Fall 2016	PS 700-025 Rsrch Meth Psio Sci (Laboratory)
Fall 2016	PS 900-009 Research (Independent Study)
Fall 2016	PS 920-001 Dissertation (Independent Study)
Spring 2017	CTS 585-009 Individualized Science Writing (Lecture)
Spring 2017	PS 900-010 Research (Independent Study)
Spring 2017	PS 920-006 Dissertation (Independent Study)
Fall 2017	PS 920-001 Dissertation (Independent Study)
Spring 2018	PS 920-006 Dissertation (Independent Study)
Fall 2018	PS 920-001 Dissertation (Independent Study)
Fall 2018	CTS 900-019 Research (Independent Study)
Spring 2019	CTS 585-019 Individualized Science Writing (Lecture)
Spring 2019	CTS 900-019 Research (Independent Study)
Spring 2019	PS 920-006 Dissertation (Independent Study)
Fall 2019	CTS 900-019 Research (Independent Study)
Fall 2019	PS 920-003 Dissertation (Independent Study)

Spring 2020 CTS 900-019 Research (Independent Study)
Spring 2020 PS 920-006 Dissertation (Independent Study)

Courses at Arizona State University
Fall 2019 MBB 495 Undergraduate Research
Spring 2020 MBB 495 Undergraduate Research

High School Student

Eva Yuan (2007-08)	Illinois Mathematics and Science Academy, IL
Angela Sun (2015-16)	The Gregory School, Tucson, AZ
Nora Sammani (2016)	Catalina Foothills High School, Tucson, AZ
Amrita Vetticaden (2018-19)	BASIS Ahwatukee, Phoenix, AZ
Tara Liu (2018-19)	Mountain Ridge High School, Glendale, AZ
Sam Fallon (2018)	Brophy College Preparatory High School, Phoenix, AZ

Undergraduate Student

Jered Linares (2007-08)	Illinois Institute of Technology
Lyndsay Joson (2008)	University of Dallas
Becky Sullivan (2009)	University of Dallas
Monica Houser (2015-16)	University of Arizona
Kellan Weston (2016)	University of Dallas
Abram Cadena (2016)	New Mexico State University
Nikolas Ramos (2017)	University of Arizona
Aryanna Thuraisingam (2018-20)	Arizona State University Barrett Honors College
Nabia Kheshtchin-Kamel (2018-20)	Arizona State University Barrett Honors College
Amrit Ammanamanchi (2018-19)	Arizona State University Barrett Honors College
Breanna Intermill (2018-19)	Arizona State University
Rebecca Roberts (2018-19)	Arizona State University
Patricia Palade (2018-20)	Arizona State University
Jiakai Pan (2019)	UC Berkley
Tara Liu (2019-20)	Arizona State University
Colin Gardner (2020)	Brigham Young University
Max Pernick (2020)	Washington University

Medical Student

Paul Chroneos (2018-)	UA COM-P

Residents and Fellows

Elise Syler, MD (2018-19) UA COM-P Internal Medicine Resident PGY2
Project: LPS stimulates PLGF secretion in pulmonary endothelial cells.

Emma Simpson (2018-19) UA COM-P Internal Medicine Resident PGY3
Project: PLGF induces apoptosis in pulmonary type II epithelial cells

Chelsea Carlson (2019-20) UA COM-P Internal Medicine Resident PGY2
Project: Excessive mechanical stress in lung during traumatic brain injury leads to endothelial apoptosis

Graduate Rotation Student

Eric Hines (2014) University of Arizona, GIDP-Physiological Sciences
Project: The effects of MYLK SNPs on nmMLCK splicing.

Brennan Boyd (2015) University of Arizona, GIDP-Physiological Sciences
Project: nmMLCK nitration mediated endothelial barrier dysfunction.

Tim Giblin (2018) University of Arizona, MPH program
Project: Generation of viral carrier of ITGB4E transgene

Tamara Young (2019 summer research exchange program) University of New Mexico
Project: blood-borne endothelial barrier disruption in mice exposed to multiwalled carbon nano particle.

Danyelle Paine (2020) University of Arizona, Clinical and Translational Science
Project: Evaluation of FAK Inhibitors as Therapeutic Reagents on Liver Fibrosis

Mentored Graduate Students
Gabriel Kelly (2015-20) PhD candidate, UA GIDP Physiological Sciences
Project: The role of caspase 3 cleavage of nmMLCK in endothelial barrier regulation.

Heather Lynn (2015-17) PhD candidate, UA GIDP Physiological Sciences
Project: Genetic association definition between *MLCKP1* and colon cancer.

Saad Sammani (2016-19) MS student, Clinical and Translational Science
Project: Ex vivo porcine model of ventilator induced lung injury

Yao Zhang (2017-19) MS Student, exchange program with BBMC
Project: Role of PLGF in VILI associated Mechanical Stress

Reem Faraj (2018-present) PhD candidate, CTS Graduate Program
Project: Identification and Evaluation of Novel ITGB4E Enhancer

Danyelle Paine (2020-present) PhD candidate, CTS Graduate Program
Project: Characterization of FAK in fibrosis in lung and liver

Mentored Postdoctoral Fellows
Zhongqing Qian, PhD (2014-2015).
Currently Professor at BBMC

Xiaomin Wu, PhD (2015-2017).
Currently T32 Postdoctoral Fellow at UA COM-T.

Xiaoyan “Lily” Xu, MD, PhD (2015-2016).
Currently Clinical Research Manager at CR Pharmaceutical Holdings.

Jun “Lisa” Zhang, MD, PhD (2016-2017).
Currently Professor and Attending Pulmonologist at Chaoyang Hospital, Beijing, China.

Anlin Feng, PhD (2017-present).

Sanchita Mallick, PhD (2019-20).

Ying Liang, PhD (2020-present).

Emma Simpson, MD (2019-2021).
UA COM-P Pulmonary T32 Fellow

Graduate Committee

Gabriel Kelly (2016-20)	Physiological Sciences (UA GIDP Program)
Xu Zhou (2016-18)	Pharmacology and Toxicology (UA College of Pharmacy)
Heather Lynn (2016-17)	Physiological Sciences (UA GIDP Program)
Shreya Sangam (2017-)	Clinical and Translational Sciences (UA College of Medicine Tucson)
Reem Faraj (2018-)	Clinical and Translational Sciences (UA College of Medicine Phoenix)

Awards for Mentored Trainees

2015 T32 Appointment (Cardiovascular Research), Gabriel Kelly, (Mentor: Ting Wang, PhD)
2016 Trainee Travel Award, *Central Society for Clinical and Translational Research* Annua Meeting, Xiaomin Wu, PhD, (Mentor: Ting Wang, PhD)
2017 T32 Appointment (Cardiovascular Research), Heather Lynn, (Mentor: Ting Wang, PhD)
2017 AFMR Scholar Award, *American Federation for Medical Research* Annual Meeting, Xiaomin Wu, PhD (Mentor: Ting Wang, PhD)
2018 Outstanding Poster Award, MWSOT annual meeting (Fort Collins CO), Gabriel T. Kelly, PhD candidate (Mentor: Ting Wang, PhD)
2019 Herbert E. Carter Travel Award, *University of Arizona Graduate School,* Gabriel T. Kelly, PhD candidate (Mentor: Ting Wang, PhD)
2019 T32 Appointment (Cardiovascular Research), Reem Faraj, Pharm D (Mentor: Ting Wang, PhD)
2019 Outstanding Poster Award, UACOMP symposium on “Is my fate in my genes?”, Anlin Feng, PhD (Mentor: Ting Wang, PhD)
2020 T32 Appointment (Cardiovascular Research), Emma Simpson, MD (Mentor: Ting Wang, PhD)
2020 Best Undergrad Poster Award, MWSOT annual meeting -- Virtual (Logan UT), Jia Kai Pan (Mentor: Ting Wang, PhD)

Publications/Creative Activity

Book chapters and monographs

1. Chiang ET, **Wang T**, Garcia JGN. Acute Lung Injury: The Injured Lung Endothelium, Therapeutic Strategies for Barrier Protection and Vascular Biomarkers. *Textbook of Pulmonary Vascular Disease* (Editor: Yuan XJ et.al.) 2009 Springer
2. Shen K, **Wang T**, Garcia JGN. MYLK (myosin light chain kinase). *Atlas Genet Cytogenet Oncol Haematol.* 2012; 16(12):901-908.
3. Zhou T, **Wang T**. A novel approach to investigate functional exonic SNPs associated with lung diseases at post-transcriptional stage. *Int J Pulm Respir Med*. 2014 Aug;1:002e.
4. Bime C, Gurguis CI, Desai AA, Hecker L, **Wang T**, Garcia JGN. MicroRNAs in Inflammatory Lung Disease. In *Translating MicroRNAs to the Clinic*, Volume III in the Translational Medicine Series (Editor: Jeffrey Laurence) 2016 Elsevier, Inc.
5. Casanova NG*, **Wang T***, Chiang ET and Garcia JG. Chapter 4: Genomics, Epigenetics and Precision Medicine in Integrative Preventive Medicine. In *Integrative Preventive Medicine (IPM)* (Editor: Richard H. Carmona) 2017 Dec Oxford University Press. ***, co-first authors.**

6. Faraj R, Paine D, Black SM, **Wang T**. Anti-Inflammatory Effects of Statins in Lung Vascular Pathology: From Basic Science to Clinical Trials. In *Lung Inflammation in Health and Disease* (Editor: Yong-Xiao Wang) 2020 Dec Springer Press.

Journal articles

7. Wang D, **Wang T**. Novel approaches to using PDE4 inhibitors for antihypertensive therapy. *Curr. Opin. Investig.* Drugs 2005;6 (3) 283-8
8. **Wang T**, Fox LM, Wang D. Validation of HPLC Analysis Method of a Novel Antihypertensive Agent MS23 in Rat Plasma. *J. Chromatogr. B.* 2006;830(1):13-7
9. **Wang T**, Wang D. High performance liquid chromatographic analysis of MS23 piperidine analog MSP001 in rat plasma. *J. Pharm. Biomed. Anal.* 2006;42(5):607-12
10. **Wang T**, Moreno-Vinasco L, Huang Y, Lang GD, Linares JD, Goonewardena SN, Grabavoy A, Samet JM, Geyh AS, Breysse PN, Lussier YA, Natarajan V, Garcia JG. Murine Lung Responses to Ambient Particulate Matter: Genomic Analysis and Contribution to Airway Hyperresponsiveness. *Environ. Health Perspec.* 2008; 116(11):1500-8
11. Zhao Y, Usatyuk PV, Gorshkova IA, He D, **Wang T**, Moreno-Vinasco L, Geyh AS, Breysse PN, Samet JM, Spannhake EW, Garcia JG, Natarajan V. Regulation of COX-2 expression and IL-6 release by particulate matter in airway epithelial cells. *Am J Respir Cell Mol Biol.* 2009;40(1):19-30.
12. Youn JY, **Wang T**, Cai H. An ezrin/calpain/PI3K/AMPK/eNOSs1179 signaling cascade mediating VEGF-dependent endothelial nitric oxide production. *Circ. Res.* 2009;104(1):50-9.
13. Gao L, Pung YF, Zhang J, Chen P, **Wang T**, Li M, Meza M, Toro L, Cai H. Sepiapterin reductase regulation of endothelial tetrahydrobiopterin and nitric oxide bioavailability. *Am J Physiol Heart Circ Physiol.* 2009 Jul;297(1):H331-9
14. Xia B, **Wang T**, Fox LM, Wang D. HPLC/MS/MS analysis of 3-carbamyl-4-methylpyrrole analog MNP001,a highly potent antihypertensive agent, in rat plasma. *J. Chromatogr. B.* 2009;877(20):1867-72.
15. **Wang T**, Chiang ET, Moreno-Vinasco L, Pendyala S, Samet JM, Geyh AS, Breysse PN, Lussier YA, Natarajan V, Garcia JG. Particulate Matter Disrupts Endothelial Integrity via an ROS-p38 MAPK Dependent Pathway. *Am J Respir Cell Mol Biol.* 2010 Apr;42(4):442-9.
16. Sammani S, Moreno-Vinasco L, Mirzapoiazova T, Patrick A. Singleton PA, Chiang ET, Evenosky C, **Wang T**, Mathew B, Husain A, Moitra J, Sun X, Nunez L Jacobson J, Dudek SM, Natarajan V, Garcia JGN. Differential Effects of S1P Receptors on Airway and Vascular Barrier Function in the Murine Lung. *Am J Respir Cell Mol Biol.* 2010 Oct;43(4):394-402.
17. Mirzapoiazova T, Sammani S, Moitra J, Moreno-Vinasco L, Chiang ET, **Wang T**, Camp SM, Dudek SM, Turner J, Garcia JGN. The Non Muscle Myosin Light Chain Kinase Isoform is a Viable Molecular Target in Acute Inflammatory Lung Injury. *Am J Respir Cell Mol Biol.* 2011 Jan;44(1):40-52.
18. Mathew B, Huang Y, Jacobson JR, Berdyshev E, **Wang T**, Moreno-Vinasco L, Lang G, Zhao Y, Gerhold L, Bittman R, Chen CT, LaRiviere PJ, Mauceri H, Sammani S, Dudek SM, Natarajan V, Lussier YA, Weichselbaum RR, Garcia JGN. Sphingolipids mediate radiation lung injury: Attenuation by statins and sphingosine 1-phosphate. *Am J Respir Cell Mol Biol.* 2011 Mar;44(3):415-22.
19. Mathew B, Jacobson JR, Berdyshev E, Huang Y, Sun X, Zhao Y, Gerhold LM, Siegler J, Evenoski C, **Wang T**, Zhou T, Zaidi R, Moreno-Vinasco L, Bittman R, Chen CT, Lariviere PJ, Sammani S, Lussier YA, Dudek SM, Natarajan V, Weichselbaum RR, Garcia JG. Role of sphingolipids in murine radiation-induced lung

injury: protection by sphingosine 1-phosphate analogs. *FASEB J.* 2011 Oct;25(10):3388-400.

20. Mitra S, Sammani S, **Wang T**, Boone DL, Meyer NJ, Dudek SM, Moreno-Vinasco L, Garcia JG, Jacobson JR. Role of GADD45a in Akt Phosphorylation and Ubiquitination Following Mechanical Stress-Induced Vascular Injury. *Am J Respir Crit Care Med.* 2011 Nov 1;184(9):1030-40.
21. Sammani S, Park KS, Zaidi SR, Mathew B, **Wang T**, Huang Y, Zhou T, Lussier YA, Husain AN, Moreno-Vinasco L, Vigneswaran WT, Garcia JG. A Sphingosine 1-Phosphate 1 Receptor Agonist Modulates Brain Death-Induced Neurogenic Pulmonary Injury. *Am J Respir Cell Mol Biol.* 2011 Nov;45(5):1022-7.
22. Ma SF, Xie L, Pino-Yanes M, Sammani S, Wade MS, Letsiou E, Siegler J, **Wang T**, Infusino G, Kittles RA, Flores C, Zhou T, Prabhakar BS, Moreno-Vinasco L, Villar J, Jacobson JR, Dudek SM, Garcia JG. Type 2 Deiodinase and Host Responses of Sepsis and Acute Lung Injury. *Am J Respir Cell Mol Biol.* 2011 Dec;45(6):1203-11.
23. **Wang T**, Lang GD, Moreno-Vinasco L, Huang Y, Goonewardena SN, Peng YJ, Svensson EC, Natarajan V, Lang RM, Linares JD, Breysse PN, Geyh AS, Samet JM, Lussier YA, Dudley S, Prabhakar NR, Garcia JG. Particulate Matter Induces Cardiac Arrhythmias via Dysregulation of Carotid Body Sensitivity and Cardiac Sodium Channels. *Am J Respir Cell Mol Biol.* 2012 Apr;46(4):524-31.
24. Youn JY, **Wang T**, Blair J, Laude KM, Oak JH, McCann LA, Harrison DG, and Cai H. Endothelium-specific Sepiapterin Reductase Deficiency in DOCA-salt Hypertension. *Am J Physiol Heart Circ Physiol.* 2012 Jun 1;302(11):H2243-9.
25. **Wang T**, Wang L, Zaidi SR, Sammani S, Siegler J, Moreno-Vinasco L, Mathew B, Natarajan V, Garcia JG. Hydrogen Sulfide Attenuates Particulate Matter-Induced Human Lung Endothelial Barrier Disruption via Combined ROS Scavenging and Akt Activation. *Am J Respir Cell Mol Biol.* 2012 Oct;47(4):491-6.
26. **Wang T**, Wang L, Moreno-Vinasco L, Lang GD, Sullivan R, Usatyuk PV, Samet JM, Breysse PN, Geyh AS, Natarajan V, Garcia JG. Disruption of Endothelial Cell Barrier Integrity by Particulate Matter Air Pollution via Calpain-Mediated Tight Junction Protein Degradation. *Part Fibre Toxicol.* 2012 Aug 29;9(1):35.
27. **Wang T***, Garcia JG, Zhang W*. Epigenetic Regulation in Particulate Matter-Mediated Cardiopulmonary Toxicities: A Systems Biology Perspective. *Curr Pharmacogenomics Person Med.* 2012 Dec;10(4):314-321. *, corresponding author.
28. Wang L, Sammani S, Moreno-Vinasco L, Letsiou E, **Wang T**, Camp SM, Bittman R, Garcia JG, Dudek SM. FTY720 (S)-Phosphonate Preserves Sphingosine 1-Phosphate Receptor 1 Expression and Exhibits Superior Barrier Protection to FTY720 in Acute Lung Injury. *Crit Care Med.* 2014 Mar;42(3):e189-99.
29. Gu W, Li M, Xu Y, **Wang T**, Ko JH, Zhou T. Increased conservation level at mRNA structurally sensitive sites from bacteria to mammal. *BMC Evol Biol.* 2014 Apr 23;14(1):87.
30. Zhou T*, **Wang T***, Garcia JG. Non-muscle myosin light chain kinase mediated genes: insight into prognosis in human cancers. *PLoS One.* 2014 Apr 8;9(4):e94325. ***, co-first authors.**
31. Goldman JL, Sammani S, Kempf C, Saadat L, Letsiou E, **Wang T**, Moreno-vinasco L, Rizzo AN, Fortman JD, Garcia JG. Pleiotropic effects of interleukin 6 in a “two hit” murine model of acute respiratory distress syndrome. *Pulm Circ.* 2014 Jun;4(2):280-8.
32. **Wang T**, Moreno-Vinasco L, Ma SF, Zhou T, Shimizu Y, Sammani S, Epshtein Y, Watterson DM, Dudek SM, Garcia JG. Nonmuscle Myosin Light Chain Kinase Regulates Murine Asthmatic Inflammation. *Am J Respir Cell Mol Biol.* 2014 Jun;50(6):1129-35. **Highlighted paper in this issue of AJRCMB**

33. Moreno-Vinasco L, Quijada H, Sammani S, Siegler J, Letsiou E, Deaton R, Saadat L, Zaidi RS, Messana J, Gann PH, Machado RF, Ma W, Camp SM, **Wang T**, Garcia JG. Nicotinamide phosphoribosyltransferase inhibitor is a novel therapeutic candidate in murine models of inflammatory lung injury. *Am J Respir Cell Mol Biol.* 2014 Aug;51(2):223-8.
34. Zhou T*, **Wang T***, Garcia JG. Expression of nicotinamide phosphoribosyltransferase-influenced genes predicts recurrence-free survival in lung and breast cancers. *Sci Rep.* 2014 Aug 22;4:6107. ***, co-first authors.**
35. Gu W, Xu Y, Xie X, **Wang T**, Ko JH, Zhou T. The role of RNA structure at 5'-Untranslated Region in mi-croRNA-mediated gene regulation. *RNA.* 2014 Sep;20(9):1369-75.
36. Sun X, Ramamoorthi Elangovan V, Mapes B, Camp SM, Sammani S, Saadat L, Ceco E, Ma SF, Flores C, MacDougall MS, Quijada H, Liu B, Evenoski CL, **Wang T**, Chiang ET, Garcia JG. The NAMPT Promoter is Regulated by Mechanical Stress, STAT5, and ARDS-Associated Genetic Variants. *Am J Respir Cell Mol Biol.* 2014 Nov;51(5):660-7.
37. **Wang T***, Zhou T*, Saadat L, Garcia JG. A MYLK Variant Regulates Asthmatic Inflammation via Alterations in mRNA Secondary Structure. *Eur J Hum Genet.* 2015 Jun;23(6):874-6. ***, co-first authors.**
38. Zhou T, **Wang T***, Garcia JG*. A Non-Muscle Myosin Light Chain Kinase-Dependent Gene Signature In Blood PBMCs Is Linked To Human Asthma Severity And Exacerbation Status. *Pulm Circ.* 2015 Jun;5(2):335-8. ***, co-corresponding authors.**
39. Shen K, Ramirez B, Mapes B, Shen GR, Gokhale V, Brown ME, Santarsiero B, Ishii Y, Dudek SM, **Wang T**, Garcia JG. Structure-Function Analysis of the Non-Muscle Myosin Light Chain Kinase (nmMLCK) Isoform by NMR Spectroscopy and Molecular Modeling: Influence of MYLK Variants. *PLoS One*. 2015 Jun 25;10(6):e0130515.
40. Camp SM, Ceco E, Evenoski CL, Danilov SM, Zhou T, Chiang ET, Moreno-Vinasco L, Mapes B, Zhao J, Gursoy G, Brown ME, Adyshev DM, Siddiqui SS, Quijada H, Sammani S, Letsiou E, Saadat L, Yousef M, **Wang T**, Liang J, Garcia JG. Unique Toll-Like Receptor 4 Activation by NAMPT/PBEF Induces NFκB Signaling and Inflammatory Lung Injury. *Sci Rep.* 2015 Aug 14;5:13135.
41. Gu W, Gurguis CI, Zhou JJ, Zhu YH, Ko EA, Ko JH*, **Wang T***, Zhou T*. Functional and structural consequence of rare exonic single nucleotide polymorphisms: one story, two tales. *Genome Biol Evol.* 2015 Oct 9;7(10):2929-40. ***, co-corresponding authors.**
42. Qian Z, Zhou T, Gurguis CI, Xu X, Wen Q, Lv J, Fang F, Hecker L, Cress AE, Natarajan V, Jacobson JR, Zhang DD, Garcia JG, **Wang T***. Nuclear factor, erythroid 2-like 2-associated molecular signature predicts lung cancer survival. *Sci Rep*. 2015. 2015 Nov 24;5:16889.
43. Shimizu Y, Camp SM, Sun X, **Wang T***, Garcia JG*. Sp1-Mediated Non-Muscle MLCK Expression and Enhanced Activity in VEGF-Induced Vascular Permeability. *Pulm Circ.* 2015 Dec;5(4):707-15. ***, co-corresponding authors.**
44. Tao S, Rojo de la Vega M, Quijada H, Wondrak GT, **Wang T***, Garcia JG*, Zhang DD*. Bixin protects mice against ventilation-induced lung injury in an NRF2-dependent manner. *Sci Rep*. 2016. Jan 5;6:18760. ***, co-corresponding authors.**
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proteasome system. *Nitric Oxide.* 2020 Dec 15:S1089-8603(20)30214-7. doi: 10.1016/j.niox.2020.12.003. Online ahead of print. PMID: 33338599

Work in Progress

1. Feng A, Ma W, Zhou T, Black SM, Fallon MB, **Wang T.** S1P receptor 3 associated gene signature predicts survival in sepsis patients. *BMC Med Geno.* In revision.
2. Wu X, Burt J, Garcia JG, **Wang T**. Connexin 43 mediates particulate matter induced endothelial barrier disruption. In submission to Toxicological Science.
3. Xu X, Qian Z, **Wang T***, Zhou T*. Particulate matter mediated gene expression signature mediates human lung cancer. In preparation to *PLoS One.* *, equally contributed senior authors. ***, co-corresponding authors.**
4. Zhang J, Xu X, **Wang T.** Particulate matter stimulates EMT via fibronectin upregulation. In preparation to Experimental Lung Research.

Scholarly Presentations

05/2011 American Thoracic Society International Conference, scientific symposium EXACERBATIONS IN ASTHMA AND COPD: FROM CLINIC TO MECHANISMS (Denver, CO): “Exacerbation Of Asthmatic Inflammation By Airborne Particulate Matter: A Comparison Study Of Six Us Cities”.

09/2012 University of Illinois Hospital and Health Science System, Symposium on Translational Research Approaches to Reduce Health Disparities in Lung Disease (Chicago, IL): “Ambient Particulate Matter Exacerbates Murine Asthma, A Toxicogenomic Approach”. Invited.

11/2012 Nanjing University Model Animal Research Center invited lecture (Nanjing, China): “Mechanisms of Particulate Matter Induced Cardiac Arrhythmias”.

01/2014 University of Arizona, Arizona Respiratory Center Research Conference: “Nonmuscle MLCK Is A Novel Regulator Of Asthma”.

06/2014 Southwest Environmental Health Science Center (SWEHSC) RFG2 Meeting, University of Arizona: “Mechanistic Study of Particulate Matter Induced Cardiac Arrhythmias”.

10/2014 University of Arizona, College of Pharmacy Graduate Research Seminar: “Nonmuscle type of myosin light chain kinase is a novel regulator of asthma”.

12/2014 University of Arizona, Arizona Respiratory Center Research Conference: “Complex mechanisms of particulate matter mediated cardiac arrhythmias”.

03/2015 University of Arizona, Department of Physiology Graduate Research Seminar: “From genetics to genomics: the role of MYLK in asthma.”

04/2015 Bengbu Medical College, Anhui, China. Invited lectureship: Application of genetics/genomics tools in asthma research.

09/2015 33rd Annual Meeting of the Mountain West Society of Toxicology: Myosin Light Chain Kinase Mediates Particular Matter Exacerbated Asthma, an Example with Genomic Approaches.

10/2016 Bengbu Medical College, Anhui, China. Invited lectureship: Complex Mechanisms of PM2.5-mediated Cardiopulmonary Toxicity.

02/2017 University of Arizona, College of Pharmacy Graduate Research Seminar: “Mechanisms of Particulate Matter Induced Cardiopulmonary Toxicity”.

03/2017 University of New Mexico, Cellular and Molecular Basis of Disease Seminar Series: “From genetics to genomics: the role of *MYLK* in asthma.”

09/2017 35th Annual Meeting of the Mountain West Society of Toxicology: Complex Mechanisms of Particulate Matter Mediated Endothelial Integrity Disruption.

09/2017 University of Arizona College of Medicine Phoenix, Department of Basic Medical Science Seminar Series: Structural Sensitive Genetic Variant in *MYLK* and Its Role in Asthma

10/2017 University of Arizona Asthma and Airway Disease Research Center (A2DRC) Seminar Series: Asthma Genetics of *MYLK*, the Role of the Long Variant.

11/2017 UAHS Lung Pathobiology Seminar Series: Novel mRNA Structural Genetic Variants in Asthma.

08/2018 Banner University Medicine Grand Rounds: "Novel Study of Asthma Genetics, the traditional and untraditional approaches".

11/2018 University of Arizona College of Medicine Phoenix, Cardiovascular Research Collaborative Conference: "COM-P Pulmonary and Endothelial Research Lab"

03/2019 Arizona State University Metabolomics Symposium: "Cyclic Stretch in Endothelial Cells: From Genomics to Metabolomics"

04/2019 Bengbu Medical College, Anhui, China. Invited lectureship: Imbalanced Signaling to Circulating S1P in Acute Lung Injury and Sepsis, Practice in Genomics and Metabolomics.

Grants and Contracts

Current

P01HL134610A1 Wang (Project #3 PI) 02/05/18 –1/31/23
NIH/NHLBI Project #3: PTM- and SNP-specific regulation of sphingosine 1-phosphate receptor signaling in ventilator-induced lung injury (VILI) in NHLBI Program Project Grant: genetics, epigenetics, and post-translational modifications and the development of ventilator-induced lung injury (PPG PI: Black)
Project #3 total cost: $2,197,265
Role: PI (25%)

P01HL146369A1 Wang (Project #3 PI) 8/10/20-7/31/25
NIH/NHLBI Project #3: Mitochondrial Network Remodeling and the Development of the Hyperproliferative and Antiapoptotic Endothelial Phenotype in NHLBI Program Project Grant: metabolic reprogramming and pulmonary vascular disease in congenital heart disease (PPG PI: Black)
Project #3 total cost: $1,980,002
Role: PI (20%)

R01HL142212 Black (PI) 7/1/18-6/30/22
NIH/NHLBI PKG Signaling and Sepsis Induced ALI
Role Co-I (5%)
Direct cost: $300,000/year

ADHS17-00007403 Knox (PI) 3/1/18-2/28/21
Arizona Dept. of Health Services A Novel Ex-vivo Leaf-lung model to Study Pulmonary Diseases
Role: co-investigator (5%)
Total cost: $750,000

Completed

R01HL091889 Garcia and Wang (multiple PI) 5/15/15-3/31/19
NIH/NHLBI nmMLCK Contributes to Genetic & Environmental Asthma Susceptibility

Total cost: $1,571,001
Role: PI

R41HL140741-01 ReStore Therapeutics 12/1/17 – 11/30/18
NIH/NHLBI Novel Targeting of the S1P Receptor, S1P1, and Nox4 as Therapeutic Approaches in ARDS
Role: consortium site PI (5%)
Consortium total cost: $93,430

Parker B Francis Fellowship Wang (PI) 7/1/12-6/30/15
PBK Family Foundation Mechanisms of Particulate Matter-Induced Murine Cardiac Arrhythmias
Total cost: $156,000
Role: PI

Arizona Cancer Therapeutics Wang (PI) 07/01/14-06/30/15
Contract: Therapeutic assessment of novel Muc1 inhibitor in murine models of acute lung injury
Total cost: $4,000

Aqualung Therapeutics Wang (PI) 07/01/14-06/30/15
Contract: Therapeutic assessment of humanized PBEF antibody in pre-clinical model of ventilation induced lung injury
Total cost: $10,000

P30ES006694 Wang (Pilot Project PI) 4/1/96-3/31/18
NIEHS/Southwest Environmental Health Science Center
Pilot project: Mechanisms of Particulate Matter-Exacerbated Cardiopulmonary Toxicities
Pilot project total cost: $40,000 (4/1/16-3/31/18)
Role: Pilot project PI (Wang)

P01HL09805 Natarajan (PI) 6/1/11-5/31/16
NIH/NHLBI Role of Sphingolipids in the Pathobiology of Lung Injury
Direct cost: $1,515,000/year
Core C: Core of Pre-clinical Animal Models of Lung Inflammatory Injury (Subcontract)
Role: co-investigator (25%)
The major goal of Core C is to establish murine models of acute lung injury.

Arizona Biomedical Investigator Grant (ADHS14-082983) Chen (PI) 11/1/14-10/31/17
AZ Biomedical Research Commission A novel microfluidic ex vivo lung (MEVL) model for studying pulmonary diseases
Total cost: $750,000
Role: co-investigator (8%)

R01HL125615 Garcia (PI) 12/16/15 – 3/31/16
NIH/NHLBI Regulation of Nonmuscle Myosin Light Chain Kinase Structure and Function of ARDS
Direct cost: $325,000/year
Role: Co-investigator (30%)

P01HL126609 Garcia (PI/PD) 4/1/16 – 3/31/18
NIH/NHLBI Cytoskeletal Regulation of Lung Endothelial Pathobiology

Direct cost: $1,660,188/year
Project #1: Structure-Function Analysis of nmMLCK in EC Barrier Responses
Core A: Administrative Core
Core C: Pre-Clinical Models of ALI/ARDS
Role: Project #1 Co-I (10%), Core A Co-I (5%), Core C Co-I (10%)

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THE FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
Academic Policy and Student Affairs Committee

June 16, 2021

Subject: Program Termination Doctor of Education in Exceptional Student Education

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Proposed Committee Action:

Recommend to the Florida International University Board of Trustees to recommend to the Board of Governors termination of the Doctor of Education in Exceptional Student Education (CIP 13.1001).

Background Information:

In 2019, in conjunction with the renaming of the former doctorate in Curriculum and Instruction to Teaching and Learning, the faculty of the doctorate in Exceptional Student Education created a new area of specialization (Special Education) in the revised PhD program. This provided students the ability to earn a Doctor of Philosophy. Since that time, new students have been pursuing the PhD (the preferred credential) rather than the EdD ESE. Students not wishing to enroll in the PhD had the option to continue in the EdD ESE; these students who availed themselves of this option have now graduated from the EdD ESE. The program faculty determined that it is now time to close the original degree given the popularity and success of the new specialization in the PhD in Teaching and Learning and to consolidate degree offerings.

Section (1d) of Florida Board of Governors Regulation 8.012 –*Academic Program Termination and Temporary Suspension of New Enrollments* states Each University Board of Trustees has the responsibility and authority to recommend termination of degree programs at the professional and doctoral level to the Board of Governors.

Supporting Documentation:	Board of Governors, State University System of Florida Academic Degree Program Termination Form: Doctor of Education in Exceptional Student Education Southern Association of Colleges and Schools Commission on Colleges Notification Letter April 15, 2021
Facilitator/Presenter:	Elizabeth M. Bejar

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STATE UNIVERSITY SYSTEM OF FLORIDA

Board of Governors, State University System of Florida
ACADEMIC DEGREE PROGRAM TERMINATION FORM
In Accordance with BOG Regulation 8.012

INSTITUTION: Florida International University

PROGRAM NAME: Doctor of Education in Exceptional Student Education

DEGREE LEVEL(S): Ed.D
(B., M., Ph.D., Ed.D., etc.)

CIP CODE: 13.1001
(Classification of Instructional Programs)

ANTICIPATED TERMINATION TERM: Spring 2022
(First term when no new students will be accepted into the program)

ANTICIPATED PHASE-OUT TERM: Spring 2022
(First term when no student data will be reported for this program)

Please use this form for academic program termination. The form should be approved by the University Board of Trustees (UBOT) prior to submission to the Board of Governors, State University System of Florida for consideration. Please fill out this form completely for each program to be terminated in order for your request to be processed as quickly as possible. Attach additional pages as necessary to provide a complete response. In the case of baccalaureate or master's degree programs, the UBOT may approve termination in accordance with BOG Regulation 8.012, and submit this form to the Board of Governors, Office of Academic and Student Affairs. For doctoral level programs, please submit this form with all appropriate signatures for Board of Governor's consideration. The issues outlined below should be examined by the UBOT when approving program terminations.

1. Provide a narrative rationale for the request to terminate the program.

In 2019, the faculty of the doctorate in Exceptional Student Education created a new area of specialization (Special Education) as part of the PhD in Teaching and Learning. This specialization provided students the ability to earn a Doctor of Philosophy as well as enabled the academic unit to consolidate degree offerings. Thus, the request to terminate the EdD is a matter of streamlined and improved academic offerings at the university.

2. **Indicate on which campus(es) the program is being offered and the extent to which the proposed termination has had or will have an impact on enrollment, enrollment planning, and/or the reallocation of resources.**

The proposed termination will not have an impact on enrollment, enrollment planning and/or the reallocation of resources. The EdD in Exceptional Student Education, and the PhD in Teaching and Learning are offered at the main Campus. As formerly enrolled students and new admissions are being served by the PhD, there is no impact on enrollment, enrollment planning, and/or the reallocation of resources.

3. **Explain how the university intends to accommodate any students or faculty who are currently active in the program scheduled to be terminated. State what steps have been taken to inform students and faculty of the intent to terminate the program.**

When the new specialization in the PhD in Teaching and Learning was initiated, enrolled students were given the opportunity to move to the PhD or complete the EdD in Exceptional Student Education. Nine of the 11 students moved, and the remaining two graduated in 2019-20. Faculty teaching in the EdD participated in the planning and decision to create the new specialization, and continue to teach their courses in the PhD in Teaching and Learning.

4. **Please provide the date when the teach-out plan was submitted to SACSCOC. Include a copy of the notification letter with your submission.**

The Southern Association of Colleges and Schools Commission on Colleges was informed of the degree closure and provided a teach-out plan on April 15, 2021. A copy of the notification letter is attached.

5. **Provide data (and cite sources) on the gender and racial distribution of students in and faculty affiliated with the program. For faculty, also list the rank and tenure status of all affected individuals.**

The following table compares the previous distribution of students as an EdD and the current breakdown of the new Special Education specialization in the PhD in Teaching and Learning.

	2017-18 N= 11 (Former EdD)		2020-21 N=20 (New PhD Specialization)	
	%	#	%	#
Hispanic	72%	8	60%	12
African Am	9%	1	30%	6
Asian	9%	1	5%	1
non-Res Alien	9%	1	n/a	-
Caucasian	n/a	-	5%	1
Females	82%	9	90%	18

Data source: FIU Office of Analysis and Information Management.

As previously indicated, due to the launch of the PhD specialization there were no faculty negatively affected by this degree closure.

6. **Identify any potential negative impact of the proposed action on the current representation of females, minorities, faculty, and students in the program.**

The program continues to attract a very diverse student body. This continued success was supported by a grant (USDOE Office of Special Education) awarded to FIU with partners at Syracuse Univ. and Arizona State Univ. to recruit and support 12 FIU doctoral students enrolling in the new Special Education specialization.

7. **If this is a baccalaureate program, please explain how and when the Florida College System (FCS) institutions have been notified of its termination so that students can be notified accordingly.**

Not applicable as this is not a baccalaureate program.

Requestor/Initiator	April 19, 2021 Date
Signature of Campus EO Officer	April 29, 021 Date
Signature of College Dean	April 19, 2021 Date
Signature of President or Vice President for Academic Affairs	5-7-2021 Date
Signature of Chair of the Board of Trustees	Date
Date Approved by the Board of Trustees	

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April 15, 2021

Belle S. Wheelan, Ph.D.
President
Southern Association of Colleges and Schools
Commission on Colleges (SACSCOC)
1866 Southern Lane
Decatur, Georgia 30033-4497

Dear Dr. Wheelan:

In Fall 2020, the Department of Teaching and Learning submitted a program termination request through the FIU Faculty Senate curricular process for the Doctor of Education in Exceptional Special Education (EdD ESE) (CIP 13.1001). The Faculty Senate approved this request for termination in January 2021 and forwarded the request to the Office of the Provost.

To terminate a doctoral program, per the State University System requirements, these steps must occur: 1. Approval by the faculty governance authority (i.e., FIU's Faculty Senate); 2. Upon the concurrence of Academic Affairs, request and seek recommendation for termination of The Florida International University Board of Trustees (FIU BOT); and 3. The Florida Board of Governors make the final decision to terminate a doctoral program based on the recommendation of the FIU BOT.

FIU's next step in the termination process would be to place this request on the agenda of the FIU BOT meeting of June 16, 2021. However, prior to this step, and in accordance with the Substantive Change for SACSCOC Accredited Institutions – Program Changes Procedures, FIU now seeks approval of its teach-out plan.

In 2019, in conjunction with the renaming of the former doctorate in Curriculum and Instruction to Teaching and Learning, the faculty of the doctorate in Exceptional Student Education created a new area of specialization (Special Education) in the revised PhD program. This provided students the ability to earn a Doctor of Philosophy. Since that time, new students have been pursuing the PhD (the preferred credential) rather than the EdD ESE. Students not wishing to enroll in the PhD had the option to continue in the EdD ESE; these students who availed themselves of this option have now graduated from the EdD ESE. The program faculty determined that it is now time to close the original degree given the popularity and success of the the new specialization in the PhD in Teaching and Learning and to consolidate degree offerrings.

For this teach-out plan, the last remaining student graduated in Spring 2020; thus, currently, there are no students enrolled or impacted. The components of the teach-out plan are as follows:

1). Attached Substantive Change Cover Sheet.

2). Date of closure: Fall 2021 (date students will no longer be admitted).

3). An explanation of how affected parties (students, faculty, staff) will be informed of the impending closure: The program director works closely with potential new doctoral students in Special Education. As a result, students became aware of the exciting opportunity to earn a PhD in Teaching and Learning once the new specialization in Special Education was approved. Since Fall 2019, students have only enrolled in the new PhD option. The EdD ESE program website has been deactivated. Upon approval of SACSCOC, followed by the FIU BOT recommendation for termination and the final decision by the Florida Board of Governors, the program will be removed from the University Catalog and the State University System Academic Program Inventory.

Exceptional Education faculty participated in the discussions regarding and supported the creation of the Special Education specialization in the PhD in Teaching and Learning. Faculty were part of the process to submit the program termination curriculum forms to the Faculty Senate.

4). An explanation of how all affected students will be helped to complete their programs of study with minimal disruption or additional costs: All students have graduated from the program as of Spring 2020.

5). Explain whether the students subject to the teach-out plan will incur additional charges or other expenses because of the teach-out and, if so, how the students will be notified: Not applicable.

6). Copies of signed teach-out agreements with other institutions, if applicable: Not applicable.

7). A description of how faculty and staff will be redeployed or helped to find new employment: Faculty or staff will not be terminated or impacted as a result of the decision to close the EdD ESE.

Let me re-affirm that the closure of the EdD ESE will have no adverse effect upon the students, faculty, or staff. Please contact me if you have any questions regarding this program closure notification. I look forward to receiving SACSCOC approval of the proposed teach-out plan.

Sincerely,

Elizabeth M. Bejar, Ph.D.
Senior Vice President for Academic and Student Affairs
SACSCOC Liaison

c: Mark B. Rosenberg, Ph.D., President
Susan P. Himburg, Ph.D., Associate Vice President, Academic Planning and Accountability

THE FLORIDA INTERNATIONAL UNIVERSITY
BOARD OF TRUSTEES
Academic Policy and Student Affairs Committee

June 16, 2021

Subject: Florida International University Annual Accountability Plan, 2021, Revision

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Proposed Committee Action:

Recommend that the Florida International University Board of Trustees (1) approve Florida International University's Annual Accountability Plan revision as provided in the Board materials and (2) delegate authority to the University President to perform finish editing as needed and to amend consistent with comments received from the Board of Governors (BOG).

Background Information:

BOG Regulation 2.002, University Accountability Plans, provides, in relevant part, that (2) each university's accountability plan shall reflect the institution's distinctive mission and focus on core institutional strengths within the context of State University System goals and regional and statewide needs; and (3) each board of trustees shall prepare an accountability plan and submit updates on an annual basis for consideration by the Board of Governors. The accountability plan shall outline the university's top priorities, strategic directions, and specific actions for achieving those priorities, as well as progress towards previously approved institutional and System-wide goals.

The BOG requested that FIU change the 2020-21 goals for online FTE metrics to reflect actuals instead of goals. The 2020-21 academic year is completed in terms of credit hours and FTEs, making this change to actuals possible. The changes are highlighted in pages 16, 20, and 22. The BOG requested that the BOT approve the revised Accountability Plan at its next meeting, prior to the June BOG meeting.

This document may require finish editing or necessary updates. Additionally, the BOG may require additional changes to the annual report. Therefore, a delegation of authority to the University President to make changes as necessary is being requested.

Supporting Documentation: FIU's Annual Accountability Plan, 2021, Revised

Facilitator/Presenter: Kenneth G. Furton

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2021 ACCOUNTABILITY PLAN

FLORIDA INTERNATIONAL UNIVERSITY

Approved by the FIU Board of Trustees April 21, 2021

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INTRODUCTION

The Accountability Plan is an annual report that is closely aligned with the Board of Governors' 2025 System Strategic Plan. This report enhances the System's commitment to accountability and strategic planning by fostering greater coordination between institutional administrators, University Boards of Trustees and the Board of Governors regarding each institution's direction and priorities as well as performance expectations and outcomes on institutional and System-wide goals.

Once an Accountability Plan is approved by each institution's respective Boards of Trustees, the Board of Governors will review and consider the plan for approval, excluding those sections of the Plan that require additional regulatory or procedural approval pursuant to law or Board regulations.

STRATEGY

Mission Statement

Florida International University is an urban, multi-campus, public research university serving its students and the diverse population of South Florida. We are committed to high-quality teaching, state-of-the-art research and creative activity, and collaborative engagement with our local and global communities.

Statement of Strategy

FIU is the place of big ideas and close connections. Those big ideas and close connections became critical for us this past year as we were able to affirm our commitment to our academic and research mission and serve our community during this global pandemic. The broad reach, through research and community engagement, and our meaningful relationships, driven by faculty and staff who care deeply about every student, allowed us to pivot while continuing our critical work.

As the FIU community moves forward with a strategic plan designed for the 21st century, we are poised and ready to take the University to its Next Horizon of student success and research excellence. This vision of FIU's Next Horizon Strategic Plan is driven by bold thinking. It is fueled by an energized and hard-working student community and outstanding faculty conducting cutting-edge research, world-class programs, innovation, and future-forward teaching that has made FIU a fast-rising top 50 public research institution.

This past year affirmed that FIU's strategy and direction towards a more 21st century lifelong learner institution of higher education was timely. COVID-19 served to accelerate the technological advances and the rise of artificial intelligence that are transforming society and revolutionizing everything – how we communicate, work and play. This year as we reflect and plan ahead, our strategy continues to drive us to broaden our research and transition to an evolving mindset that prioritizes lifelong learning and delivers a personalized learning experience sensitive to changing workforce needs and competencies.

As an anchor in our community and a driver of economic prosperity, FIU's strategy is to work with industry and government leaders to ensure that South Florida is poised to support the entire state of Florida through a robust economic recovery that is inclusive of our students, staff, and faculty. The Next Horizon Strategic Plan continues to guide our efforts, unprecedented opportunities and obligations to impact our community more deeply and to lead more boldly in areas of teaching, research, entrepreneurship, and public policy. The future of FIU is full of promise, hope and opportunity.

STRATEGY (cont.)

Strengths, Opportunities & Challenges

Our strengths and opportunities for the foreseeable future must continue to be framed in a context of responding to the twin dilemmas presented by the COVID-19 Pandemic: how to foster a new normal in which public health can be assured and how to restore Florida's economy so that Florida's workforce returns to full employment in a context of ascending prosperity.

FIU's core strengths to assist with this process lie in our can-do organizational culture, our purpose-driven institutional ethos, and our hard-driving community that thrives on uncertainty, innovation and creativity. Innovation is certainly key here as Florida and Miami/South Florida are particularly experiencing a catalytic movement. South Florida is poised to affirm its place as a global leader and great city. The greatest cities of the world have strong public research universities and FIU is ready to not only respond to industry but to partner in innovative and transformational ways to ensure that the foundation required to support talent generation and quality standards of living are developed to sustain the long-term economic strengths of our community and our state.

We intend to maintain our drive to be ranked as a top-50 public university in national rankings including *U.S. News & World Report*. We are adapting to respond to the immediate talent and workforce needs of the rapidly expanding technical and innovation sector in our community. Florida's movement towards tech innovation and a state that welcomes and fosters business and business development requires us to be ready. We are ready for the new challenges. We are confident about our ability to respond and succeed in the face of the new urgency presented by the pandemic and the post-COVID opportunities presented by the unprecedented relocation of companies to South Florida.

Three Key Initiatives & Investments

1. Amplify Learner Success & Institutional Affinity Student success is intricately tied to a greater sense of institutional affinity, individual grit, a well-nurtured sense of belonging, and optimism towards the future. The university initiatives and investments will continue to focus on this critical aspect and ensure that the post-pandemic recovery is heralded by the continued retention and graduation success of our students. Our learner-centric model is also supporting the just-in-time needs of our students and graduates responding to a very expansive and agile workforce focused on the innovation and venture capital economy.

2. Accelerate Preeminence & Research and Innovation Impact Our second key initiative is designed to achieve our 2025 strategic plan goals. We are leveraging FIU preeminent and emerging preeminent programs and our program of distinction in Environmental Resilience. We have achieved $237M in total research expenditures, placing us on a path to surpass our prior 2025 goal of $300M. We made similar progress in S&E and non-Medical S&E expenditures, surpassing the Preeminence metric for S&E research expenditures, having reached $210M. In total research, our NSF ranking improved 7 places to No. 74. This year FIU's NIH research funding increased by 38% reaching $44M and placing FIU third in the SUS. Our aim remains for FIU to be the catalyst to foster social innovation and entrepreneurship from conceptualization to commercialization.

3. Assure Responsible Stewardship Our last key initiative is driven by the recognition that FIU has a deep responsibility to be good stewards of our resources: human, economic, environmental, and entrepreneurial. Two major initiatives grab our attention. First, our university-wide DEI program is focused on leveling the playing field for diverse communities who seek opportunity and to make their contributions to our prosperity. Another initiative is our program of distinction on Environmental Resilience which presents a holistic approach to build a strong and sustainable future for our institution and the South Florida community. The optimization and impact of our academic and research enterprise requires us to align resources with academic priorities that sustain knowledge production, optimize learning, discovery and creativity, and promote a positive working environment.

STRATEGY (cont.)

Graduation Rate Improvement Plan Update

In FIU's 2018 Graduation Improvement Plan, we highlighted the importance of identifying and resolving the student-level and institutional-level obstacles to timely graduation. At the time, our 4-Year FTIC Graduation rate was 33.5%. In the three years since that plan was published, we have continued to focus on removing the barriers that impede students' progress. This year, our graduation rate stands at 49.3%. We continue to build the infrastructure to support continued and sustainable improvement in the graduation rate.

FIU has developed processes and strategies to continuously review and refine our student support efforts and initiatives. One of the primary tools is FIU's Communication Protocol for Accountability and Strategic Support (ComPASS). ComPASS is a data driven management process used by the President, Provost, Deans, and staff to monitor the university's instructional, curricular, and operational needs and their impact on FIU's mission and position relative to the State's Performance Funding Model and rankings. The process consists of workshops that provide an open discussion and in-depth data analysis with each college to identify best practices, challenges, and opportunities. Additionally, general sessions are held semesterly with the President, Provost, Executive team, Deans, and their staff to identify and evaluate resources, support, and adjustments needed for positive improvement. In April 2020, the university held its 13th ComPASS session which focused on efforts to assist students to graduate on time and improve retention.

FIU's approach to student success is centered on developing critical collaborations throughout the university to identify and resolve barriers students are encountering. Through the facilitation and management of numerous cross-unit working groups, FIU is addressing academic and financial barriers at both the student and institutional level. These working groups come together to ensure that university course offerings facilitate timely graduation, the use of holds preventing students from registering is closely monitored, and students who are experiencing academic and financial difficulties are supported. These collaborative working groups give the university the agility and dexterity needed to address and resolve issues as they arise.

Additionally, we have invested in software solutions that help to build and maintain these critical collaborations. Panther Success Network (PSN, powered by EAB) is FIU's Advisor-Student Case Management system. PSN has been facilitating Advisor to Student interaction and support since 2018. In 2020, FIU expanded the use of the PSN platform to include other university offices (Care Units) to enhance the coordinated support for student success. The following care units were recently added: Center for Academic Success (Tutoring); Career and Talent Development (Career Services); College Life Coaching; Financial Wellness Coaching; Multicultural Programs and Services; Student Access & Success; and the Center for Testing and Career Certification. These additional care units are using the PSN platform to collaboratively assist students by issuing and receiving student referrals between care units, reading and entering contact notes, scheduling student appointments, and messaging students. In the coming year, we will continue to expand the scope of the platform and the number of units working together to support students.

These critical collaborations also include working with the faculty. The Gateway Project, led by FIU's Center for the Advancement of Teaching (CAT) initially identified critical courses with high enrollment, high failure rates, and/or high impact (strong predictor of dropping out or delayed graduation) in 2014-15. The Gateway Project includes communication and collaboration with and amongst department chairs, structured faculty work sessions, and gateway course data collection and analysis. The goal of the sessions is to improve course design and pedagogy with a focus on student learning and success. Since the inception of the Gateway Project over 21,000 more students have passed 21 foundational "gateway" courses than would have at the 2013-14 passing rates (21 courses with > 35,000 enrolled students annually, including Biology, Chemistry, English, History, Psychology, Math, Statistics, Economics). The average passing rate across these courses has increased from 65% to 82%. The reach of the project has expanded to Gateway to Graduation (G2G), which will provide support for improving student success in courses that have historically slowed progress toward graduation.

STRATEGY (cont.)

Key Achievements for Last Year (Student, Faculty, Program, Institutional)

- From 2019 to 2020 research awards grew from $157M to $197M (a 25% increase).
- Six startup companies were created based on FIU technologies, the largest number in the history of FIU. Thirteen license options were executed and licensing income totaled $236K. Over $1M in research funding was received in connection to a license option.
- FIU was awarded 61 patents in the fields of renewable energy, medicine, computer science, engineering, and more. This maintains FIU's rank among the top 25 public universities in the world for the number of U.S. utility patents produced according to the 'Top 100 Worldwide Universities Granted U.S. Utility Patents in 2019' report.
- The Air Force Office of Scientific Research awarded FIU an extension additional $4.82M to expand its groundbreaking research on origami antennas through the Transforming Antennas Center.
- The USAID Office of U.S. Foreign Disaster Assistance, awarded a $4.2M, three-year cooperative agreement to the FIU Extreme Events Institute Disaster Risk and Resilience in the Americas program.
- Robert Stempel College of Public Health & Social Work Professor Kim Tieu and his team received a $6.6M NIH grant to study how brain cells die in Parkinson's disease and to develop effective drug therapies for Parkinson's.
- FIU was recognized as the University of Distinction in Environmental Resilience by the Board of Governors. FIU joined the Global Council for Science and the Environment to address environmental sustainability in the world through linking actionable science to national and international policy. FIU was ranked by the Times Higher Education World University Rankings as #1 in Florida, #3 in the US, and #9 in the world impact on life below water FIU was ranked #1 in the US training students to make a difference in the climate crisis by College Magazine.
- FIU hosted The Role Of Water, a focused national dialogue in Washington, D.C. that explored opportunities for federal, state, local, corporate and university collaboration on solutions and technologies relating to water quality, water resilience and long-term restoration efforts. The discussion was the launch of a national initiative led by FIU to increase recognition of the importance of water quality research and multi-sector collaboration.
- FIU's Jack D. Gordon Institute for Public Policy and Applied Research Center was awarded year two of the Intelligence Community Centers for Academic Excellence Critical Technologies and Intelligence Program. The overall grant is $2 million over three years and brought in local educational partners.
- FIU, in partnership with Florida Power & Light, established the Artificial Intelligence-based Renewable Microgrid at our Engineering Center. The one of its kind "living lab" allows for research, design, study, simulation of future renewable power plant, microgrid, resiliency and many aspects of the smart grid.
- The global health pandemic crisis has resulted in over 110,000 restaurants closed permanently, and the Chaplin School is the only hospitality program in the country that stepped up and created the SOBEWFF® and Chaplin School Hospitality Industry Relief Fund, which has distributed over $1.6M in grants to independently owned and operated restaurants and bars in Miami-Dade, Broward, and Palm Beach counties.
- CARTA Miami Beach Urban Studios 3D printed and assembled more than 6,363 face shields for front line workers and minority-owned businesses, healthcare workers and those serving the disabled.
- FIU medical student Jennifer Knight was awarded a National Health Service Corps Scholarship by the United States Department of Health and Human Services. The award is an incentive for students to practice primary health care in underserved urban, rural and frontier communities hardest hit by the doctor shortage.
- FIU was once again named one of the best colleges in the nation to work for by the Great Colleges to Work For program. The university also achieved honor roll designation with recognition in all 12 categories.
- FIU created the Equity Action Initiative to identify and implement initiatives that can begin the lifelong work to impactfully address the issues of inclusion, and equity. A core advisory group was tasked to review and recommend initiatives to enhance equality, dignity, inclusion and belonging in an effort to seek permanent reforms that will make our community and our world a better place.
- As the No. 2 public institution in the nation for Quality Matters certified courses, FIU achieved top placement for many of its online degree programs in the *U.S. News & World Report's* rankings. The rankings highlight FIU's commitment to quality and underscore the university's dedication to excellence in online learning.

STRATEGY (cont.)

Performance-Based Funding Goal Adjustments

FIU made progress towards the Performance Based Metric goals assessed in the 2021 Accountability Plan. In particular, FIU's goals for metric 4 are being increased as a result of success in our ongoing efforts to increase the 4-year graduation rate of our students. Though FIU exceeded many of its goals for the current cycle, there is currently insufficient data to predict if these improvements will be sustainable going forward due to the residual effects of the COVID-19 pandemic. FIU will need to gather more data before confidently setting more ambitious goals.

For the new metrics (9a and 9b), we made the most reliable projections possible based on the data available. FIU is projecting to increase at a steady rate from 55% in 2019-21 to 59% in 2023-25 for the 2-Year Full-Time FCS AA-Transfer Graduation Rate, as this is more in line with the changes that we observed from 2014-16 to 2017-19. Once further institutional initiatives are implemented that focus on improving the 2-Year Full-Time FCS AA-Transfer Graduation Rate and the institution can estimate the impact of those initiatives, FIU will be able to consider more aggressive goals for future years. There exists significantly more data and mechanisms in place for 6-Year Pell FTIC Graduation Rate. Thus, FIU is confident that we can continue to show steady year-over-year increases in this metric.

Finally, FIU projects that its BOT Choice Metric (Number of Post-Doctoral Appointees) will be negatively impacted by COVID-19. Many of our postdoctoral appointees are international and their ability to work on research projects at FIU was hindered by COVID-19 travel restrictions. Monetary shortfalls caused by budget cutbacks, as well as the university's transition to remote learning due to COVID-19 local community conditions and the need to enforce limited occupancy for labs and research spaces, also affected FIU's ability to increase the number post-doctoral appointees. However, we believe this will be short term and as a result we are proposing to decrease the fall 2020 goal from 271 to 235. We will continue to grow our number of post-doctoral appointees during the out years and maintain our previously set goals.

PERFORMANCE-BASED FUNDING METRICS

1. Percent of Bachelor's Graduates Enrolled or Employed ($25,000+)

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
ACTUAL	69.0	67.9	68.2	70.9	72.3	.	.	.	.	.
APPROVED GOALS	69.5	69.5	69.5	70	70	70	70.5	71	73	.
PROPOSED GOALS	.	.	.	.	.	*73*	*73.5*	*74*	*74.5*	*75*

2. Median Wages of Bachelor's Graduates Employed Full-time

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
ACTUAL	38,800	39,300	38,800	39,800	41,000	.	.	.	.	.
APPROVED GOALS	37,000	39,450	39,500	40,000	40,500	41,000	41,000	41,000	41,000	.
PROPOSED GOALS	.	.	.	.	.	*41,000*	*41,000*	*41,000*	*41,000*	*41,000*

3. Average Cost to the Student [Net Tuition & Fees per 120 Credit Hours for Resident Undergraduates]

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	17,300	15,670	11,920	8,670	3,930	.	.	.	.	.
APPROVED GOALS	.	16,780	16,000	11,300	9,000	9,000	9,000	9,000	9,000	.
PROPOSED GOALS	.	.	.	.	.	*8,500*	*8,375*	*8,250*	*8,125*	*8,000*

4. FTIC Four-Year Graduation Rate [Full-time, First Time in College students]

	2012-16	2013-17	2014-28	2015-19	2016-20	2017-21	2018-22	2019-23	2020-24	2021-25
ACTUAL	28.6	33.8	38.9	42.8	49.3	.	.	.	.	.
APPROVED GOALS	28	31	34	41	43	46	50	55	60	.
PROPOSED GOALS	.	.	.	.	.	*55*	*57*	*59*	*61*	*63*

5. Academic Progress Rate [Second Fall Retention Rate with at Least a 2.0 GPA for Full-time FTIC students]

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	80.9	86.7	88.0	88.1	90.4	.	.	.	.	.
APPROVED GOALS	83	82	86.5	89	90	91	92	92	92	.
PROPOSED GOALS	.	.	.	.	.	*91*	*92*	*92*	*92*	*92*

PERFORMANCE-BASED FUNDING METRICS (cont.)

6. Percentage of Bachelor's Degrees Awarded within Programs of Strategic Emphasis

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	47.7	48.9	46.3	45.1	50.5	.	.	.	.	.
APPROVED GOALS	48	48	48	49	50	50	50	50	50	.
PROPOSED GOALS	.	.	.	.	.	*50*	*50*	*50*	*50*	*50*

7. University Access Rate [Percent of Undergraduates with a Pell grant]

	FALL 2015	FALL 2016	FALL 2017	FALL 2018	FALL 2019	FALL 2020	FALL 2021	FALL 2022	FALL 2023	FALL 2024
ACTUAL	51.3	50.4	52.0	50.5	50.9	.	.	.	.	.
APPROVED GOALS	52	50	50	50	50	50	50	50	50	.
PROPOSED GOALS	.	.	.	.	.	*50*	*50*	*50*	*50*	*50*

8. Percentage of Graduate Degrees Awarded within Programs of Strategic Emphasis

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	58.7	59.6	56.2	56.5	60.0	.	.	.	.	.
APPROVED GOALS	56	58	57	56.5	58	59	60	60	60	.
PROPOSED GOALS	.	.	.	.	.	*60*	*60*	*60*	*60*	*60*

9a. BOG Choice: FCS AA Transfer Two-Year Graduation Rate [Full-Time students]

	2014-16	2015-17	2016-18	2017-19	2018-20	2019-21	2020-22	2021-23	2022-24	2023-25
ACTUAL	31.9	33.4	41.5	45.6	54.9	.	.	.	.	.
APPROVED GOALS	.	.	.	.	.	.	.	.	.	.
PROPOSED GOALS	.	.	.	.	.	*55*	*56*	*57*	*58*	*59*

9b. BOG Choice: FTIC Pell Recipient Six-Year Graduation Rate [Full-Time students]

	2010-16	2011-17	2012-18	2013-19	2014-20	2015-21	2016-22	2017-23	2018-24	2019-25
ACTUAL	54.7	55.7	58.2	60.3	63.8	.	.	.	.	.
APPROVED GOALS	.	.	.	.	.	.	.	.	.	.
PROPOSED GOALS	.	.	.	.	.	*65.3*	*66.8*	*68.3*	*69.8*	*71.3*

10. BOT Choice: Number of Post-Doctoral Appointees

	FALL 2015	FALL 2016	FALL 2017	FALL 2018	FALL 2019	FALL 2020	FALL 2021	FALL 2022	FALL 2023	FALL 2024
ACTUAL	75	211	222	242	260	.	.	.	.	.
APPROVED GOALS	74	200	220	235	255	271	276	282	288	.
PROPOSED GOALS	.	.	.	.	.	*235*	*276*	*282*	*288*	*288*

PREEMINENT RESEARCH UNIVERSITY FUNDING METRICS

A. (1). Average GPA

	FALL 2016	FALL 2017	FALL 2018	FALL 2019	FALL 2020	FALL 2021	FALL 2022	FALL 2023	FALL 2024	FALL 2025
ACTUAL	3.9	4.1	4.1	4.2	4.3	.	.	.	.	.
APPROVED GOALS	4.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1	.
PROPOSED GOALS	.	.	.	.	.	*4.1*	*4.1*	*4.1*	*4.1*	*4.1*

A. (2). Average SAT Score

	FALL 2016	FALL 2017	FALL 2018	FALL 2019	FALL 2020*	FALL 2021	FALL 2022	FALL 2023	FALL 2024	FALL 2025
ACTUAL	1129	1196	1258	1292	1270	.	.	.	.	.
APPROVED GOALS	1140	1160	1200	1260	1260	1260	1260	1260	1260	.
PROPOSED GOALS	.	.	.	.	.	*1260*	*1260*	*1260*	*1260*	*1260*

Note*: The 2020 Florida Legislature amended statute (1001.7065, FS) so that beginning in Fall 2020, this metric also includes ACT scores that have been translated into the SAT scale. The historical scores, and goals, were based on a different methodology and SAT scale standard.

B. Public University National Ranking [Top50 rankings based on BOG's official list of publications]

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
ACTUAL	1	2	0	1	1	.	.	.	.	.
APPROVED GOALS	1	1	2	2	2	2	2	3	3	.
PROPOSED GOALS	.	.	.	.	.	*2*	*2*	*3*	*3*	*3*

C. Freshman Retention Rate [Full-time FTIC students]

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	88	89	90	89.5	91	.	.	.	.	.
APPROVED GOALS	.	.	91	92	91	92	93	93	93	.
PROPOSED GOALS	.	.	.	.	.	*92*	*93*	*93*	*93*	*93*

D. Four-year Graduation Rate [Full-time FTIC students]

	2012-16	2013-17	2014-18	2015-19	2016-20	2017-21	2018-22	2019-23	2020-24	2021-25
ACTUAL	29	34	39	43	49	.	.	.	.	.
APPROVED GOALS	28	31	34	41	43	46	50	55	60	.
PROPOSED GOALS	.	.	.	.	.	*55*	*57*	*59*	*61*	*63*

PREEMINENT RESEARCH UNIVERSITY FUNDING METRICS (cont.)

E. National Academy Memberships

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
ACTUAL	4	3	6	7	7	.	.	.	.	.
APPROVED GOALS	1	4	6	7	7	8	8	8	8	.
PROPOSED GOALS	.	.	.	.	.	*8*	*8*	*8*	*8*	*8*

F. Science & Engineering Research Expenditures ($M)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	134	146	166	192	210	.	.	.	.	.
APPROVED GOALS	130	138	186	195	207	219	227	245	265	.
PROPOSED GOALS	.	.	.	.	.	*219*	*227*	*245*	*265*	*287*

G. Non-Medical Science & Engineering Research Expenditures ($M)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	122	131	153	176	196	.	.	.	.	.
APPROVED GOALS	122	129	134	160	178	184	197	210	226	.
PROPOSED GOALS	.	.	.	.	.	*200*	*204*	*212*	*228*	*242*

H. Number of Broad Disciplines Ranked in Top 100 for Research Expenditures

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
ACTUAL	5 of 7	5 of 7	5 of 7	6 of 7	6 of 7	.	.	.	.	.
APPROVED GOALS	5 of 7	5 of 7	5 of 7	5 of 7	6 of 7	6 of 7	7 of 7	7 of 7	7 of 7	.
PROPOSED GOALS	.	.	.	.	.	*6*	*6*	*7*	*7*	*7*

PREEMINENT RESEARCH UNIVERSITY FUNDING METRICS (cont.)

I. Utility Patents Awarded [over three calendar years]

	2014-16	2015-17	2016-18	2017-19	2018-20	2019-21	2020-22	2021-23	2022-24	2023-25
ACTUAL	26	66	126	171	189	.	.	.	.	.
APPROVED GOALS	23	34	115	166	188	182	180	180	180	.
PROPOSED GOALS	.	.	.	.	.	*182*	*180*	*180*	*180*	*180*

J. Doctoral Degrees Awarded Annually

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	327	373	404	433	430	.	.	.	.	.
APPROVED GOALS	326	337	403	438	455	480	506	535	565	.
PROPOSED GOALS	.	.	.	.	.	*480*	*506*	*535*	*565*	*600*

K. Number of Post-Doctoral Appointees

	FALL 2015	FALL 2016	FALL 2017	FALL 2018	FALL 2019	FALL 2020	FALL 2021	FALL 2022	FALL 2023	FALL 2024
ACTUAL	75	211	222	242	260	.	.	.	.	.
APPROVED GOALS	74	200	220	235	255	271	276	282	288	.
PROPOSED GOALS	.	.	.	.	.	*235*	*276*	*282*	*288*	*288*

L. Endowment Size ($M)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	174	196	209	216	219	.	.	.	.	.
APPROVED GOALS	225	250	275	275	210	250	275	300	325	.
PROPOSED GOALS	.	.	.	.	.	*250*	*275*	*300*	*325*	*350*

KEY PERFORMANCE INDICATORS

Teaching & Learning (from the 2025 System Strategic Plan not included in PBF section)

1. Public University National Ranking [Number of Top50 Rankings based on BOG's official list of publications]

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
ACTUAL	1	2	0	1	1	.	.	.	.	.
APPROVED GOALS	1	1	2	2	2	2	2	3	3	.
PROPOSED GOALS	.	.	.	.	.	*2*	*2*	*3*	*3*	*3*

2. Freshmen in Top 10% of High School Class

	FALL 2016	FALL 2017	FALL 2018	FALL 2019	FALL 2020	FALL 2021	FALL 2022	FALL 2023	FALL 2024	FALL 2025
ACTUAL	18	25	25	35	28	.	.	.	.	.
APPROVED GOALS	19	20	27	25	28	31	34	37	40	.
PROPOSED GOALS	.	.	.	.	.	*31*	*34*	*37*	*40*	*40*

3. Time to Degree for FTICs in 120hr programs

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	5.1	5.1	4.9	4.8	4.6	.	.	.	.	.
APPROVED GOALS	4.5	4.5	5.0	4.9	4.8	4.7	4.6	4.5	4.5	.
PROPOSED GOALS	.	.	.	.	.	*4.7*	*4.6*	*4.5*	*4.5*	*4.5*

4. Percent of Baccalaureate Degrees Awarded Without Excess Hours

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	69	72	75	79	82	.	.	.	.	.
APPROVED GOALS	71	70.1	73.4	75.1	78.9	79.2	79.5	79.8	80	.
PROPOSED GOALS	.	.	.	.	.	*79.2*	*79.5*	*79.8*	*80*	*80*

5. Six-Year FTIC Graduation Rates [Full-& Part-time students]

	2010-16	2011-17	2012-18	2013-19	2014-20	2015-21	2016-22	2017-23	2018-24	2019-25
ACTUAL	55	55	57	61	65	.	.	.	.	.
APPROVED GOALS	52	57	58	58	62	64	66	68	70	.
PROPOSED GOALS	.	.	.	.	.	*64*	*66*	*68*	*70*	*72*

KEY PERFORMANCE INDICATORS (cont.)

Teaching & Learning (from the 2025 System Strategic Plan not included in PBF section)

6. FCS AA Transfer Three-Year Graduation Rate [Full-& Part-time students]

	2013-16	2014-17	2015-18	2016-19	2017-20	2018-21	2019-22	2020-23	2021-24	2022-25
ACTUAL	54	55	56	62	65	.	.	.	.	.
APPROVED GOALS	.	.	.	.	62.5	63	63.5	64	64.5	.
PROPOSED GOALS	.	.	.	.	.	*63*	*63.5*	*64*	*64.5*	*66*

7. Pell Recipient Four-Year Graduation Rate [for Full-Time FTIC]

	2012-16	2013-17	2014-18	2015-19	2016-20	2017-21	2018-22	2019-23	2020-24	2021-25
ACTUAL	28	31	36	41	49	.	.	.	.	.
APPROVED GOALS	.	.	.	.	44	47	51	56	61	.
PROPOSED GOALS	.	.	.	.	.	*47*	*51*	*56*	*61*	*64*

8. Bachelor's Degrees Awarded [First Majors Only]

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	9,076	9,519	10,404	10,961	11,828	.	.	.	.	.
APPROVED GOALS	8,600	8,800	9,900	10,700	11,000	11,300	11,600	11,900	12,200	.
PROPOSED GOALS	.	.	.	.	.	*12,000*	*12,200*	*12,400*	*12,600*	*12,800*

9. Graduate Degrees Awarded [First Majors Only]

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	3,605	3,730	3,690	3,788	4,021	.	.	.	.	.
APPROVED GOALS	3,597	3,630	3,745	3,761	3,776	3,791	3,806	3,806	3,806	.
PROPOSED GOALS	.	.	.	.	.	*3,791*	*3,806*	*3,806*	*3,806*	*3,840*

10. Percentage of Bachelor's Degrees Awarded to African-American & Hispanic Students

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	84	84	85	85	85	.	.	.	.	.
APPROVED GOALS	86	86	83	83	85	85	85	85	85	.
PROPOSED GOALS	.	.	.	.	.	*85*	*85*	*85*	*85*	*85*

KEY PERFORMANCE INDICATORS (cont.)

Teaching & Learning (from the 2025 System Strategic Plan not included in PBF section)

11. Percentage of Adult (Aged 25+) Undergraduates Enrolled

	FALL 2016	FALL 2017	FALL 2018	FALL 2019	FALL 2020	FALL 2021	FALL 2022	FALL 2023	FALL 2024	FALL 2025
ACTUAL	25	24	22	22	21	.	.	.	.	.
APPROVED GOALS	24	24	24	23	23	24	24	25	25	.
PROPOSED GOALS	.	.	.	.	.	*24*	*24*	*25*	*25*	*25*

12. Percent of Undergraduate FTE in Online Courses

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	27	30	33	36	39	.	.	.	.	.
APPROVED GOALS	28	31	33	35	37	38	39	40	40	.
PROPOSED GOALS	.	.	.	.	.	*77*	*39*	*40*	*40*	*40*

13. Percent of Bachelor's Degrees in STEM & Health

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	24	25	24	23	28	.	.	.	.	.
APPROVED GOALS	24	24	25	25	25	25	25	25	25	.
PROPOSED GOALS	.	.	.	.	.	*25*	*25*	*25*	*25*	*26*

14. Percent of Graduate Degrees in STEM & Health

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	34	35	35	36.7	40.4	.	.	.	.	.
APPROVED GOALS	33	34	36	35	36	36	37	37	37	.
PROPOSED GOALS	.	.	.	.	.	*38*	*39*	*40*	*41*	*42*

KEY PERFORMANCE INDICATORS (cont.)

Teaching & Learning (from the 2025 System Strategic Plan not included in PBF section)

15. Professional Licensure & Certification Exam First-time Pass Rates

CALENDAR YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
NURSING	87	87	89	93	96	93	93	93	93	93
US Average	88	90	92	91	90	.	.	.	.	.
LAW	87	87	88	94	89	85	85	85	85	85
Florida Average	66	69	66	74	71	.	.	.	.	.
MEDICINE (2YR)	99	99	99	100	100	96	96	96	96	96
US Average	96	96	96	97	97	.	.	.	.	.

CROSS-YEAR	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
MEDICINE (4Y-CK)	94	97	99	99	99	96	96	96	96	96
US Average	96	96	97	98	98	.	.	.	.	.

MULTI-YEAR	2014-16	2015-17	2016-18	2017-19	2018-20	2019-21	2020-22	2021-23	2022-24	2023-25
PHYSICAL THERAPY	89	92	92	90	91	92	92	92	92	92
US Average	92	92	92	92	91	.	.	.	.	.

Exam Scores Relative to Benchmarks

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
ABOVE OR TIED	2	4	4	4	5	4	4	4	4	4
TOTAL	5	5	5	5	5	5	5	5	5	5

KEY PERFORMANCE INDICATORS (cont.)

Scholarship, Research & Innovation Metrics

16. National Academy Memberships

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
ACTUAL	4	3	6	7	7	.	.	.	.	.
APPROVED GOALS	1	4	6	7	7	8	8	8	8	.
PROPOSED GOALS	.	.	.	.	.	*8*	*8*	*8*	*8*	*8*

17. Faculty Awards

	FALL 2014	FALL 2015	FALL 2016	FALL 2017	FALL 2018	FALL 2019	FALL 2020	FALL 2021	FALL 2022	FALL 2023
ACTUAL	5	13	3	2	5	.	.	.	.	.
APPROVED GOALS	8	8	13	5	10	12	14	16	18	.
PROPOSED GOALS	.	.	.	.	.	*12*	*14*	*16*	*18*	*18*

18. Total Research Expenditures ($M)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	171	177	196	226	237	.	.	.	.	.
APPROVED GOALS	166	175	186	205	230	236	252	272	294	.
PROPOSED GOALS	.	.	.	.	.	*248*	*269*	*309*	*350*	*401*

19. Research Expenditures from External Sources ($M)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	83	81	96	108	113	.	.	.	.	.
APPROVED GOALS	.	.	.	.	120	141	151	163	176	.
PROPOSED GOALS	.	.	.	.	.	*127*	*134*	*142*	*150*	*165*

KEY PERFORMANCE INDICATORS (cont.)

Scholarship, Research & Innovation Metrics

20. Utility Patents Awarded

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
ACTUAL	17	43	66	62	61	.	.	.	.	.
APPROVED GOALS	.	17	55	57	60	60	60	60	60	.
PROPOSED GOALS	.	.	.	.	.	*60*	*60*	*60*	*60*	*60*

21. Number of Licenses/Options Executed Annually

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
ACTUAL	2	3	4	6	7	.	.	.	.	.
APPROVED GOALS	.	2	4	6	6	7	12	15	19	.
PROPOSED GOALS	.	.	.	.	.	*7*	*12*	*15*	*19*	*20*

22. Number of Start-up Companies Created

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
ACTUAL	2	1	1	0	1	.	.	.	.	.
APPROVED GOALS	.	1	1	3	4	5	6	6	7	.
PROPOSED GOALS	.	.	.	.	.	*5*	*6*	*6*	*7*	*7*

KEY PERFORMANCE INDICATORS (cont.)

Institution Specific Goals

To further distinguish the university's distinctive mission, the university may choose to provide additional metric goals that are based on the university's own strategic plan.

1. Percent of Student Credit Hours in Online Education

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	27	30	33	36	39	.	.	.	.	.
APPROVED GOALS	.	.	.	.	37	38	39	40	40	.
PROPOSED GOALS	.	.	.	.	.	*77*	*39*	*40*	*40*	*40*

2. Percent of Student Credit Hours in Hybrid Education

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	6	8	10	12	13	.	.	.	.	.
APPROVED GOALS	.	.	.	.	13	14	15	16	16	.
PROPOSED GOALS	.	.	.	.	.	*9*	*15*	*16*	*16*	*16*

3. Internships (Number of academic internships students participated in during the academic year)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
ACTUAL	4,986	6,101	6,826	8,618	8,230	.	.	.	.	.
APPROVED GOALS	.	.	.	.	8,660	8,700	8,740	8,780	8,820	.
PROPOSED GOALS	.	.	.	.	.	*8,700*	*8,740*	*8,780*	*8,820*	*8,820*

4. Percent of First Generation Undergraduate Student Enrollment

	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022	Fall 2023	Fall 2024	Fall 2025
ACTUAL	25%	24%	24%	25%	23%	.	.	.	.	.
APPROVED GOALS	.	.	.	.	25%	25%	25%	25%	25%	.
PROPOSED GOALS	.	.	.	.	.	*24%*	*25%*	*25%*	*25%*	*25%*

ENROLLMENT PLANNING

Fall Headcount Enrollment by Student Level [all degree-seeking students, all campuses]

UNDERGRADUATE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
ACTUAL	41,111	41,852	41,796	41,794	41,160	.	.	.	.	.
APPROVED GOALS	.	41,276	41,957	41,554	41,629	41,466	41,107	41,220	41,220	.
PROPOSED GOALS	.	.	.	.	.	*40,991*	*40,882*	*41,017*	*41,331*	*41,592*

GRADUATE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
ACTUAL	8,770	8,700	8,778	8,999	9,462	.	.	.	.	.
APPROVED GOALS	.	9,087	8,944	9,111	9,077	9,218	9,364	9,364	9,364	.
PROPOSED GOALS	.	.	.	.	.	*9,588*	*9,827*	*10,041*	*10,046*	*10,046*

Fall Headcount Enrollment by Student Type [all degree-seeking students, all campuses]

UNDERGRADUATE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
FTIC: New	4,669	4,386	4,542	4,105	3,914	3,930	4,000	4,000	4,000	4,000
FTIC: Returning	12,752	13,206	13,308	13,385	13,240	13,123	12,864	12,933	13,107	13,145
Transfer: FCS w/ AA	13,914	13,888	13,761	14,366	14,315	14,247	14,095	14,095	14,127	14,300
Transfer: Other	8,888	9,468	9,263	8,917	8,644	8,644	8,876	8,942	9,050	9,100
Post-Baccalaureates	888	904	922	1,021	1,047	1,047	1,047	1,047	1,047	1,047
Subtotal	**41,111**	**41,852**	**41,796**	**41,794**	**41,160**	**40,991**	**40,882**	**41,017**	**41,331**	**41,592**

GRADUATE	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Master's	6,239	6,025	5,906	6,010	6,360	6,435	6,649	6,866	6,871	6,871
Research Doctoral	1,348	1,359	1,452	1,509	1,547	1,589	1,612	1,608	1,608	1,608
Professional Doctoral	1,183	1,316	1,420	1,480	1,555	1,564	1,566	1,567	1,567	1,567
Subtotal	**8,770**	**8,700**	**8,778**	**8,999**	**9,462**	**9,588**	**9,827**	**10,041**	**10,046**	**10,046**
TOTAL	**49,881**	**50,552**	**50,574**	**50,793**	**50,622**	**50,579**	**50,709**	**51,058**	**51,377**	**51,638**

Note: This table reports this number of students enrolled by student type categories. These headcounts only include those seeking a degree – unclassified students (eg, dual enrolled) are not included. The student type for undergraduates is based on the 'Type of Student at Most Recent Admission'. The First Time in College (FTIC) student was admitted in the same fall term or in the preceding summer term – this includes those who were re-admitted as FTICs.

ENROLLMENT PLANNING (cont.)

Percent of Baccalaureate-Seeking Resident Undergraduates Earning 15+ Credits [Fall term]

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
ACTUAL	10	11	12	12	13	.	.	.	.	.
APPROVED GOALS	.	.	.	13	14	16	18	18	18	.
PROPOSED GOALS	.	.	.	.	.	*14*	*15*	*15*	*16*	*17*

Full-Time Equivalent (FTE) Enrollment by Course Level

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
LOWER	13,719	13,995	14,251	14,524	14,264	14,028	13,958	13,825	13,874	13,995
UPPER	22,793	23,259	24,283	25,372	26,559	26,189	26,111	26,203	26,278	26,438
GRAD 1	6,216	6,433	6,294	6,248	6,430	6,804	6,884	7,113	7,345	7,351
GRAD 2	1,913	1,979	2,107	2,150	2,258	2,343	2,381	2,400	2,398	2,398
TOTAL	**44,641**	**45,666**	**46,935**	**48,294**	**49,511**	**49,364**	**49,334**	**49,541**	**49,895**	**50,182**

Note: Full-time Equivalent (FTE) student is a measure of all instructional activity (regardless of fundability) that is based on the number of credit hours for all students during an academic (summer, fall, spring) year. FTE is based on the standard national definition, which divides undergraduate credit hours by 30 and graduate credit hours by 24. Pursuant to section 1013.31, Florida Statutes, Board facilities staff use this data as a key factor in the calculation of facility space needs for university educational plant surveys.

Percent FTE Enrollment by Method of Instruction

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
UNDERGRADUATE										
All Distance (100%)	27	30	33	36	39	*77*	*39*	*40*	*40*	*40*
Primarily Dist. (80-99%)	0	0	0	0	0	0	0	0	0	0
Hybrid (50-79%)	6	8	10	12	13	9	15	16	16	16
Classroom (0-49%)	67	63	57	52	48	14	46	44	44	44
GRADUATE										
All Distance (100%)	21	22	24	26	29	60	30	30	30	30
Primarily Dist. (80-99%)	0	0	0	0	0	0	0	0	0	0
Hybrid (50-79%)	1	7	9	10	10	14	13	13	13	13
Classroom (0-49%)	78	71	67	64	61	26	57	57	57	57

ACADEMIC PROGRAM COORDINATION

New Programs for Consideration by Institution in AY 2021-22

The SUS Council of Academic Vice Presidents Academic Program Coordination Work Group will review these programs as part of their on-going coordination efforts. The programs listed below are based on the 2020 Accountability Plan list for programs under consideration for 2021-22.

PROGRAM TITLES	CIP CODE	AREA OF STRATEGIC EMPHASIS	OTHER INST W/ SAME PROGRAM	OFFERED VIA DISTANCE LEARNING IN SYSTEM	PROJECTED ENROLLMENT IN 5TH YEAR	PROPOSED DATE OF SUBMISSION TO UBOT
UNDERGRADUATE						
Engineering Management	15.1501	STEM	---	50%	300	6/2022
Global Languages Cultures and Literatures	16.0101	Global	FAU, NCF, UF, USF	50%	75	3/2022
Music Education	13.1312	Education	FAMU, FAU, FGCU, FSU, UCF, UF, UNF, USF, UWF	---	65	3/2022
Public Health	51.2201	Health	FSU, FGCU, UF, USF	50-75%	250	12/2021
MASTER'S, SPECIALIST AND OTHER ADVANCED MASTER'S PROGRAMS						
MBA in Cybersecurity Risk Management	43.0303	STEM	USF	50%	50	12/2021
School Psychological Sciences and Methodology	42.2805	Education	----	--	Companion to PhD	12/2021
DOCTORAL PROGRAMS						
School Psychological Sciences and Methodology	42.2805	Education	UF, USF	--	25	12/2021

New Programs for Consideration by Institution in AY 2022-23

These programs will be used in the 2022 Accountability Plan list for programs under consideration for 2022-23.

PROGRAM TITLES	CIP CODE	AREA OF STRATEGIC EMPHASIS	OTHER INST W/ SAME PROGRAM	OFFERED VIA DISTANCE LEARNING IN SYSTEM	PROJECTED ENROLLMENT IN 5TH YEAR	PROPOSED DATE OF SUBMISSION TO UBOT
UNDERGRADUATE						
MASTER'S, SPECIALIST AND OTHER ADVANCED MASTER'S PROGRAMS						
DOCTORAL PROGRAMS						

DEFINITIONS

Performance Based Funding (PBF)

PBF-1. Percent of Bachelor's Graduates Enrolled or Employed (25,000+) One Year After Graduation:
This metric is based on the percentage of a graduating class of bachelor's degree recipients who are enrolled or employed (earning at least 25,000) somewhere in the United States. Students who do not have valid social security numbers and are not found enrolled are excluded. This data now includes: non-Florida data from all states and districts, including the District of Columbia and Puerto Rico; and military enlistment as reported by the institutions. Sources: State University Database System (SUDS), Florida Department of Economic Opportunity (DEO) analysis of State Wage Interchange System (SWIS), and National Student Clearinghouse (NSC).

PBF-2. Median Wages of Bachelor's Graduates Employed Full-Time One Year After Graduation
This metric is based on annualized Unemployment Insurance (UI) wage data from the fourth fiscal quarter after graduation for bachelor's recipients. This data does not include individuals who are self-employed, employed by the military, those without a valid social security number, or making less than minimum wage. This data now includes non-Florida data from all states and districts, including the District of Columbia and Puerto Rico. Sources: State University Database System (SUDS) and Florida Department of Economic Opportunity (DEO) analysis of State Wage Interchange System (SWIS).

PBF-3. Cost to the Student Net Tuition & Fees for Resident Undergraduates per 120 Credit Hours
This metric compares the average sticker price and the average gift aid amount. The sticker price includes: (1) tuition and fees for resident undergraduates; (2) books and supplies (we use a proxy as calculated by the College Board); and (3) the average number of credit hours attempted by students who were admitted as an FTIC student who graduated with a bachelor's degree from a program that requires only 120 credit hours. The gift aid amount includes: (1) financial aid (grants, scholarships, waivers and third-party payments) provided to resident undergraduate students during the most recent academic year; (2) the total number of credit hours for those resident undergraduates. The average gift aid award per credit hour was multiplied by 120 and compared to the sticker price. Sources: State University Database System (SUDS), the Legislature's annual General Appropriations Act, and university required fees as approved by the Florida Board of Governors.

PBF-4. Four Year FTIC Graduation Rate
This metric is based on the percentage of first-time-in-college (FTIC) students who started in the Fall (or summer continuing to Fall) term and were enrolled full-time in their first semester and had graduated from the same institution by the summer term of their fourth year. FTIC includes 'early admit' students who were admitted as a degree-seeking student prior to high school graduation. Students who were enrolled in advanced graduate programs during their 4th year were excluded. Source: State University Database System (SUDS).

PBF-5. Academic Progress Rate [2nd Year Retention with 2.0 GPA or Above]
This metric is based on the percentage of first-time-in-college (FTIC) students who started in the Fall (or summer continuing to Fall) term and were enrolled full-time in their first semester and were still enrolled in the same institution during the next Fall term with a grade point average (GPA) of at least 2.0 at the end of their first year (Fall, Spring, Summer). Source: State University Database System (SUDS).

DEFINITIONS (cont.)

PBF-6. Bachelor's Degrees within Programs of Strategic Emphasis
This metric is based on the number of baccalaureate degrees awarded within the programs designated by the Board of Governors as 'Programs of Strategic Emphasis.' A student who has multiple majors in the subset of targeted Classification of Instruction Program codes will be counted twice (i.e., double-majors are included). Source: State University Database System (SUDS).

PBF-7. University Access Rate Percent of Undergraduates with a Pell Grant
This metric is based the number of undergraduates, enrolled during the fall term, who received a Pell Grant during the fall term. Students who were not eligible for Pell Grants (e.g., unclassified, non-resident aliens, post-baccalaureate students) were excluded from the denominator for this metric. Source: State University Database System (SUDS).

PBF-8a. Graduate Degrees within Programs of Strategic Emphasis
This metric is based on the number of graduate degrees awarded within the programs designated by the Board of Governors as 'Programs of Strategic Emphasis.' A student who has multiple majors in the subset of targeted Classification of Instruction Program codes will be counted twice (i.e., double-majors are included). Source: State University Database System (SUDS).

PBF-8b. Freshmen in Top 10% of High School Class (*Applies only to New College of Florida and Florida Polytechnic University)*
Percent of all degree-seeking, first-time, first-year (freshman) students who had high school class rank within the top 10% of their graduating high school class. Source: As reported by each university on the Common Data Set.

PBF-9a: FCS AA Transfer Two-Year Graduation Rate [Full-time students]: This transfer cohort is defined as undergraduates entering in fall term (or summer continuing to fall) from the Florida College System with an Associate in Arts (AA) degree. The rate is the percentage of the initial cohort that has either graduated from the same institution by the summer term of their second academic year. Full-time students are used in the calculation. Students who were flagged as enrolled in advanced graduate programs that would not earn a bachelor's degree were not excluded. Source: State University Database System (SUDS).

PBF-9b: Pell Recipient Six-Year Graduation Rate [Full-time students]: This metric is based on the percentage of students who started in the Fall (or summer continuing to Fall) term and were enrolled full-time in their first semester and who received a Pell Grant during their first year and who graduated from the same institution by the summer term of their sixth year. Students who were flagged as enrolled in advanced graduate programs that would not earn a bachelor's degree were excluded. Source: State University Database System (SUDS).

PBF-10.FAMU: Number of Bachelor's Degrees Awarded to Transfers with AA Degrees from FCS: This is a count of first-major baccalaureate degrees awarded to students who entered as FCS AA Transfers. First majors include the most common scenario of one student earning one degree in one Classification of Instructional Programs (CIP) code. A student who earns two baccalaureate degrees under two different degree CIPs is counted twice. Source: State University Database System (SUDS).

PBF-10.FAU: Total Research Expenditures: Total expenditures for all research activities, including non-science and engineering activities. Source: As reported by each institution to the National Science Foundation annual survey of Higher Education Research and Development (HERD) based on the NSF rules and definitions.

DEFINITIONS (cont.)

PBF-10.FGCU: Number of Bachelor's Degrees Awarded to Hispanic & African-Americans: Race/Ethnicity data is self-reported by students to the university. Non-Hispanic Black and Hispanic do not include students classified as Non-Resident Alien or students with a missing race code. Degree data is based on first-major counts only; second majors are not included. Source: State University Database System (SUDS).

PBF-10.FIU: Number of Post-Doctoral Appointees: The number of postdoctoral appointees awarded annually. Source: National Science Foundation/National Institutes of Health Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS).

PBF-10.FPOLY: Percent of Bachelor's Graduates with 2 or more Workforce Experiences: The percentage of Bachelor's recipients who completed at least two of the following four workforce experiences: external internships, industry-sponsored capstone projects, undergraduate research (from an externally funded research grant), and certifications. Source: Florida Polytechnic University student survey data reported to the Florida Board of Governors.

PBF-10.FSU: Percent of Bachelor's Graduates who took an Entrepreneurship Class: The percentage of Bachelor's recipients who enrolled in one or more graded Entrepreneurship courses before graduating. Source: Florida State University student survey data reported to the Florida Board of Governors.

PBF-10.NCF: Percent of FTIC Graduates Completing 3 or more High Impact Practices: The percentage of graduating seniors who started as FTIC students and who complete three or more high-impact practices as defined by the National Survey of Student Engagement (NSSE) and the Association of American Colleges & Universities. High-impact practices include: (1) capstone project or thesis, (2) internships, (3) study abroad, (4) writing-intensive courses, (5) living-learning communities, (6) undergraduate research, (7) first-year experience, (8) learning communities, (9) service-learning, and (10) collaborative projects. Multiple activities within the same category only count once (e.g., a student completing three internships has completed one high impact practice). Source: New College of Florida student survey data reported to the Florida Board of Governors.

PBF-10.UCF: Percent of Bachelor's Degrees Awarded to African American and Hispanic Students: Percentage of Degrees is based on the number of baccalaureate degrees awarded to non-Hispanic Black and Hispanic students divided by the total degrees awarded - excluding those awarded to non-resident aliens and unreported. Source: State University Database System (SUDS).

PBF-10.UF: 6-Year Graduation Rates (full-time only): The first-time-in-college (FTIC) cohort is defined as undergraduates entering in fall term (or summer continuing to fall) with fewer than 12 hours earned since high school graduation. The rate is the percentage of the initial cohort that has either graduated from the same institution by the summer term of their sixth academic year. Only full-time students are included in this calculation. FTIC also includes 'early admits' students who were admitted as degree-seeking students prior to high school graduation. Source: State University Database System (SUDS).

PBF-10.UNF: Percent of Undergraduate FTE in Online Courses: Full-time equivalent (FTE) student is a measure of instructional activity that is based on the number of credit hours that students enroll. FTE is based on the Integrated Postsecondary Education Data System (IPEDS) definition, which divides undergraduate credit hours by 30. Online, or distance learning, courses provide at least 80 percent of the direct instruction using some form of technology when the student and instructor are separated by time or space, or both per Section 1009.24(17), Florida Statutes. Source: State University Database System (SUDS).

DEFINITIONS (cont.)

PBF-10.USF: 6-Year Graduation Rates (FT/PT): The first-time-in-college (FTIC) cohort is defined as undergraduates entering in fall term (or summer continuing to fall) with fewer than 12 hours earned since high school graduation. The rate is the percentage of the initial cohort that has either graduated from the same institution by the summer term of their sixth academic year. Both full-time and part-time students are used in the calculation. FTIC includes 'early admits' students who were admitted as a degree-seeking student prior to high school graduation. Source: State University Database System (SUDS).

PBF-10.UWF: Percent of Baccalaureate Graduates Completing 2+ Types of High-Impact Practices: The percentage of graduating seniors completing two or more high-impact practices as defined by the Association of American Colleges & Universities. High-impact practices include: (1) first-year seminar & experiences, (2) common intellectual experience, (3) writing-intensive courses, (4) collaborative assignments & projects, (5) diversity/global learning, (6) ePortolios, (7) service learning, community-based learning, (8) internships, (9) capstone courses & projects. Multiple activities within the same category only count once (e.g., a student completing three internships has completed one high impact practice). Source: University of West Florida student data reported to the Florida Board of Governors.

Preeminence Research University (PRE)

PRE-A: Average GPA & Average SAT: An average weighted grade point average of 4.0 or higher and an average SAT score of 1200 or higher for fall semester incoming freshmen, as reported annually in the admissions data that universities submit to the Board of Governors. This data includes registered FTIC (student type='B', 'E') with an admission action of admitted or provisionally admitted ('A', 'P', 'X'). Source: State University Database System (SUDS).

PRE-B: National University Rankings: A top-50 ranking on at least two well-known and highly respected national public university rankings, reflecting national preeminence, using the most recent rankings. Sources: Princeton Review, Fiske Guide, QS World University Ranking, Times Higher Education World University Ranking, Academic Ranking of World University, US News and World Report National University, US News and World Report National Public University, US News and World Report Liberal Arts Colleges, Forbes, Kiplinger, Washington Monthly Liberal Arts Colleges, Washington Monthly National University, and the Center for Measuring University Performance.

PRE-C: Freshmen Retention Rate: Freshman Retention Rate (full-time, FTIC) cohorts are based on first-year undergraduate students who enter the institution in the Fall term (or Summer term and continue into the Fall term). Percent retained is based on those who are enrolled during the second fall term. Source: State University Database System (SUDS).

PRE-D: 4-year Graduation Rate: This metric is based on the percentage of first-time-in-college (FTIC) students who started in the Fall (or summer continuing to Fall) term and were enrolled full-time in their first semester and had graduated from the same institution by the summer term of their fourth year. FTIC includes 'early admit' students who were admitted as a degree-seeking student prior to high school graduation. Students who were enrolled in advanced graduate programs during their 4th year were excluded. Source: State University Database System (SUDS).

DEFINITIONS (cont.)

PRE-E: National Academy Memberships: National Academy Memberships held by faculty. Source: The Center for Measuring University Performance in the Top American Research Universities (TARU) annual report or the official membership directories maintained by each national academy.

PRE-F: Total Science & Engineering Research Expenditures: Research expenditures within Science & Engineering disciplines. Source: As reported by each institution to the National Science Foundation (NSF) annual survey of Higher Education Research and Development (HERD) based on the NSF rules and definitions.

PRE-G: Science & Engineering Research Expenditures in Non-Health Sciences: Research expenditures within Science & Engineering in non-medical sciences. Source: As reported by each institution to the National Science Foundation annual survey of Higher Education Research and Development (HERD) based on the NSF rules and definitions.

PRE-H: National Ranking in Research Expenditures: The NSF identifies 8 broad disciplines within Science & Engineering: Computer Science, Engineering, Environmental Science, Life Science, Mathematical Sciences, Physical Sciences, Psychology, and Social Sciences. The rankings by discipline are determined by BOG staff using the NSF online database.

PRE-I: Patents Awarded: Total utility patents awarded for the most recent three calendar year period. Based on legislative staff guidance, Board staff query the USPTO database with a query that only counts utility patents: "(AN/"University Name" AND ISD/yyyymmdd->yyyymmdd AND APT/1)". Source: United States Patent and Trademark Office (USPTO).

PRE-J: Doctoral Degrees Awarded Annually: Includes doctoral research degrees and professional doctoral degrees awarded in medical and health care disciplines. Source: State University Database System (SUDS).

PRE-K: Number of Post-Doctoral Appointees: The number of postdoctoral appointees awarded annually. Source: National Science Foundation/National Institutes of Health Survey of Graduate Students and Postdoctorates in Science and Engineering (GSS).

PRE-L: Endowment Size (M): Assets invested by an institution to support its educational mission. Source: National Association of College and University Business Officers (NACUBO) and Commonfund Institute's annual report of Market Value of Endowment Assets.

Key Performance Indicators (KPI)

KPI-1: Public University National Ranking: A top-50 ranking on at least two well-known and highly respected national public university rankings, reflecting national preeminence, using most recent rankings. Sources: Princeton Review, Fiske Guide, QS World University Ranking, Times Higher Education World University Ranking, Academic Ranking of World University, US News and World Report National University, US News and World Report National Public University, US News and World Report Liberal Arts Colleges, Forbes, Kiplinger, Washington Monthly Liberal Arts Colleges, Washington Monthly National University, and Center for Measuring University Performance.

KPI-2: Freshmen in Top 10% of High School Class: Percent of all degree-seeking, first-time, first-year (freshman) students who had high school class rank within the top 10% of their graduating high school class. Source: As reported by each university on the Common Data Set.

DEFINITIONS (cont.)

KPI-3: Time to Degree for FTICs in 120hr programs: This metric is the number of years between the start date (using the student entry date) and the end date (using the last month in the term degree was granted) for a graduating class of first-time, single-major baccalaureates in 120 credit hour programs within a (Summer, Fall, Spring) year. Source: State University Database System (SUDS).

KPI-4: Percent of Bachelor's Degrees Without Excess Hours
This metric is based on the percentage of baccalaureate degrees awarded within 110% of the credit hours required for a degree based on the Board of Governors Academic Program Inventory. This metric excludes the following types of student credits: accelerated mechanisms, remedial coursework, non-native credit hours that are not used toward the degree, non-native credit hours from failed, incomplete, withdrawn, or repeated courses, credit hours from internship programs, credit hours up to 10 foreign language credit hours, and credit hours earned in military science courses that are part of the Reserve Officers' Training Corps (ROTC) program. Starting in 2018-19, the calculation for this metric included a new type of statutory exclusion of up to 12 credit hours for students who graduated in four years or less. This metric does not report the number of students who paid the "Excess Hour Surcharge" (Section 1009.286, Florida Statutes). Source: State University Database System (SUDS).

KPI-5: Six-Year FTIC Graduation Rates [full-& part-time students]: The first-time-in-college (FTIC) cohort is defined as undergraduates entering in fall term (or summer continuing to fall) with fewer than 12 hours earned since high school graduation. The rate is the percentage of the initial cohort that has either graduated from the same institution by the summer term of their sixth academic year. Both full-time and part-time students are used in the calculation. FTIC includes 'early admits' students who were admitted as a degree-seeking student prior to high school graduation. Source: State University Database System (SUDS).

KPI-6: FCS AA Transfer Three-Year Graduation Rate [full-& part-time students]: This transfer cohort is defined as undergraduates entering in fall term (or summer continuing to fall) from the Florida College System with an Associate in Arts (AA) degree. The rate is the percentage of the initial cohort that has either graduated from the same institution by the summer term of their third academic year. Both full-time and part-time students are used in the calculation. Students who were flagged as enrolled in advanced graduate programs that would not earn a bachelor's degree are excluded. Source: State University Database System (SUDS).

KPI-7: Pell Recipient Four-Year Graduation Rate [for full-time FTIC]: This metric is based on the percentage of first-time-in-college (FTIC) students who started in the Fall (or summer continuing to Fall) term and were enrolled full-time in their first semester and who received a Pell Grant during their first year and who graduated from the same institution by the summer term of their fourth year. FTIC includes 'early admit' students who were admitted as a degree-seeking student prior to high school graduation. Students who were flagged as enrolled in advanced graduate programs that would not earn a bachelor's degree were excluded. Source: State University Database System (SUDS).

KPI-8: Bachelor's Degrees Awarded & KPI-9: Graduate Degrees Awarded: This is a count of first-major baccalaureate and graduate degrees awarded. First majors include the most common scenario of one student earning one degree in one Classification of Instructional Programs (CIP) code. In cases where a student earns a baccalaureate degree under two different degree CIPs, a distinction is made between "dual degrees" and "dual majors." Also included in first majors are "dual degrees" which are counted as separate degrees (e.g., counted twice). In these cases, both degree CIPs receive a "degree fraction" of 1.0. The calculation of degree fractions is made according to each institution's criteria. Source: State University Database System (SUDS).

KPI-10: Bachelor's Degrees Awarded to African-American & Hispanic Students: Race/Ethnicity data is self-reported by students to each university. Non-Hispanic Black and Hispanic do not include students classified as Non-Resident Alien or students with a missing race code. Degree data is based on first-major counts only; second majors are excluded. Percentage of degrees is based on the number of baccalaureate degrees awarded to non-Hispanic Black and Hispanic students divided by the total degrees awarded, excluding those awarded to non-resident aliens and unreported. Source: State University Database System (SUDS).

KPI-11: Percentage of Adult (Aged 25+) Undergraduates Enrolled: This metric is based on the age of the student at the time of their Fall term enrollment, not their age upon entry. As a proxy, age is based on birth year not birth date. Unclassified students with a HS diploma (or GED) and above are included in this calculation. Source: State University Database System (SUDS).

KPI-12: Percent of Undergraduate FTE in Online Courses: Full-time equivalent (FTE) student is a measure of instructional activity that is based on the number of credit hours that students enroll. FTE is based on the US definition, which divides undergraduate credit hours by 30. Distance Learning is a course in which at least 80 percent of the direct instruction of the course is delivered using some form of technology when the student and instructor are separated by time or space, or both (per Section 1009.24(17), Florida Statutes). Source: State University Database System (SUDS).

KPI-13: Percent of Bachelor's Degrees in STEM & Health & KPI-14: Percent of Graduate Degrees in STEM & Health: The percentage of degrees that are classified as STEM or Health disciplines by the Board of Governors in the Academic Program Inventory. These counts include second majors. Second majors include all dual/second majors (e.g., degree CIP receive a degree fraction that is less than 1). The calculation of degree fractions is made according to each institution's criteria. The calculation for the number of second majors rounds each degree CIP's fraction of a degree up to 1 and then sums the total. Second majors are typically used when providing degree information by discipline/CIP, to better conveys the number of graduates who have specific skill sets associated with each discipline. Source: State University Database System (SUDS).

KPI-15: Licensure & Certification Exam Pass Rates: The average pass rates as a percentage of all first-time examinees for Nursing, Law, Medicine (3 subtests), Veterinary, Pharmacy, Dental (2 subtests), Physical Therapy, and Occupational Therapy, when applicable. The average pass rate for the nation or state is also provided as a contextual benchmark. The Board's 2025 System Strategic Plan calls for all institutions to be above or tied the exam's respective benchmark. The State benchmark for the Florida Bar Exam excludes non-Florida institutions. The national benchmark for the USMLE exams are based on rates for MD degrees from U.S. institutions. Source: BOG staff analysis of exam pass rates provided by institutions or licensure/certification boards.

KPI-16: National Academy Memberships: National Academy Memberships held by faculty. Source: Center for Measuring University Performance in the Top American Research Universities (TARU) annual report or the official membership directories maintained by each national academy.

DEFINITIONS (cont.)

KPI-17: Faculty Awards: Awards include: American Council of Learned Societies (ACLS) Fellows, Beckman Young Investigators, Burroughs Wellcome Fund Career Awards, Cottrell Scholars, Fulbright American Scholars, Getty Scholars in Residence, Guggenheim Fellows, Howard Hughes Medical Institute Investigators, Lasker Medical Research Awards, MacArthur Foundation Fellows, Andrew W. Mellon Foundation Distinguished Achievement Awards, National Endowment for the Humanities (NEH) Fellows, National Humanities Center Fellows, National Institutes of Health (NIH) MERIT, National Medal of Science and National Medal of Technology, NSF CAREER awards (excluding those who are also PECASE winners), Newberry Library Long-term Fellows, Pew Scholars in Biomedicine, Presidential Early Career Awards for Scientists and Engineers (PECASE), Robert Wood Johnson Policy Fellows, Searle Scholars, Sloan Research Fellows, and Woodrow Wilson Fellows. Source: Center for Measuring University Performance in the Top American Research Universities (TARU) annual report.

KPI-18: Total Research Expenditures: Total expenditures (in millions of dollars) for all research activities (including non-science and engineering activities). Source: As reported by each institution to the National Science Foundation annual survey of Higher Education Research and Development (HERD) based on the NSF rules and definitions.

KPI-19: Research Expenditures Funded from External Sources: This metric reports the amount of research expenditures that was funded from federal, private industry, and other (non-state and non-institutional) sources. Source: As reported by each institution to the National Science Foundation annual survey of Higher Education Research and Development (HERD) based on the NSF rules and definitions.

KPI-20: Utility Patents Awarded: The number of utility patents in a calendar year, excluding design, plant or similar patents. Source: United States Patent and Trademark Office (USPTO).

KPI-21: Number of Licenses/Options Executed Annually: Licenses/options executed in the fiscal year for all technologies Source: As reported by universities on the Association of University Technology Managers Annual (AUTM) annual Licensing Survey.

KPI-22: Number of Start-up Companies Created: The number of start-up companies that were dependent upon the licensing of University technology for initiation. Source: Association of University Technology Managers Annual (AUTM) annual Licensing Survey.

Enrollment Planning (ENRL)

ENRL-1: Fall Headcount Enrollment by Student Level and Student Type: This table reports the number of students enrolled by student type categories. These headcounts only include those students who were seeking a degree – unclassified students (e.g., dual enrolled) are not included. The student type for undergraduates is based on the 'Type of Student at Most Recent Admission'. The first-time-in-college (FTIC) student was admitted in the same fall term or in the preceding summer term, including those who were re-admitted as FTICs. Source: State University Database System (SUDS).

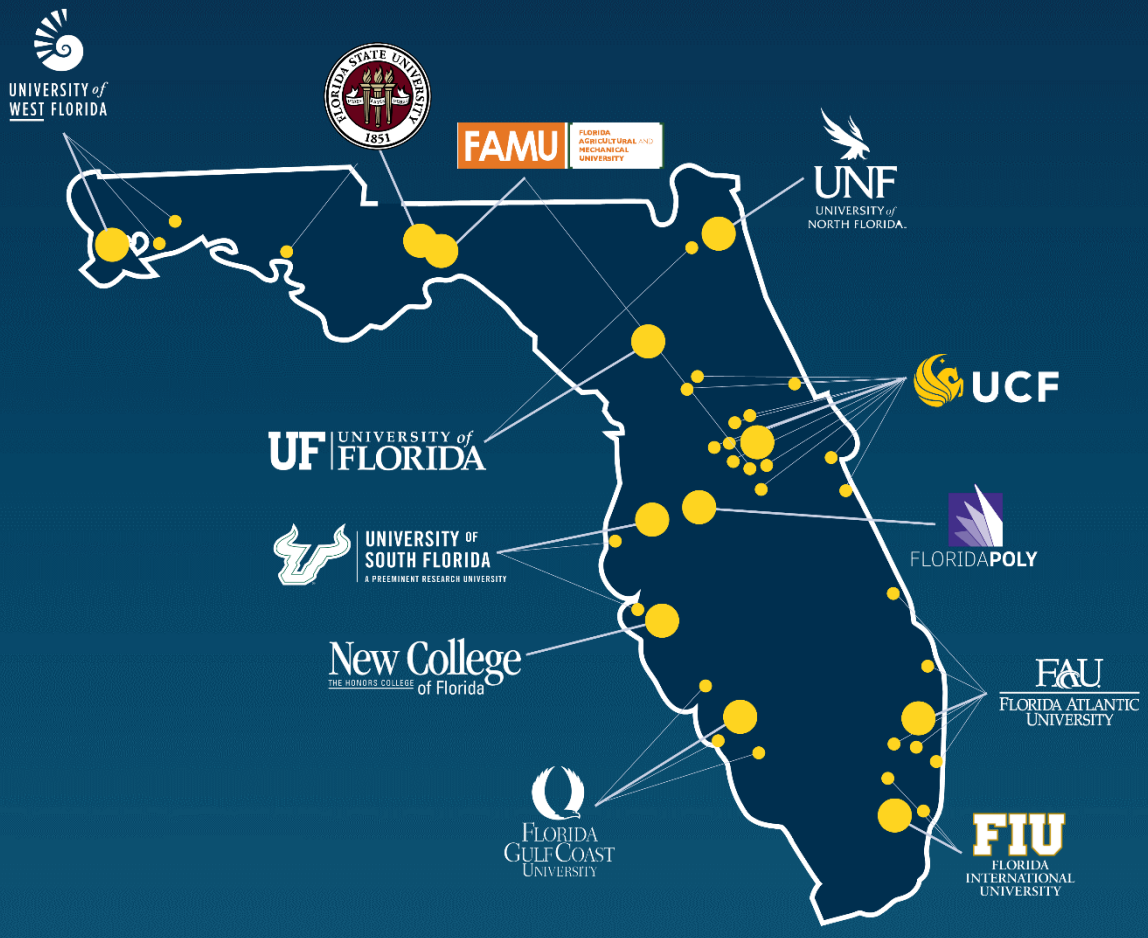
ENRL-2: Percent of Resident Baccalaureate-Seeking Resident Undergraduates Earning 15+ Credits: This table reports the percent of baccalaureate-seeking resident undergraduates who earned fifteen or more credit hours during the fall term as reported on the Term Credit Hours Earned element (#01089). This includes the pass/fail courses in which the student earned a passing grade and excludes audited courses. Source: State University Database System (SUDS).

DEFINITIONS (cont.)

ENRL-3 Full-Time Equivalent Enrollment by Course Level: This table reports full-time Equivalent (FTE) enrollment, which is a measure of all instructional activity, regardless of fundability, that is based on the number of credit hours that students enroll. This FTE calculation is based on the Integrated Postsecondary Education Data System (IPEDS) definition, which divides undergraduate credit hours by 30 and graduate credit hours by 24. Pursuant to Section 1013.31, Florida Statutes, Board facilities staff use this data as a key factor in the calculation of facility space needs for institution educational plant surveys. Source: State University Database System (SUDS).

ENRL-4: Percent FTE Enrollment by Method of Instruction: This table reports the percentages of FTE enrollment that is classified as Distance Learning for all students at all campuses regardless of funding source. Distance Learning is a course in which at least 80 percent of the direct instruction of the course is delivered using some form of technology when the student and instructor are separated by time or space, or both per Section 1009.24(17), Florida Statutes). Source: State University Database System (SUDS).

STATE UNIVERSITY SYSTEM OF FLORIDA



ACADEMIC AFFAIRS REGULAR REPORTS

I. **Academic and Career Success**
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I. Academic and Career Success

1. Redirection Specialist

In November 2020, Academic and Career Success hired our first Redirection Specialist (RS) to assist with the University's progression and graduation. The University's Redirection Specialist works with students across the University who are struggling to succeed in their chosen major. He helps these students to explore alternatives, find a path towards timely graduation, and successfully process the change of major request. He also carries an advising caseload of approximately 71 students pursuing the Bachelor of Arts in Disaster Management.

In addition, our Redirection Specialist has created training materials to assist advisors across campus with the redirection process. The training includes a presentation highlighting the most common reasons why a student may need to be redirected a well as strategies to assist in the redirection process. He has also created a virtual redirection binder that will be accessible to the advising community. The binder includes the change of major guidelines for all undergraduate majors, information on careers for different fields of study, and contact information for each of the colleges so that advisors can facilitate the connection between student and advisor when a student is seeking to change majors.

The Redirection Specialist and the whole Student Success Operations and Strategy Team, have worked with the colleges to identify students who would benefit from redirection based on missed success markers that delay progress towards degree (e.g., Engineering students who have had two unsuccessful attempts at Calculus I). In collaboration with advisors in the colleges, the RS will communicate with students and meet to discuss alternative paths with the goal of finding a degree pathway that better suits the students' skills and interests and will allow them to graduate in a timely fashion (i.e., 4 years for FTIC and 2 years for AA transfers).

2. Panther Degree Pathway - EduNav

The Panther Degree Pathway (PDP) is a guided degree plan to help students stay on track and graduate on time. Powered by EduNav's SmartPlan, PDP uses a sophisticated algorithm to generate students' personalized educational plan. PDP is a tool which students can and should use with their Academic Advisor. Academic Advisors can help in further customizing and adjusting the PDP plan at any time. The platform notifies students if any customizations or adjustments of course selections will affect the time to degree at FIU. In addition, PDP facilitates class selection and registration for students. Students and Advisors log in to the PDP via their MyFIU account.

In the Fall 2020 semester, August 2020 through December 2020 there were 9,200 PDP Log-Ins. In the Spring 2021 semester, January 2021 through April 2021 there were 18,529 PDP Log-Ins – a 101.402% increase.

Starting with the registration cycle for Summer 2021, most undergraduate majors have been configured in the Panther Degree Pathways system. In the upcoming semesters, minors and second major evaluations will be added to support students who have declared minors and second majors.

II. ENGAGEMENT

1. Community Outreach and Events: CEO for a Day, FIU Cafecito Chats & LSSF Undergraduate STEM Symposium

The Office of Engagement began multiple virtual community engagement activities immediately following community quarantine due to the COVID-19 pandemic. Between January and April 2021, the office held events engaging over 2,500 community members.

FIU Cafecito Chats, an engagement talk show, features local and national community leaders, FIU faculty, staff and students and other local celebrities as featured guests. As of April 2021, the show had aired 154 episodes and reached over 52,000 people with speakers including FIU students, faculty, and staff as well as community leaders, authors, and elected officials. Cafecito Chat episodes in 2021 have featured FIU Alumni during Panther Alumni Week; FIU Theatre discussion on Women, Leadership & Healing Division with a special performance of Lysistrata; a special edition co-hosted with AT&T on Black History Month with over 700 participants; Uber's Global Head of DEI Bo Young Lee, and a conversation with Miami-Dade's Chief Bay Officer, Irela Bague.

The eighth annual Life Sciences South Florida Undergraduate STEM Symposium was held on April 10th, 2021. There were over 130 guests, 70 STEM student presentations representing 8 educational institutions, and 54 judges evaluating student presentations. Student presentations followed the University of Queensland standard for 3MT (3-minute thesis). Student presenters at the Symposium are top STEM majors from across 8 South Florida colleges and universities. Six prizes were awarded to the highest rated presentations and a special keynote presentation featured Live Like Bella's CEO Raymond Rodriguez-Torres and cancer researcher and FIU faculty member, Dr. Diana Azzam.

2. Community Coalitions: South Florida Black Prosperity Alliance

A direct-action recommendation coming from the Equity Action Advisory Group is FIU's capacity-building support of the South Florida Black Prosperity Alliance (SFBPA), which was launched by the Miami-Dade Chamber in June of 2020. The SFBPA is comprised of business, civil rights and economic leaders across the Tri-County, with a key focus of aligning advocacy efforts in response to the COVID-19 disproportionate impact on the South Florida Black community, and historic economic access and mobility gaps. The FIU Engagement Strategy and Outreach Manager is currently working in partnership with Alliance leadership and members to create an ongoing strategy and implementation plan to maximize the impact and reach of the SFBPA and its long-term efforts. The SFBPA press conferences as the official public launch of the initiative across the tri-county area on February 11, 2021 and featured FIU's Senior Vice President of Human Resources and Vice Provost of Diversity, Equity, and Inclusion, El pagnier Kay Hudson.

3. Future of Work: Urban Potential Laboratories (UP Labs)

UP Labs started its fifth cohort of non-traditional learners on January 25, 2021. Ninety-six (96) applicants applied to 30 slots for the free workforce program focused on up-skilling underemployed residents and setting them up with opportunities for careers in healthcare. Two significant developments took place in January and February as our students will sit for CNA (Certified Nurse Assistant) State Board Exams after completing the UP Labs program. Another development was the career pathway created with Baptist Health South Florida within their Pharmacy Technician Program. Selected students will be able to continue their education and become Pharmacy Technicians through Baptist Health. UP Labs was also able to partner with the City of North Miami to offer two modules as part of the deployment of their CARES Act funding.

III. ENROLLMENT MANAGEMENT AND SERVICES

1. University Enrollment

During the spring Tribune Virtual College Fair, FIU professional staff served as featured experts in the areas of financial aid, roadblocks encountered by first generation college students, and selecting majors. We served 15,000 students via FIU's virtual booth; we engaged in video presentations and one-on-one virtual appointments.

During the spring term, we also met with 515 new students and 700 family members via a socially distanced, on-campus Admitted Students Day. Through this event, we focused on developing institutional affinity within our new FTIC and undergraduate transferring students. The admitted student day events included a car caravan, opportunities to meet with President Rosenberg, and many pictures taken with Roary. After parking their cars, students and families participated in a campus tour/scavenger hunt guided by a GPS enabled app. We hosted a similar event at BBC on April 17th and a virtual Admitted Student day on April 24th.

Table 1
Spring Point in Time Headcount comparison (End of Term PIT)

Student Classification	Spring 2020	Spring 2021	Diff.	% Diff.
Degree Seeking Headcount				
Undergraduate	40,207	39,420	-787	-1.96%
Graduate	8,744	9,315	571	6.53%
Degree Seeking Totals	*48,951*	*48,735*	*-216*	*-0.44%*
Non-Degree Seeking Headcount				
Dual Enrollment	6,133	5,556	-577	-9.41%
Non-Degree Non-DE	1,496	1,658	162	10.83%
Non-Degree Seeking Totals	*7,629*	*7,214*	*-415*	*-5.44%*
Overall Headcount	**56,580**	**55,949**	**-631**	**-1.12%**

2. International Admissions

We are ahead in applied, admitted, and matriculated international students for AY 2021-2022 (see table 2). For the upcoming year, we received more applications from prospective FTIC and Graduate students. Although we received slighter fewer undergraduate transfer applications (when compared to last year), we are ahead in admitted transferring international students by more than 20%. We anticipate that incoming students will encounter substantial roadblocks as they attempt to obtain visas; therefore, we will continue to support international students via online coursework while deferring I-20 entry terms.

Table 2
International Applications by Status and Academic Year (*as of 04/23/2021*)

Application Status	2020-2021	2021-2022	Diff.	% Diff.
		FTIC		
Applied	1,294	1,481	187	14.45%
Admitted	363	434	71	19.56%
Matriculated	83	110	27	32.53%
		Undergraduate Transfer		
Applied	1,170	1,073	-97	-8.29%
Admitted	319	391	72	22.57%
Matriculated	161	209	48	29.81%
		Graduate		
Applied	1,188	1,828	640	53.87%
Active Referred	437	420	-17	-3.89%
Admitted/Matriculated	242	663	421	173.97%

3. Transfer and Transition Services

Connect4Success
On April 1st, our team hosted the annual BC-FIU day as a virtual event. During the event, faculty, administrators, and advisors from BC2FIU Helios Scholarship programs discussed strategies to recruit and engage Associate in Science students to the four established pathways more effectively. Through this event, we developed several collaborative strategies that we will implement in the upcoming recruitment cycle.

In collaboration with Miami Dade College and FIU's College of Business, on March 31st the C4S team facilitated a virtual information session for FIU-bound students. We provided 263 MDC students with information concerning application deadlines, program prerequisites, degree requirements, and alternative pathways. During the second half of the event, a panel of FIU students who transferred from MDC shared insights from the lived experiences during their transitions to our College of Business. Our level of participation constituted a record for the count of student participants.

Note: The number of students who joined Connect4Success in the 2020-21 academic year reached 1,923, surpassing the 2019-20 cohort of 1,851.

Brainware for Transcripts (BFT) Strategic Initiative

In March 2021, we launched the Brainware Optical Character Recognition software. We are finishing the process of modifying business processes and position expectations to optimize the use of this new technology. Over the next year, we will be evaluating the implementation phase of this project via the number of days required to process incoming transfer credits (as opposed to weeks) and the accuracy of our credit equivalencies.

4. Financial Aid

Disbursement
As of April 21st, we delivered $221 million in aid for the Spring 2021 semester. At this time last year, we awarded $208.8 million. The large increase for point in time reflects our awarding of the CRRSAA (HEERF II) funds to students. Details will follow in the Scholarship Office section.

Draft 3 Year Cohort Default Rate
Our Draft Cohort Default rate for 2018 is 4.5%. The final rate will be published in September 2021 and is usually similar to the draft rate. Our continued downward trend is reflective of our continued efforts in financial education and direct outreach to FIU students who borrow.

Name: FLORIDA INTERNATIONAL UNIVERSITY
Code: 00963500 **Type:** School
Status: OPEN
Address: MODESTO A. MAIDIQUE CAMPUS 11200 SW 8 STRE
MIAMI, FL 331990001

Cohort Default Rate History List

Fiscal Year	Rate Type	Numerator	Denominator	Rate	Process Date
2018	3YR DRAFT	475	10393	4.5	01/30/2021
2017	3YR OFFICIAL	554	10575	5.2	08/08/2020
	3YR DRAFT	553	10575	5.2	01/25/2020
2016	3YR OFFICIAL	388	10319	3.7	08/03/2019
	3YR DRAFT	391	10320	3.7	01/26/2019
2015	3YR OFFICIAL	542	10065	5.3	08/18/2018
	3YR DRAFT	544	10069	5.4	01/27/2018

5. Scholarships

Merit Scholarships
For the 2021-2022 academic year, we are focusing on improving the quality and diversity of our merit aid program while mitigating the impact of COVID-19 on our students. For the Fall 2021 class, we have committed 5 national merit finalists (this is one more than we had at this time for Fall 2020). We updated our College Board Recognition Scholarships regimen and offered our first set of College Board Scholar Scholarships to 29 students; scholarship recipients include 22 College Board Hispanic Scholars, 6 College Board African American Scholars, and 1 College Board Rural Scholar. Through our top 10% pathway to scholarship consideration, we have increased the diversity of our premier merit scholarship offers; we increased the number of black students that we awarded our largest awards from 18 (in 2020) to 25 in 2021. We are working to yield these students and continue our work to improve access.

Beyond Financial Aid
In partnership with Academic and Student Affairs, we will be leading the University through the Beyond Financial Aid Framework. As created by the Lumina Foundation, Beyond Financial Aid is a compendium of best practices for assisting low-income students. This toolkit includes five concrete strategies we can use determine how, and how well, we are serving low-income students. In this framework, we will devise and implement plans to improve, expand and better coordinate services for greater impact.

Holistic student support for students facing financial distress has become increasingly important over the past year and a half. To provide student-centered and intentional experiences, we rely on a holist, cross-institutional strategy. Through this strategy, we leverage existing resources to proactively contact students who may be encountering barriers to enrollment and provide “just in time” support for students in the midst of financial difficulty. This strategy capitalizes on the Enrollment Management’s capacity to eliminate process-based barriers and Student Affairs focus on providing high-touch support. To date, we provided $900,000 to students who encountered non-COVID, financial challenges.

Covid-19 Impact
The Higher Education Emergency Relief Funds (HEERF) are a vital part of our student support effort post-pandemic. Although regulations pertaining to use of HEERF funds prohibit us from using funds to incentivize enrollment directly, we employ communication and follow up strategies to make sure eligible students receive the funds needed to enroll.

Since the pandemic began, we have awarded $41 million in student relief to over 26,000 students. HEERF I (CARES) recipient data illustrates that these funds have been essential in supporting students through the pandemic. Some highlights:

- .53% (n=51) of CARES Act recipients withdrew completely
- 29%(n=2,842) of CARES Act recipients completed programs by Fall 2020
- 75% (n=7,301) of students were still enrolled* as of Fall 2020.

**includes undergrads who graduated spring/summer and started grad school or other courses in Fall 2020.*

We are analyzing this data further, along with that from HEERF 2 recipients, to see what we can learn to maximize impact of HEERF 3 and to determine impacts on cohort progression.

As we await guidance on HEERF 3, we will be working with External Relations and the HEERF Committee to update marketing materials and messaging to students to raise awareness of eligibility and how funds can be applied.

6. University Registrar

Added features to the Employee Activity Guide
On February 2nd, the University Registrar's office initiated new automation to ensure that all employees who have access to our student information system engage in annual FERPA training and sign FERPA-based terms of system usage. Specifically, our new system ensures that employees review and agree to:

a. The Family Education Rights and Privacy ACT (FERPA) agreement
b. FIU's Code of Computing Practice
c. The Gramm-Leach-Bliley ACT (GLBA)

Enhanced privacy for students and their records

On February 19th, the University changed several aspects of the official transcript. To enhance services and privacy for students, we partially masked SSN, partially masked DOB, and removed the gender reference.

Additionally, on February 2nd, we enhanced the student port by introducing a simplified method for reporting SSN and masking SSN as the default setting. This enhancement includes the following:

a. Removal of SSN from personal details tab (student profile tile)
b. New SSN-specific tab which includes appropriate institutional use of SSN
c. SSN data entry screen for students (precludes the need to contact OneStop to add SSN to student information)
d. Data quality and validation measures

Prior Learning Assessment (PLA) Credits for Undergraduate graduation
We actively worked with the Nicole Wertheim College of Nursing & Health Sciences to create a new and streamlined process to post Prior Learning Assessment (PLA) credits to student transcripts; this will facilitate a more efficient graduation process for Undergraduate Nursing students. Licensed RN's with an associate degree in nursing (ADN) from an ACEN accredited institution, who meet certain criteria can earn up to 27 PLA credits towards the completion of the BSN at FIU. In Fall of 2020, we graduated 11 students with their BSN using this accelerated mechanism.

We launched a similar PLA process for the BA in Disaster Management Program. In collaboration with the department, we created a variable credit course, FES 3951, to provide up to 30 PLA credits for Undergraduate Disaster Management students.

7. OneStop
One Stop has reopened the front counter as a point of service during repopulation of the campus. During the Spring 2021 peak time, students slowly returned to receive service in person at the front counter. As indicated in the chart below, during the month of January 2021 343 students visited the One Stop in person. As we approach the beginning of the Summer semester, we continue to schedule staff to meet the needs of our students, the majority of whom continue to access our services via phone, email, and live chat.

One Stop student in-person visits

Month	Avg. daily	Avg. weekly	Highest daily	Highest weekly	Total monthly
October **2020**	4.7	22	13	37	109
November **2020**	6.4	34	15	39	134
December **2020**	7.2	31	13	45	123
Jan **2021**	17.2	86	39	131	343

*MMC & BBC figures combined due to low volume at BBC resulting in negligible values for averages

Students contact One Stop via phone, email, or chat 9AM-8PM, Monday through Thursday, and 9AM-6PM on Fridays. As a result of our extended service hours, students are able to speak to a representative. There has been a significant reduction in call volume over the past three years, due to increased efficiency in the number of forms that can now be processed electronically, without the need for students to bring forms to our office in person.

8. Customer Relationship Management (CRM) Update
On April 14th, we launched the May 1st FTIC yield campaign. Our communication efforts yielded an open rate of 48% and a click through rate of 5%; these rates are well above industry standards. We also sent a communication to Title I students that have not submitted a tuition deposit with instructions on next steps such as requesting for a deposit waiver, completing FAFSA, and encouraging them to join a Campus Tour.

On April 13, 2021, we kicked-off the 2021 Search Piece campaign to High Ability 11th grade students to recruit for class of 2022. As of April 21, 2021, 4,100 students opened the communication and will receive a personalized postcard from the University Admissions office.

Lastly, we added a Request for More Information form to the Self-Guided tour that admissions will be using for students who decide to come on campus and do a tour on their own. This Self-Guided tour will collect information so that recruiters can reach out and get to know potential FIU applicants.

IV. INFORMATION TECHNOLOGY REPORT

1. Q-Factor High-Speed Data Transfer Project

The Division of IT's Center for Internet Augmented Research and Assessment (CIARA) and Energy Science Network (ESnet) have been awarded a two-year National Science Foundation (NSF) Office of Advanced Cyberinfrastructure research grant for Q-Factor. Q-Factor is a framework that enables high-speed data transfer optimization. This concept, developed by CIARA and ESnet, will help automate the data transfer speed between computers and end points. Q-Factor will enhance inter-campus data transfers performed over regional, national, and international networks to support the growing trend towards data-intensive research. CIARA and ESnet will research, prototype, and deploy the new Q-Factor technology.

2. Enterprise-Wide Cloud Strategy Update

The Division of IT continues to leverage cloud technology to uplift core enterprise applications such as Panthersoft Campus Solutions, Human Resources, and Financials to enhance the ability to accelerate production with autonomous technologies. Over the past eight months, the division has been working to migrate all of FIU's PeopleSoft applications to the Oracle Cloud Infrastructure (OCI). This strategic move to the cloud will allow for greater scalability to meet the University's growing needs, higher service availability, and will protect FIU services from natural disasters. Panthersoft is only one of many transitions to a cloud-based infrastructure that will take place over the next year. The Panthersoft applications are tentatively set to be migrated during the Fall of 2021. To date, other applications such as email and authentication have been transitioned to the cloud.

3. Enterprise-Wide CRM

The Division of IT is driving efforts to standardize on one customer relationship management (CRM) tool to be used university-wide. This is a multi-phased approach that will evaluate academic and business units individually, starting with the College of Business. The division is providing project management services to assist the College of Business and the vendor with the implementation, consultations on hiring project resources with the appropriate skillsets, and provide data management and governance best practices to support this implementation. This strategy is intended to centralize university data and track student progress from their initial interactions at FIU through graduation.

V. RESEARCH AND ECONOMIC DEVELOPMENT / UNIVERSITY GRADUATE SCHOOL

1. External Grant Awards' Performance

During the first nine months of fiscal year (FY) 2020-2021, awards received increased by 63%, from $120.8M to $196.3M, when compared with the same period last year. Awards received by Centers and Institutes increased by 10%, from $57.9M to $63.7M. Notable initial awards include $3.39M from the National Institute on Aging for a project titled Gene Deregulation in Cortical Dementia. Among colleges, the Stempel College of Public Health & Social Work had the largest increase (127%), followed by the Steven J. Green School of International and Public Affairs (97%). The Herbert Wertheim College of Medicine had a decline of 22%, and the College of Engineering & Computing had a decline of 15%. During the past 9 months, the overall value of proposals submitted increased

by 16%, from $557M to $646M; the number of proposals submitted increased by 14%, from 828 to 944. The distribution among funding sources (federal, private, state and local) during this period was 85%, 5% and 10%, respectively.

2. Innovation, Partnerships and Economic Development

The research commercialization staff had a net increase of three teams during the third quarter. One team submitted an NSF PFI grant proposal and a national I-Corps application. Two teams completed a regional NSF I-Corps to qualify for national I-Corps. StartUP FIU staff developed and presented three virtual workshops on commercializing research in which 78 faculty participated. In the Venture Bites college student entrepreneurship competition hosted by Miami Angels and the City of Miami, nine (9) students from StartUP FIU moved to the second round of competition (out of 17 total students who reached this stage). These students all had been through at least one of StartUP FIU's sprint-style boot camps prior to the competition and went through weekly sessions with StartUP FIU staff to prepare for each round of the competition. In the end, out of five finalists, two of them were StartUP FIU student companies, and College Thrifts created by FIU's Patricia Garcia won! The other FIU student company, Amber Nolan's Planet Paws, came in fourth place. College Thrifts received $5,000 and Planet Paws received $1,500. Both students will receive free mentorship from Miami-based entrepreneurship organizations. It is noteworthy that FIU was only university with female-led founders.

In addition, three teams continued their weekly preparation at StartUP FIU for the 2021 Hult Prize regional competitions in April. This quarter, 20 students applied and 18 were accepted to Beta Studio Cohort 2 prototype incubator. StartUP FIU initiated "Building a Technical Career" with Google and Dr. Jennifer Gebelein from CASE for 20 students to prepare them to secure internships at Google. StartUP FIU Food secured a $400,000 grant from the Kellogg Foundation in December of 2020. This funding will allow the development of an online platform that supports and accelerates minority and woman-owned food and beverage businesses with aspirations to expand online. During the third quarter, the Technology Transfer group received 14 disclosures, filed 23 patent applications, received 30 patents and entered into 4 license agreements. Mr. Hernández presented via zoom to a group of faculty and postdocs on intellectual property—things to know and pitfalls.

3. University Graduate School (UGS)

As of March 30, UGS received 2,624 applications for doctoral programs, a 37.6% increase when compared to last year. Both domestic and international applications increased (20% and 70%, respectively). Thus far, we have admitted 425 doctoral students, an 89.7% increase compared to last year. The application deadline for masters' program is June 1, and UGS has so far received 5,482 applications, a 37.5% increase compared to last year. We have admitted 1694 masters' students, a 47.9% increase compared to last year. This spring semester UGS has been developing a new series of interactive workshops that will be part of the soon-to-be-launched Writing Lab under UGS' Office of Training and Fellowships (OTF). UGS facilitated various workshops that were very well attended and for which we received overwhelmingly positive feedback. Five (5) current FIU doctoral students have been awarded the prestigious National Science Foundation Graduate Research Fellowship (NSF GRF).The fellowship provides full financial support for 3 years and important networking opportunities. This is the highest GRF award number among current FIU doctoral students in the last seven years.

VI. ACADEMIC & STUDENT AFFAIRS REPORT

1. LGBTQA Initiatives Rebranded to the Pride Center

On April 2, 2021, LGBTQA Initiatives in the Office of Social Justice and Inclusion (OSJI) was rebranded to the Pride Center at FIU. The Pride Center name change reflects the unit's mission and programs that seek to uplift and include the voices of all students with marginalized gender identities, sexual identities, and romantic identities and their allies with a special emphasis on centering students whose identities intersect with additional experiences of marginalization (e.g., due to racism, colorism, ableism, and more). "Pride" echoes the terminology that students connected to the office resonate with and desire to represent them. The Pride Center is committed to FIU's values and diversity, equity, and inclusion efforts. Overall, through the Pride Center's focus on growth, inclusion, kindness, openness, affirmation, celebration, and empowerment, this name change better represents the framing of the office's efforts and our FIU. This catalyst for change is a stellar example that the Division of Academic and Student Affairs is working to enhance services and resources to improve inclusion, student success, and university affinity.

2. WRC

The Wellness and Recreation Center at MMC and BBC continues to play a significant role in supporting the health and well-being of our panther community. Apart from maintaining clean and continuously sanitized facilities, the team also offers diverse programs such as intramural sports leagues, sport club practices, adventure recreation programs like archery, kayaking, etc. The utilization of facilities and programs during the Spring 2021 semester was 50,131, which is 140% greater than utilization during the Fall 2020 semester. All programs and services are offered in an adjusted manner, with the safety of all participants as our top priority.

3. FIU Online

Ally: In FIU's continued commitment to providing students an inclusive learning environment, as of Friday, April 23rd FIU has implemented a new technology called Ally. Ally is an accessibility tool that is integrated into Canvas courses and automatically alerts faculty to issues of accessibility and provides detailed guidance to instructors on how to improve student accessibility in course design, available content, and course materials. Ally includes features that provide alternative formats to course content that not only help ensure students with disabilities can access their materials, but also improve the learning experience for all students. Furthermore, Ally will score the accessibility of Canvas course content, and provide guidance and tips to instructors in making lasting accessibility improvements to our academic content. On-going training is taking place for instructors on best practices to create accessible course content, how to use the Ally accessibility technology in Canvas, and the support our instructional design professionals will provide to improve accessibility in their courses.

FIU Online's 2-Day Accessibility Challenge and Training: Each year, the global accessibility community unites on the third Thursday of May for Global Accessibility Awareness Day (GAAD) to highlight the need for more inclusive digital content. FIU Online is participating in a 24-hour, *Fix Your Content Day* competition committed to creating accessible and more inclusive digital learning content across classrooms and institutions globally. The challenge aims to mobilize instructors and staff to fix as many digital course files as possible through Ally for the LMS. To seize the opportunity, FIU Online is hosting a two-day event, May 20-21, 2021, focusing on accessibility. The first day will be the Fix Your Content Day competition with all team members and faculty focusing on fixing as much course content as possible within 24 hours. The second day will feature a webinar in collaboration with FIU's Disability Resource Center team to train FIU Online team members on accessibility policies, student

impact, universal design thinking, and tools available to create, monitor, fix, and share accessible digital content.

Enrollment and Programs: FIU continues its positive trajectory of growth in distance education enrollments. With over 100 fully online programs and degree tracks and now ranked #1 in the world for Quality Matters certified course, fully online programs realized a 46% increase in applicants and a 41% increase in new to program student enrollments for Spring 2021. Spring also saw the creation of many new programs in strategic emphasis areas such as the BS in Global Sustainable Tourism to fully launch Spring 2022.

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