

Item 1. Research Report

- Focus on Young Faculty
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- Research Metrics
- Significant Awards

Focus on Young Faculty

College by College - Notable Young Faculty Achievements - Clemson has hired several new faculty for their distinct accomplishments. Dollars alone do not give a complete indication of institutional research and scholarly productivity. National awards and quality publications also contribute to faculty and institutional reputation. Each college was requested to send a brief write-up of three top young faculty with high research and scholarly productivity. This section includes the write-ups received.

College of Agriculture, Forestry and Life Sciences



Donald L. Hagan, PhD
Assistant Professor
Department of Forestry and
Environmental Conservation

Dr. Hagan is an ecologist who studies the effects of fire and plant invasions on population, community and ecosystem-level processes in forest ecosystems. He conducts most of his research in the southern Appalachian and Piedmont regions, but he has also worked extensively in the SE Coastal Plain, Florida, and in the tropical dry forests of coastal Ecuador.

Current research projects are supported by the Joint Fire Science Program, the US Forest Service and the National Park Service. Dr. Hagan currently teaches courses in Dendrology (tree ID), Forest Ecology and Forest Communities. He has also been heavily involved with the Creative Inquiry (CI) program, leading or co-leading 2 CI classes in the past 2 years. He serves as faculty advisor for the Forestry Club and the student chapter of the Society of American Foresters. His research lab consists of one post-doctoral fellow, four Master's students, three undergraduate research interns, and an undergraduate Honors student.

Recent Accomplishments:

- Awarded the Ansel E. Miller Faculty Teaching Award from the Department of Forestry and Environmental Conservation
- Nominated for the USDA Award for Excellence in College and University Teaching (nomination currently under review)
- Awarded 3rd place at the 2016 Focus on Creative Inquiry Poster Forum (student poster)
- Served on the Faculty Committee Supporting Teaching and Learning
- Organized and moderated a workshop on online teaching methodologies
- Published 4 peer-reviewed journal articles, and 2 articles in *Forest Landowner* magazine
- Received a \$168,833 research grant from the Joint Fire Science Program (PI)
- Received a \$52,000 research grant from the US Forest Service Southern Research Station and Great Smoky Mountain National Park (PI)
- Received a \$97,000 research grant from the National Park Service (Co-PI)
- Gave 3 live interviews (topics: fall foliage and invasive plant control) on RFD-TV (47.3 million households)
- Quoted in "As record Appalachian wildfires fizzle out, scientists look to learn from the destruction" *Science Magazine* 12/2016.
- Served as Chair for the Keowee Chapter of the Society of American Foresters
- Served as Vice President of the South Carolina Exotic Pest Plant Council
- Organized, hosted and won the 59th Annual Southern Forestry Conclave



R. Andrew Hurley, PhD
Assistant Professor
Department of Packaging Science

Dr. R. Andrew Hurley is an Assistant Professor of Packaging Science at Clemson University, where he directs the design, prototyping, and consumer experience test labs. Dr. Hurley's biometric-based consumer experience lab, CUshop™, has assisted hundreds of global consumer product groups and small businesses in developing data-driven designs that show increased consumer engagement and sales. The success of his eye tracking program catalyzed the formation of Package InSight, a full service packaging design and consumer experience company located in Greenville, SC, and executive member of the Sonoco Institute of Packaging Design and Graphics. Since 2008, Hurley has led the development and continuous improvement of the packaging design curriculum at Clemson University. Andrew directed a significant project with academic and industry professionals who collectively developed a premiere packaging curriculum, which was licensed by the Clemson University Research Foundation to The Packaging School. PackagingSchool.com offers a certificate of Packaging Science, (non-collegiate professional education for folks working in the packaging industry), with a state-of-the-art online curriculum that communicates the necessary business acumen and professional vocabulary to improve the value of working professionals.

Recent Accomplishments:

- Founding Faculty, Sonoco Institute of Packaging Design and Graphics
- Founded 2 companies, Package InSight & The Packaging School
- Submitted 5 NSF/USDA grants
- FPRF Research Honorarium
- Chaired MS students: 16 (3 current / 13 graduated) - all working in their field
- Chaired PhD students: 2 current
- Graduate committee member: 7 (4 MS, 2 Fulbright MS, 1 PhD)
- Sponsored research applications: 58 awarded out of 79 submitted
- Total funding applied for: \$2,732,594
- Total research expenditures: \$792,225
- Non-cash GIKs: \$1,917,600
- Peer-Reviewed Articles: 24 (12 published, 5 in review, 7 in process)
- H-Index: 5
- Published, non-peer reviewed articles: 41
- Published Books: 5 (3 of which are series)
- Invited Presentations: 61 in 7 countries (16 peer-reviewed)
- Patents: 1 Full, 3 provisional submissions
- Copyrights: 2

- Honorariums and Awards: 7
- Chaired summits and symposium: 4
- Faculty Fellow, Spiro Institute



Nishanth Tharayil, PhD
Assistant Professor
Department of Plant and Environmental Sciences

Nishanth Tharayil is a plant ecophysiologicalist interested in the physiological adaptations of plants in response to global environmental changes. Using advanced spectroscopic and spectrometric techniques, and *omics* approaches, his research group strives to gain a mechanistic understanding not only of the plant-environment interactions under future climate scenarios, but also of the feedback effects of these interactions on ecosystem processes. The basic research efforts in his lab are devoted to elucidate the role of phytochemicals in shaping the plant responses to their environments, and how these plant responses then influence various soil processes including the cycling of carbon and nutrients. His research team further uses the knowledge gained from the above basic research to devise strategies to enhance the quality and sustainability of agricultural production practices and ecosystem processes under changing climate. These applied strategies include improving nutritive value of food crops through the precise management of moderate stress, recapturing and reusing nitrogen and phosphorous from agricultural byproducts for crop production, managing ecological anomalies such as invasion of weedy plants, and forecasting potential shifts in ecosystem processes including soil nutrient cycling under future climate scenarios. His research team collaborates across several disciplines outside of life-sciences, with universities and national labs in this transformative area of research. The research projects in his lab are supported through competitive awards from the United States Department of Agriculture, National Science Foundation, and the United States Department of Energy, and research lead by his group has been published in leading journals and extensively covered by the popular media including the National Geographic Magazine. His current research team is comprised of one adjunct faculty, one postdoctoral fellow, six Ph.D. students, one lab technician and several undergraduate students.

Recent Accomplishments:

- Thirteen peer-reviewed publications, of which ten are based on research led by his lab group.
- Two publications were selected as ‘Editors-choice’ by New Phytologist and American Chemical Society.
- Two research awards as PI from USDA-NIFA totaling \$648,900.
- Three research awards as Co-PI (two-member team) from USDA-NIFA totaling \$922,000.

- Organized symposium on Omics approaches at national meeting of the Weed Science Society of America.
- Four invited presentations at national society meetings and peer-institutions.
- Sixteen presentations by his research team at national society meetings.
- Led the efforts to enhance the metabolomics capability of a core analytical and teaching facility at Clemson University by the acquisition of an ultra-high resolution mass spectrometer, and through an Academic Agreement Partnership Program with Thermo Scientific.

College of Architecture, Arts and Humanities



Todd Anderson, MFA
Assistant Professor of Art
Printmaking

Todd Anderson was born in Rochester, Minnesota, USA. Anderson received his Bachelor of Fine Arts from the University of Wisconsin-Madison in 1997 and his Master of Fine Arts (with Distinction) from the University of New Mexico in 2004. Anderson worked at various Fine Art print studios over the course of seven years including Tandem Press (Madison, Wisconsin, USA), The Tamarind Institute of Lithography (Albuquerque, New Mexico, USA) and The Artist's Press (Mpumalanga, Republic of South Africa). He currently resides in Clemson, South Carolina, where he is a researcher and professor at Clemson University. His work has been widely exhibited nationally and internationally. His artwork is in numerous notable collections including the New York Public Library Print Collection, The U.S. Library of Congress Print Collection and the Metropolitan Museum of Art.

Recent Accomplishments:

- The artwork of Todd Anderson was recently acquired by the New York Public Library Print Collection. The collection is one of the few comprehensive, national repositories of printed ephemera and artwork in the country. As such, its holdings represent the historic roots of printmaking while simultaneously being a physical collection of fine art prints that collectively constitute the field's canon. Anderson's artwork was also recently acquired by U.S. Library of Congress — the de facto national library for the country and the oldest national cultural institution in the U.S. It holds the second-largest library collection in the world. Artwork acquisition by the U.S. Library of Congress is considered one of the most significant career achievements for a visual artist. Lastly, Todd Anderson's artwork was acquired by the The Metropolitan Museum of Art. With over 2 million artworks in their permanent collection, the "Met" is the largest museum in the United States. The Met's collection spans 5,000 years of art from around the globe. Artwork acquisition by the Met can be considered the pinnacle career achievement for an artist. Examples of Todd's artwork can be seen at www.TheLastGlacier.com.



Walt Hunter, PhD
Assistant Professor
Department of English

Dr. Hunter is assistant professor of world literature at Clemson University. He holds an A.B. *summa cum laude* in English and American Literature and Language from Harvard College and a Ph.D. in English from the University of Virginia. His writing on contemporary poetry and poetics has appeared or is forthcoming in *ASAP/Journal*, *ARCADE*, *College Literature*, *Cultural Critique*, *Essays in Criticism*, *Jacket2*, *Modern Philology*, *symploke*, and elsewhere. His poetry has appeared or is forthcoming in the *Boston Review* and *Prelude*. He lives in Greenville with the poet Lindsay Turner.

Recent Accomplishments:

- Dr. Hunter has recently been named The South Carolina Arts Commission 2017 Poetry Fellow. The Board has awarded Individual Artist Fellowships to four South Carolina artists in the categories of 1) prose, 2) poetry, 3) dance: choreography and 4) dance: performance. As a Fellow, Dr. Hunter will receive a \$5,000 award. The S.C. Arts Commission board approves fellowships based on recommendations made by nationally prominent, out-of-state review panelists, who select fellows based solely on a review of anonymous work samples.



Eric Morris, PhD
Assistant Professor
City Planning & Real Estate Development – City & Regional Planning

Dr. Morris is Assistant Professor of City and Regional Planning. His primary focus is transportation, particularly how transportation contributes to our quality of life. His current research focuses on transportation and happiness; transportation, time use, and activity patterns; and transportation and access to employment, shopping, food, and medical care. He has a strong interest in transportation equity and disadvantaged populations. He also conducts research in the field of transportation history, and is currently coauthoring a book on the development and financing of the freeway system. Other interests include transportation and land use, transportation finance and economics, transportation policy, and transportation and the environment. He wrote a column on transportation for the *New York Times* for several years, and now is a regular contributor to the Freakonomics website. He was

also the Associate Editor of *Access* magazine. Before returning to academia, he worked as a travel writer, a sports writer, and a television writer and producer.

Recent Accomplishments:

- Eric A. Morris won a major paper award for “Negotiating a Financial Package for Freeways: How California’s Collier-Burns Act Helped Pave the Way for the American Interstate Highway Era.” The paper was co-authored with Jeffrey Brown (Florida State) and Brian Taylor (UCLA); Dr. Morris was first author. It won the Wootan Award for best paper in transportation policy and operations from the Transportation Research Board of the National Academies of Science, Engineering, and Medicine, one of the seven awards given in 2016 from among the roughly 5,400 manuscripts submitted. The paper examines legislation in California that pioneered a method for paying for a massive freeway system, arguing that 1) the inclusion of urban routes at a time when highway systems were thought to be meant to serve rural areas, 2) a trust fund that sequestered driving-related revenues for use exclusively on roads, and 3) under-taxation of trucking relative to the road damage trucks cause were essential for funding our highway system both in California and later at the national level. The paper will be published in the *Transportation Research Record: Journal of the Transportation Research Board*.

College of Behavioral, Social and Health Sciences



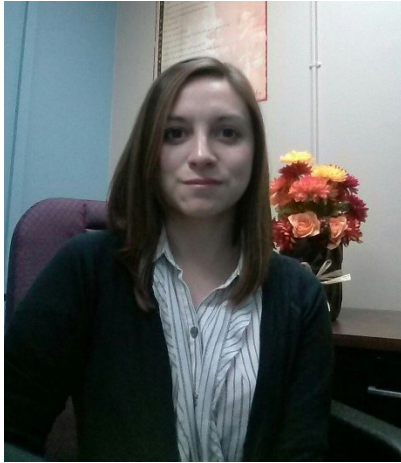
Erin Ash, PhD
Assistant Professor
Department of Communication

Dr. Ash is a mass communication scholar focused primarily on media portrayals of marginalized groups and audience interpretations of those messages. To that end, she conducts content analytic research to examine media texts across a variety of contexts, including film, television, and news. Her content analyses not only shed light on the persistence of stereotyping in media, but also consider how stereotypes evolve to reflect and reinforce dominant ideologies. In addition to studying the nature of media messages, she conducts research to explore the psychological processes that explain the effects of media on individuals. Despite, and considering, the ever-growing body of evidence documenting

the harmful effects of media on inter-group attitudes, she takes an intervention based approach to examining media influence. Her work explores types of media content that might reduce prejudice, such as those that elicit other focused emotions like empathy and inspiration that lead people to act pro-socially. She is also interested in the counter-stereotyping potential of identification with diverse characters in both narrative and interactive media.

Recent Accomplishments

- Three solo and four co-authored peer-reviewed manuscripts published or in press in such journals as *Journal of Social Issues*, *Mass Communication & Society*, and *Games and Culture*.
- Six papers accepted for presentation at international and national conferences, one of which was the result of a Creative Inquiry
- Co-authored book chapter in *Media and Social Life* (Routledge).
- Outstanding Professor of the Year for 2015-16, Department of Communication
- Chaired or currently chairing seven MA committees
- Served or currently serving as member of ten MA and two Ph.D. committees



Mariela Fernandez, PhD
Assistant Professor
Department of Parks, Recreation and Tourism Management

Dr. Fernandez is a social scientist who examines equitable processes in park planning and management and their impact on health outcomes. She is particularly interested in the research that suggests that individual's standing in society impacts their access to the built environment, particularly as related to park and recreation resources (i.e., community centers, green space). She primarily focuses on the urban Latino population, who have shown to lack access to park and recreation resources. Consequently, the research questions fueling her work are: *Why do differences in resource allocation decisions occur?*, *What strategies can be used to ensure that Latino communities have equal access to needed resources?*, and *How do issues of accessibility affecting urban spaces translate to rural spaces?* Her area of study has attracted undergraduate and graduate students. Current projects that Mariela conducts and/or supervises include (a) conducting a systematic review of factors promoting and constraining positive health outcomes in rural Latino communities, (b) examining the experiences of rural Latina mothers in accessing needed resources that impacts their health outcomes, (c) developing a study to examine the spillover effects of health curriculum in youth programs on Latinos' healthy eating behaviors, and (d) establishing community collaborative teams and a mentorship program to improve Latino youth's access to STEM education in informal settings to increase Latino youth's education and employment outcomes. Mariela work has allowed for interdisciplinary collaborations to occur with faculty from across the nation representing PRTM, public health, sociology, biology, chemistry, STEM, urban planning, and education. Partnering with local residents and community organizations has also been essential to the projects' success. Her work is currently supported by the Robert Wood Johnson Foundation.

Recent Accomplishments:

- Recipient for the 2016 American Academy for Park and Recreation Administration Best Dissertation Award
- Funding received by the Robert Wood Johnson Foundation and Clemson's University Research Grants Committee
- One of her undergraduate honors student received two grants from the Clemson Departmental Honors College
- Mentor of 1 PhD student, 4 MS students, and 1 undergraduate senior thesis research student
- Mentors a Creative Inquiry undergraduate research program with the involvement of nine undergraduate students from science and engineering fields
- Four published peer-reviewed manuscripts and one book chapter
- Invited to serve as panel member for three sessions
- Invited speaker for *NRPA Webinar Series, Do the Right Thing – Social Equity in the Field of Parks and Recreation*
- Featured in the *Parks and Recreation Magazine*

- Chair, CBSHS's Community and Diversity Committee
- Member of the *Parks and Recreation Magazine's* Social Equity Advisory Board • Member of the Commission of Latino Affairs



Lu Shi, PhD
Assistant Professor
Department of Public Health Sciences

He has been working on topics related with mindfulness and chronic diseases, particularly from the perspective of health economics. In a recent publication in the high-impact [*Journal of Hypertension*](#), Dr. Shi (together with his colleague Dr. Liwei Chen and collaborators from University of Georgia and East Tennessee State University) finds that the low-cost meditation interventions such as mindfulness-based stress reduction are consistently helpful in lowering blood pressure. This might come as good news for hypertension patients who could benefit from a meditation intervention but find the well-established program of Transcendental Meditation a bit too pricy. In 2016, Dr. Shi led a publication in the prominent journal *Circulation*, showing that ischemic stroke patients admitted on Saturdays face elevated mortality risk, and thus there is considerable room for improvement in stroke care.

Recent Accomplishments:

- Principal investigator or co-investigator of five extramural grants: funders include Department of Defense, Blue Cross Blue Shield Foundation South Carolina, UniHealth Foundation (subawards via UCLA), and Intuitive Surgical, Inc.
- 17 peer-reviewed journal articles, including top journals such as *American Journal of Public Health*, *Circulation* and *Journal of Hypertension*
- Invited speaker at the Health Economics and Outcomes Research forum at Centers for Disease Control and Prevention (CDC) and several universities and hospitals in China
- Served in CDC's special emphasis review committee to provide peer review of federal grants
- Led international collaborative research projects in China
- Peer-reviewed oral presentations in the annual meetings of American Public Health Association, Institute of Industrial Engineering Annual Conference & Expo 2016, and 2015 Industrial and Systems Engineering Research Conference
- Involved both graduate students and undergraduate students as co-authors of peer-reviewed journal articles
- One of the graduate students won the rare opportunity of giving a 30-minute talk in the roundtable discussion of the field's top conference (APHA)

College of Business



Oriana Aragón, PhD
Assistant Professor
Department of Marketing

Dr. Aragón earned her PhD in psychology from Yale University in 2014 and joined the Clemson faculty as an Assistant Professor in 2016. Her research focuses on the expression and regulation of emotion, including its relationship to the field of marketing.

Recent Accomplishments:

- Already has a dozen referred publications in *Advances in Consumer Research*, *Psychological Science*, *Social Cognitive Affective Neuroscience*, *Handbook of Contemporary Family Psychology*, *International Encyclopedia of Social and Behavioral Sciences*, and *The Oxford Handbook of Close Relationships*, among others.
- Her research has also been highlighted in the prestigious publications such as *Scientific American Mind* (twice), *Time Magazine*, the *Washington Post*, and the *Atlantic*.



Daniel Greene, PhD
Assistant Professor
Department of Finance

Dr. Daniel Greene joined the Finance Department at Clemson three years ago, immediately after completing his PhD at Georgia State University. Prior to starting his PhD, he worked in the insurance industry in Chicago. Dr. Greene's research is empirical corporate finance with a focus on corporate governance, labor, product market relations, and access to finance as a driver to firm value.

Recent Accomplishments:

- His top publication is “Valuations in Corporate Takeovers and Financial Constraints on Private Targets”. It was sole-authored and was published in the *Journal of Finance and Quantitative Analysis* (an "A" level journal.) He has also, published in *the Review of Corporate Finance Studies* and *Journal of Corporate Finance*.
- He has presented at the annual meetings of the American Finance Association, European Finance Association, Northern Finance Association, Midwest Finance Association, and Financial Management Association.

- He teaches Financial Institutions and Markets and receives consistently high teaching evaluations from his students.



Erica Walker, PhD
Assistant Professor
Department of Graphic Communications

Dr. Walker has taught at Clemson since 2013, when she joined the faculty of Graphic Communications as a Lecturer. She completed her PhD at Clemson in 2016 and has become an Assistant Professor.

Dr. Walker has a diverse background in visual communications which includes feature film production, web design & development, print buying, marketing, and graphic design for print. As a faculty member in the Department of Graphic Communications, she teaches courses in photography, video, and web development. In the last two years, she has also developed two new courses focused on entrepreneurship in the graphic communications industry. Her summer entrepreneurship course has quickly expanded to two full sections to accommodate growing student interest in this topic.

When not on in the classroom, Dr. Walker keeps her calendar full by speaking at conferences and workshops across the country on a variety of topics including software application, classroom research, the entrepreneurial mindset, game-based learning, color management, and marketing. One of her current research interests is the role of entrepreneurs and intrapreneurs within the graphic communications industries and the impact of preparing graduates with the entrepreneurial mindset as they prepare to enter the industry.

Her diverse research interests include:

- Color management across all media including digital devices.
- The relationship of creative services within the print industry.
- The impact of teaching methods on student learning of domain content and 21st Century Skills.
- Active learning, project-based learning, game-based learning.

College of Education



Natasha N. Croom, PhD
Assistant Professor of Higher Education and
Student Affairs Leadership Development
Department of Educational and Organizational

Dr. Croom began as a faculty member at Clemson in fall 2016. Prior to arriving at Clemson, she was a faculty member at Iowa State University. The goal of Dr. Croom's scholarship is to identify and deconstruct embedded ideological and structural inequities that disproportionately affect opportunities and successes of minoritized populations in order to create equitable environments, opportunities, and outcomes across communities in higher education. Her current research centers the experiences of Black women in the

analysis of institutional practices and policies related to (1) post-tenure faculty advancement, (2) student engagement and persistence, and (3) intersectional identity development in postsecondary environments.

Recent Accomplishments:

- 2015-2016: selected as an Emerging Scholar by *College Student Educators International*
- Co-editor, *Critical perspectives on black women and college success*. New York: Routledge. 2017
- Co-editor, *Envisioning critical race praxis in higher education through counterstorytelling*. Charlotte, NC: Information Age Publishing. 2016
- Co-editor, *Envisioning critical race praxis in educational leadership through counterstorytelling*. Charlotte, NC: Information Age Publishing. 2016
- Editorial Board, *Journal of College Student Development*
- Editorial Board, *NASPA Journal About Women in Higher Education*



Shanna E. Hirsch, PhD, BCBA-D
Assistant Professor of Special Education
Education and Human Development

Shanna E. Hirsch received her PhD in Special Education from the University of Virginia in 2016 and M.Ed., in Special Education from Vanderbilt University in 2009. She has previously worked as a special education teacher and behavior analyst in Boston, Nashville, and Washington, DC. These experiences have shaped her research, teaching, and service. Her expertise centers on (a) supporting novice teachers as they learn to implement evidence-based classroom management practices, (b) developing supports for students with or at risk for emotional

behavioral disorders, and (c) implementing positive behavior supports. Dr. Hirsch has published over 20 peer-refereed papers as well as three book chapters.

Recent Accomplishments:

- 10 peer-refereed papers since 2015
- Editorial Board, *Behavioral Disorders*, *Beyond Behavior*, *Exceptional Children*, and *TEACHING Exceptional Children*.
- Executive Board, Association of Positive Behavior Supports
- 9 national conference presentations in 2016/2017 (4 invited presentations)
- Strand leader for Teacher Educators for Children with Behavior Disorders (TECBD) in Tempe, AZ, 2015-2016
- Organized the PBIS Film Festival at the annual meeting of the Association for Positive Behavioral Supports (2013-present)
- Internal grant (College ADR), Co-PI, 2017-2018: *Developing Classroom management and student engagement measures within the Classroom Teacher (CT) Scan*. (\$4,735)
- 2016 Doctoral Student Scholar, Division of Research, Council for Exceptional Children
- 2016 University of Virginia, Edgar F. Shannon Award



Phillip M. Wilder, PhD
Assistant Professor of Adolescent Literacy
Department of Education & Human Development

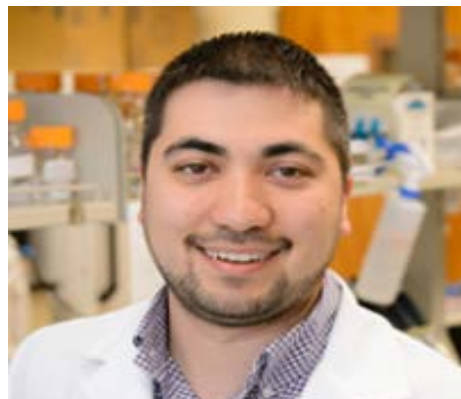
Dr. Wilder's research focuses on improving how reading and writing are used to support adolescent literacy in middle school and secondary school disciplines. Whether it be mathematics, science, social studies or English, we use texts to read, write, and create knowledge. To prepare students for college, career, and life, teachers and schools need to further improve how they apprentice students into being literate in each discipline. Dr. Wilder partners with schools to support the literacy of adolescents. He has published several articles in top tier journals including the

Journal of Adolescent and Adult Literacy, Research in the Teaching of English, and Cultural Studies of Science Education.

Recent Accomplishments:

- Co-PI (\$142,500 in 2016-2017), Geometry by Design, an Improving Teacher Quality (ITQ) grant, SC Commission on Higher Education, US Department of Education,
- Co-PI (\$172, 257 in 2017-2018), Exploring the Mathematics of Genetics, ITQ grant
- Implementation Evaluator, \$5 million United Way Social Innovation Fund Grant Award
- Faculty in Residence at Fisher Middle School, Greenville County School District
- With school districts, designed multiyear models of professional development on literacy for over 5,000 SC middle and secondary teachers (required by Read to Succeed)
- Authored the Greenville County School District's K-12 district literacy plan
- Selected as an International Literacy Association Young Scholar of Promise
- Named US Director of Mwangaza Education for Partnership in Arusha, Tanzania

College of Engineering, Computing and Applied Sciences



Mark A Blenner, PhD
Assistant Professor
Chemical and Biomolecular Engineering Dean's Assistant Professor

Dr. Blenner completed his work as a Research Fellow at Harvard Medical School and joined the Chemical and Biomolecular Engineering Department at Clemson as an Assistant Professor in 2012. Since that time, he has been blazing a trail of success in both research and teaching. He received his PhD in Chemical Engineering from Columbia University in 2009 and his BS from Manhattan College. His

group uses protein engineering and synthetic biology to address major problems in energy, sustainability, and human health by taking a molecular-scale approach to improving bioprocessing.

His research examines how microorganisms sense their environment, how that information is processed, and how it ultimately leads to a change in phenotype. From an engineering standpoint, this information can be used to improve biological synthesis of fuels and chemicals from renewable biomass. Another major interest of our group is developing cell-based biosensors for metabolic engineering, environmental detection, biodiagnostic, and biocatalysis applications.

He is the recipient of the 2015 College of Engineering Dean's Professorship Award. In his short time at Clemson, he has published two book chapters, one patent, and 9 journal articles and received over \$3 million in extramural funding. Prof. Blenner has taught numerous courses, including specialized ones on polymer and composite engineering.

Recent Accomplishments:

- Clemson Principal Investigator for 18 extramural grants with funding exceeding \$3.25 million dollars (\$3.20 million in force) from NSF, AFOSR, NASA, DTRA, and NIH.
- Prestigious Grants/Awards: Air Force Young Investigator Award and Nasa Early Career Faculty Award
- Refereed journal papers and reviewed book chapters: 11, 217 citations to-date
- Patents: 1, "Leucine Beta Roll Domains And Uses Thereof" US 9,127,267 B2
- Technical presentations: 9 as invited speaker, 51 total
- Teaching: a total of 6 different classes, including a new graduate course titled "Recent Advances in Genetic and Metabolic Engineering"
- Advisor for 2 post-doctoral research fellows, 7 PhD students, and 3 undergraduate honor students; graduated 1 PhD student as co-advisor

The grant is titled: "Discriminatory Transcriptional Response of Environmental Microorganisms and Microbial Communities to Low-Dose Ionizing Radiation." The grant is for 3 years with 2 option years, valued at \$866,884 (and potentially \$1,480,460 over 5 years). In

this project, he and his students will study how microorganisms respond to low-doses of ionizing radiation that would be found at some distance away from nuclear activities. This dose rate of radiation is known to affect microbial physiology but is poorly understood. They hope to uncover transcriptional signatures that can discriminate between different types of radiation sources and use this knowledge to create microbial sensors that can be covertly deployed and passively monitor illicit nuclear activities.



Srikanth Pilla, PhD
Assistant Professor
Automotive Engineering

Dr. Srikanth Pilla is an assistant professor of automotive engineering at Clemson University and holds a joint appointment in the Department of Materials Science and Engineering. Dr. Pilla is also a faculty affiliate at the Center for Optical Materials Science and Engineering Technologies and a fellow of the Wood Utilization + Design Institute at Clemson University.

Dr. Pilla earned his doctorate in mechanical engineering from the University of Wisconsin- Milwaukee with postdoctoral training from Stanford University, CA. Prior to joining Clemson University, Pilla worked as an Assistant Scientist at the University of Wisconsin-Madison. Pilla also spent time in industry having worked at SC Johnson and SuGanit Biorenewables as R&D scientist. Pilla serves as a materials and manufacturing consultant to several industries including automotive OEMs such as BMW.

Dr. Pilla's research interests are in the fundamentals and applications of sustainable and lightweight functional materials and manufacturing. Encompassing the "Materials Genome Initiative" and "Advanced Manufacturing Partnership", Dr. Pilla's work aims to create a crosscutting paradigm at the interface of polymer chemistry, polymer physics, energy resources, materials engineering, manufacturing science, computational theories and numerical models. His discoveries and innovations have been published in a wide variety of journals. He has produced over 75 peer-reviewed publications with a H-index of 28 and more than 150 technical presentations, reports, extended abstracts, and scientific articles. His work is highly cited with total citation count of over 2783. He edited the world's leading handbook in bioplastics and biocomposites and four Society of Automotive Engineers Progress in Technology Series books. His research is supported by National Science Foundation, Department of Energy, United States Department of Agriculture, and NASA, several industries including automotive OEMs, and their tiered suppliers. His research has created about \$10.9M of funding.

Dr. Pilla is highly active in plastics, composites and automotive professional societies. He has chaired and organized several technical sessions at SAE World Congress and SPEANTEC. Pilla currently serves as an Associate Editor of SAE International Journal of

Materials and Manufacturing and on the boards of Journal of Renewable Materials, SPE Injection Molding and Bioplastics Divisions.

Dr. Pilla is the recipient of several awards including best poster and paper awards from the Society of Plastics Engineers, the 2017 Ralph R. Teetor Educational Award, the 2017 Forest R. McFarland Award from the Society of Automotive Engineers and the 2016 Robert J. Hocken Outstanding Young Manufacturing Engineer award from the Society of Manufacturing Engineers. He has mentored (and continue to advise) more than 55 research staff members that include graduate students, postdoctoral associates, scientists, undergraduate students, high school students, and international visiting scholars. The results of his student's research have been recognized with best research and graduate students awards by Society of Plastics Engineers, International Symposium on Bioplastics, Biocomposites and Biorefining, Ceramics Society, Moldex3D, etc.

Recent Accomplishments:

- Principal Investigator for 17 extramural grants with funding exceeding \$9.45 million dollars (\$9.35 million in force) from DOE, USDA-NIFA, US Endowment for Forestry and Communities, and NASA-SC Space Grant Consortium, SC-DOC, Honda, BMW, JTEKT/Koyo, Firestone, Master-PT, etc.
- Pending research proposals: nine with over \$16.1 million dollars (~\$10.8 million dollars as PI).
- Dr. Pilla has been a prolific writer of grant proposals, submitting on average 20 proposals every year, with over 80% of them to competitive federal agencies such as NSF, DOE, USDA, NASA. In addition to the funded and pending grants listed above, Dr. Pilla has submitted over 35 grants (since 2013) totaling more than \$40M to federal funding agencies that were ultimately not funded. Dr. Pilla was the PI for over 80% (with over \$17M requested budget) of these grants.
- *2017 Ralph R. Teetor Educational Award* (Distinguished award from Society of Automotive Engineers recognizing as one of the top engineering educators)
- *2017 Forest R. McFarland Award* (Highest Society of Automotive Engineer's award and recognition given for service to the society and support of its dissemination mission)
- *Robert J. Hocken Outstanding Young Manufacturing Engineer Award*, SME, May 2016
- As of March 2017, the total citations to Dr. Pilla's publications are 2783 according to Google Scholars database and his H-index is 28.
- Taught a total of 6 different classes, including four new graduate courses



Yue “Sophie” Wang, PhD

Assistant Professor Mechanical Engineering

Warren H. Owen – Duke Energy Assistant Professor of Engineering

Dr. Wang completed her work as a Postdoc Research Associate at the University of Notre Dame and joined the Mechanical Engineering Department at Clemson as an Assistant Professor in 2012. Since that time, she has been blazing a trail of success in both research and teaching. She received her PhD in Mechanical Engineering from Worcester Polytechnic Institute in 2011 and her BS from Shanghai University. Her group

focuses on developing novel control, decision-making, and motion planning algorithms for humanrobot collaboration systems so that the performance of the joint human-robot systems is improved while human experience is balanced. She leads the I2R laboratory which features a robot experiment area with reconfigurable UAV flying paths, testbeds of heterogeneous mobile robot teams including UGVs, drones, swarm robots, a humanoid manufacturing robot, haptic devices, and motion tracking system.

Her research integrates social and psychological human-robot interaction (HRI) factors into robot speed control, decision-making, and motion planning. By quantitatively modeling, measuring, and estimating human trust in their robot partner in near real-time, trust-based robot control, automated decision-making aids, and high-level motion planning strategies have been developed in applications such as assembly manufacturing, telerobotics, and multi-robot systems. Furthermore, human decision-making patterns (such as regret) under uncertainty is quantitatively modeled and analyzed, which is then embedded into robot decision-making strategies so that humans and robots can share a same mental model for improved team performance. Last but not least, human-centered intelligent control strategies have been investigated for connected and automated vehicles for higher user acceptance, safety and hence market penetration.

She is the recipient of the 2016 Warren H. Owen – Duke Energy Assistant Professorship. In her short time at Clemson, she has been the leading editor of 2 books, 5 book chapters, 8 journal articles, and 19 peer-reviewed conference papers, and received nearly \$1 million in extramural funding. Prof. Wang has taught all the undergraduate and graduate core control courses offered in the department, as well as a creative inquiry course on “human-robot collaborative manufacturing using humanoid manufacturing robots”.

Recent Accomplishments:

- Clemson Principal Investigator for 5 extramural grants with funding achieving nearly \$1 million dollars from NSF, AFOSR, NASA, ARO, and ARC.
- Prestigious Grants/Awards: National Science Foundation CAREER Award, and Air Force Young Investigator Program (YIP) Award
- Teaching: a total of 5 different classes, including a new creative inquiry course
- Advisor for 2 post-doctoral research fellows, 6 PhD students, 7 Master’s students, and 2 undergraduate honor students; graduated 1 PhD student

- Chair of the IEEE Control System Society Technical Committee on Manufacturing Automation and Robotic Control
- Works featured in *ASEE First Bell* and *State News*
- Featured in home game versus USC, *Professor of the Game*, 2016
- Organized 3 workshops at prestigious international robotics, controls, and HRI conferences (ICRA 2017, ACC 2017, HRI 2017) and 6 invited sessions at ACC (2014-2017)

Dr. Wang received an ARC grant this Spring, with Dr. John Wagner from ME. The grant is titled: Optimal Control, Pairing, and Scheduling for Manned-Unmanned Vehicles Teaming based on RoboTrust Algorithms. The grant is for 1 year (with possible extensions an additional 2 years), valued at \$86,794. In this project, the team seeks to fill the gap in our fundamental understanding in human-robot teaming and create quantitative models for trust dynamics, the human-robot collaboration system, as well as robot trustworthiness based on the RoboTrust algorithm. Dynamic human-robot pairing and real-time multi-robot scheduling algorithms will be developed and simulated over distributed and heterogeneous multi-agent systems with a human-in-the-loop.

College of Science



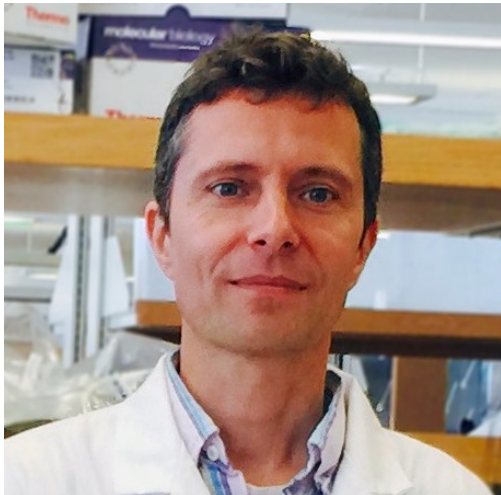
David M. Feliciano, PhD
Assistant Professor
Department of Biological Sciences

The goal of the Feliciano laboratory is to determine the etiology of childhood neurological diseases, namely epilepsy, autism spectrum disorders, and intellectual delay. Dr. Feliciano pioneered novel approaches that led to the only mouse model to date that mimics the disease Tuberous Sclerosis Complex and his work is cited in a wide range of journals including *Nature Medicine*. A manuscript currently under revision at *Scientific Reports* details a novel approach for therapeutic intervention in a subset of such patients. Dr. Feliciano's

seminal studies on secreted factors called exosomes has generated tremendous interest from academics, the pharmaceutical, and biotechnology industries. His Clemson student team recently published a manuscript demonstrating age dependent changes in patient cerebrospinal fluid exosomes, which will facilitate diagnostic testing for a range of neurological disorders. Dr. Feliciano recently generated a “first of its kind” transgenic mouse model to understand the role of exosomes in the brain. The process of scientific discovery is brought into the Clemson University classroom where Dr. Feliciano takes pride in sharing the successes and failures of science to prepare the next generation of scientific and medical leaders.

Recent Accomplishments:

- Published 4 papers
- Submitted another manuscript
- Contributed a chapter to a book entitled: Non Canonical Sites of Adult Neurogenesis in the Mammalian Brain (Cold Spring Harbor Monograph)
- Presented at 2 International Conferences
- Obtained funding from the NIH as a sole PI (~\$450,000)
- Obtained funding from the Whitehall foundation (~\$200,0000)



Lukasz Kozubowski, PhD
Assistant Professor
Department of Genetics and Biochemistry

Dr. Kozubowski's research aims at elucidating how cellular stress impacts cell division. This area of studies has broad applications in medicine including treatments of infectious diseases and cancer. One of the main challenges in managing infections is the development of drug resistance. Microorganisms frequently develop resistance to all available antibiotics, contributing to high mortality rate. Two main strategies to cope with this highly important problem are to discover new targets for anti-microbial drugs and to reduce the ability of the pathogens to acquire drug resistance. Dr. Kozubowski studies the human fungal pathogen, *Cryptococcus neoformans*, which is known to evolve into drug resistant subpopulations that avert efficient therapies. This pathogen is the causative agent of fungal meningitis especially in those with compromised immune systems. Approximately 1 million cases of cryptococcal meningitis occur among people with HIV/AIDS worldwide each year, resulting in nearly 625,000 deaths.

Currently there are two main projects that the Kozubowski lab focuses on. In a study that is currently funded by an NIH AREA grant, the group elucidates how an antifungal drug fluconazole leads to an increase in DNA content in fungal cells, a phenomenon that has been associated with the development of drug resistance. In the second project that is funded by the NIH COBRE grant, Dr. Kozubowski's team deciphers mechanisms by which *Cryptococcus* cells divide and how stress affects this process. Currently, our knowledge of the mechanism of cellular division in *Cryptococcus* is very limited. These studies will contribute to development of better treatment strategies and will help to understand how fungal pathogens have evolved diverse mechanisms of cell division.

Recent Accomplishments:

- Published a review paper
- Prepared 2 senior author manuscripts for submission (one to be submitted by the end of March, other by the end of April)
- Contributed to a manuscript published in the journal *mSphere*
- Presented an invited talk at Western Carolina University
- Presented at 4 national scientific meetings
- One graduate student has presented at three national and one international meeting, the other student presented at two national meetings
- 4 undergraduate students presented their results at national meetings
- Received 3 years funding from the NIH as a sole PI (NIH AREA grant) (~\$300,000)
- Received funding as a member of the COBRE grant from the NIH (~\$180,000)



Xian Lu, PhD
Assistant Professor
Department of Physics and Astronomy

Dr. Lu's research focuses on the two fundamental processes in the Sun-Earth system, i.e., the vertical wave coupling from the lower to the upper atmosphere, and the magnetosphere-ionosphere-thermosphere (MIT) coupling from the topside down. The two most important energy sources for the Earth are the solar radiation and the energy deposition from the magnetosphere through the MIT coupling. The Earth's atmosphere responds to these energy inputs via the generation of a variety of atmospheric waves. The vertical wave coupling

plays a key role in the redistribution of the total energy and reshaping the thermal and dynamic structure of the atmosphere. For the last two years, Dr. Lu has thoroughly studied three major waves in the Antarctic atmosphere, i.e., planetary waves, gravity waves, and "tides", by combining the ground-based and space-borne observations, and numerical modeling. Her studies have led to a clearer picture of the Antarctic wave dynamics: the stratosphere (30–60 km) is dominated by the persistent planetary waves with periods of several days generated by the instability of the polar night jet; the mesosphere and lower thermosphere (60–100 km) is dominated by the inertia-gravity waves with periods of 3–10 h while their source is still a mystery; the "tides" originated from the MIT coupling become strong above 100 km where the neutral-ion coupling takes place. Dr. Lu's research not only focuses on the polar region which is closely related to space weather and climate, but also covers middle and low latitudes. Using the high-resolution and high-precision lidar data at 40°N, Dr. Lu has developed a unique method to automatically identify wave packets and compute waves' intrinsic periods and horizontal wavelengths. This method provides a new opportunity for the single-site observation to infer a full set of wave characteristics without detecting background winds, which are usually difficult to access. Although a variety of techniques have been developed to detect the atmosphere, the observations are still insufficient to fully resolve the whole globe. The long-term goal of Dr. Lu's group is to combine observations, whole atmosphere models, and mechanistic models to obtain a better understanding of the coupling and dynamics of the Earth's atmosphere, which can be adopted to investigate the other planets in the future.

Recent Accomplishments:

- Published 6 journal papers and 4 peer-reviewed conference papers.
- Led a NSF Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) grant as a PI (\$311,418.00, 2014–2017).
- Led a NASA Heliophysics Supporting Research (HSR) grant as a PI (\$228,765.00, 2016–2017)
- Served as a Co-I for a NSF Polar Program grant (\$235,000.00, 2016–2019).

- Featured in *National Center for Atmospheric Research (NCAR) Science Highlight*, *Physics World*, and *Yahoo News*.
- Presented four invited research talks outside of the US.
- Presented four invited research talks in the US.
- Been the first author for 10 presentations and a contributing author for 15 presentations.
- Advised or co-advised 4 undergraduate students and 3 PhD students.
- Served as a regular reviewer for *Journal of Geophysical Research*, *Journal of Atmospheric Sciences*, *Journal of Atmospheric and Solar-Terrestrial Physics*, and *Geophysical Research Letter*.
- Served as a regular reviewer for NSF and NASA grants.
- Served as a panelist for NSF CEDAR and NASA Guest Investigator programs.

Focus on Faculty

College by College - Notable Faculty Achievements - Dollars alone do not give a complete indication of institutional research and scholarly productivity. National awards and quality publications also contribute to faculty and institutional reputation. Each college was requested to send a brief write-up of three top faculty with high research and scholarly productivity. This section includes the write-ups received.

College of Agriculture, Forestry and Life Sciences



William H. Conner, PhD

Professor

Department of Forestry and Environmental Conservation

Dr. William Conner is currently Assistant Director and Professor at Clemson University's Baruch Institute of Coastal Ecology and Forest Science. His research interests include freshwater and saltwater forested wetlands, wetland management, wetland creation and restoration, effects of man and nature on natural environments, dendrochronology, wetlands for wastewater treatment, estuarine/upland connections, changing land-use impacts on natural systems, and historical ecology. He has been involved in forested wetland research for over 43 years and continues to do research throughout the South. William began his education with a B.S. in biology at Virginia Tech (1973); obtained his M.S. in marine science at LSU (1976); completed his PhD in Forestry at LSU (1988). He is an internationally recognized forested wetland scientist known for his ecological work to save and restore wetland forests throughout the South. He served on the Louisiana Governor's Coastal Wetland Forest Conservation and Use Science Working Group; work that is widely recognized as being an important contribution to changing the way the Southern U.S. manages and conserves cypress and tupelo forests. He has been the major professor for seven PhD students, four M.S. students and served on 23 other student committees. He has authored or edited 2 books, 1 special issue of *Wetland Ecology and Management*, 14 book chapters, over 100 refereed journal papers, and 79 other scientific papers and reports. He has given over 300 presentations as presenter or co-author at local, national, and international meetings. William was selected as a Fellow in the Society of Wetland Scientists in 2007 and in the Clemson University Institute for Parks in 2012. He won Clemson University's Highest Agricultural Honor, the Godley-Snell Award for Excellence in Agricultural Research in 2010, the same year he was selected as LSU's School of Renewable Natural Resources Alumnus of the Year. In 2013, he was presented with the Society of Wetland Scientists President's Service Award.

Recent Accomplishments:

- Mentor of 2 PhD students and on committee of additional 2 Ph.D. and 3 M.S. students
- 35 presentations prepared for national and international meetings with 10 as first author (3 invited)
- 2016 Natural Resources Graduate Students Association Teacher of the Year
- Taught Forested Wetland Ecology class at Hobcaw (32 graduate students during the 3 years)
- Served as Teacher in the Winyah Master Naturalist Class held at Hobcaw each year.
- 7 peer-reviewed publications, 1 book chapter (since starting at Clemson in 1990 have had 68 peer-reviewed publications, 16 book chapters, and edited 2 books)
- Awarded funding as co-PI on U.S. Army Corps of Engineers project on lower Savannah River, 2013-2016 (\$858,284)

- Awarded funding as co-PI on USGS Global Climate Change Project, 2014-2019 (\$199,995)
- Awarded funding as co-PI on Earthwatch Climate Change and Sea Level Rise Response, 2014-2017 (\$47,120)
- Served as Secretary/Treasurer of the South Atlantic Chapter of the Society of Wetland Scientists (since 1992)
- Served as Chair of the Future Meetings Committee of the Society of Wetland Scientists and charged with coming up with an annual meeting model to rotate the location of the annual meeting and then soliciting and receiving proposals for future meeting venues and recommending possible meeting schedules and sites for at least 5 years in advance.
- Asked to serve on the Research Working Group of the newly launched (February 2, 2017) Wetland Forest Initiative. This is a multi-state effort dedicated to conserving, restoring, and improving the condition of Southern wetland forests (press release - <http://wetlandforests.org/2017/02/02/press-release/> or YouTube video - <https://youtu.be/SMZ5AVLRLYA>)

Asked by Dr. Dave Stahle from the University of Arkansas to work with him on the development of the Ancient Bald Cypress Consortium dedicated to advancing research, education, and conservation of the last remaining stands of old-growth bald cypress and bottomland hardwoods.



Jeremy Greene, PhD
Professor of Entomology
Department of Plant and Environmental
Sciences

Dr. Greene's program focuses on integrated management strategies for important insect pests in cotton and soybeans. His comprehensive research and Extension program develops and evaluates new strategies along with existing approaches for managing important agricultural insect pests - a program that focuses on acquiring knowledge and understanding of pest

management techniques through cooperative applied research efforts and promptly educating stakeholders. Current research interests include refinement of monitoring methods and treatment thresholds for hemipteran and lepidopteran pests in cotton and soybeans, evaluation of new insecticide chemistries and delivery systems, alternative control strategies for important insects, and collaboration with researchers on other potential methods of detecting insect pests. During the late 1990s and early 2000s, Dr. Greene developed the boll-injury threshold methodology used to monitor for and treat economic infestations of stink bugs in cotton. Recently, novel research from 2011 to 2016 addressed management approaches for the invasive kudzu bug, *Megacopta cribraria*, discovered in soybeans in the USA during 2010. As the insect emerged as an important pest in the crop, critical pieces of information were discovered about the insect, and collaborative research with Dr. Francis Reay-Jones, Associate Professor CAFLS, and two PhD students recruited to join Dr. Greene's program led to over 12 papers addressing the exotic pest, and the

results and recommendations likely saved soybean producers in the southeastern United States millions of dollars.

Recent Accomplishments:

- 6 graduate students advised (15 graduate students total advised to date, with 9 as major or co-major professor and 6 as committee member – 1 post-doctoral associate advised).
- 26 peer-reviewed publications (out of 62 peer-reviewed publications total, with 6 additional papers/chapters in press or submitted).
- 3 book chapters, chair of one book chapter
- \$1.29 million in grants (out of \$5.6 million in career grants, with \$4.3 million at Clemson University in last 11 years – 67% Greene’s share).
- Dr. Greene was awarded Clemson University SAFES Ag Division Faculty Superior Service Award (2013/2014).
- Mix My Sprayer Mobile App. and Calibrate My Sprayer Mobile App.
- Created to aid with quick, accurate calculations of product mixes to be applied with spraying equipment and to aid in the proper calibration of spraying equipment, respectively. Designed by Greene and the Mobile Innovation Team, Clemson Univ.
- Available for free download in iOS and Android platforms.
- (<http://www.clemson.edu/extension/mobile-apps/>) Downloaded worldwide about 25K times and very likely saving global users countless hours of time and significant money by promoting accurate sprayer calibration and delivery of pesticides. Users from all over the globe have benefited from these highly rated mobile application tools.
- 50 issues (Volumes 9 – 11) of the *Cotton/Soybean Insect Newsletter* distributed weekly to various clientele (county agents, consultants, producers, etc.) during spring-summer (2014
- 2016) (Volumes 1 – 11, 180 issues, 2006 - 2016).
http://www.clemson.edu/extension/rowcrops/cotton/pest_management/newsletters/index.html
- 52 professional presentations (15 invited) (career total: 349, invited: 75)



Ahmad Khalilian, PhD
Professor
Department of Agricultural Sciences

Ahmad Khalilian is a Biosystems Engineer who is dedicated to the advancement of engineering applicable to agricultural, food, and biological systems. He has provided leadership to an internationally recognized precision farming research program at the Edisto REC for sensor-based and site-specific applications of crop inputs (fertilizer, lime, nematicides, herbicides, insecticides, irrigation, and tillage). He has developed innovative technologies to provide farmers with effective and affordable tools to manage their crops, to enhance the competitive position of U.S. Agriculture and improve stewardship of the environment. These systems apply crop inputs exactly where they are needed, when they are needed, and in the amount that is needed. Most of these technologies are commercially available and are widely used by growers and Agriculture industries.

A pioneer in developing a precision agriculture program for Clemson, Khalilian has developed 1) the concept of variable rate nematicide application based on soil electrical conductivity linked to global positioning satellites; 2) algorithms and equipment for sensor-based application of crop nutrients based on reflected lights (red and near infrared) from the crop canopy; 3) equipment for controlling tillage depth “on-the-go” to match soil physical parameters (Intelligent Plow); 4) a variable-rate lateral irrigation system which enhances crop yields while conserving water; 5) an electronic nose for accurately identifying insects and the damage they cause in cotton and soybean fields (Pest and Damage Detector -- PADD); 6) technologies and equipment for site-specific and variable-rate applications of soil applied herbicides, plant growth regulators & harvest aids in cotton production; and 7) guidelines for zone management of crop inputs using soil electrical conductivity (EC). These technologies have the potential to save U.S. producers billions of dollars while enhancing environmental quality by applying fewer fertilizers and pesticides to farmlands. With a grant from NASA, Khalilian is leading a team of scientists utilizing space-based technologies, such as Soil Moisture Active and Passive (SMAP) satellite and the NASA’s Cyclone Global Navigation Satellite System (CYGNSS) for managing irrigation and watersheds.

Recent Accomplishments:

- Eight peer-reviewed published manuscripts and 11 papers in meeting proceedings.
- 26 presentations (13 invited or peer reviewed; and 13 presentations at local meetings, field days, and workshops).
- Research advisor for three Ph.D. and two M.S. students, and a committee member for one PhD student.
- Actively involved in 16 funded research projects (10 as PI and 6 as Co-PI) for a total of
- \$3.557 million.
- Collaborated with 9 Clemson faculty from 6 disciplines and scientists from other U.S. universities, NASA, and USDA-ARS.
- Attended 23 international, national, or local meetings.

- Assisted farmers, county agents, consultants, and equipment dealers with conservation tillage, irrigation, and precision agriculture related problems.
- Reviewed several technical research papers and grant proposals.
- Established about 200 acres of on-farm research plots in 14 growers' fields at geographically diverse locations in South Carolina.

College of Architecture, Arts and Humanities



Angela Naimou, PhD

Professor

English - U.S. American Literature, Cultural Studies

Dr. Naimou's research and teaching interests include contemporary literature and culture of the U.S., Caribbean, and Middle East; theories of race, ethnicity, migration, and diaspora; and the intersections of law, economy, and personhood. She is an Associate Editor for the journal *College Literature* (Johns Hopkins University Press) and serves on the Editorial Board of *Humanity Journal* (U Penn). She is also Treasurer for *The Association for the Study of the Arts of the Present* (ASAP). She holds a B.A. from the University of Michigan – Ann Arbor, and M.A. and Ph.D. degrees from Cornell University.

Recent Accomplishments:

- Angela Naimou's book, *Salvage Work: U.S. and Caribbean Literatures amid the Debris of Legal Personhood* (Fordham 2015), received honorable mention for the William Sanders Scarborough Prize awarded by the Modern Language Association for an outstanding scholarly study of African American literature or culture. The Modern Language Association of America is the oldest and largest association for the study and teaching of languages and literature. The William Sanders Scarborough Prize was established in 2001 and named for the first African American member of the MLA, a scholar of classical philology and languages who was brought up in the South. Naimou's book also won the 2016 ASAP book prize for best study of the arts of the present. In December, she was an invited speaker at "A Mobile World Literature and the Return of Place: New Diasporic Writing Beyond the Black Atlantic," a conference hosted by the Catholic University of Eichstaett-Ingolstadt (Germany), where she presented her current work on refugee timespaces and contemporary literature. She was also an Honorable Mention, MLA William Sanders Scarborough Prize for outstanding scholarly study of African American literature or culture.



James H. Spencer, PhD
Professor
City Planning & Real Estate Development

James H. Spencer is Professor of City & Regional Planning, and Associate Dean of the College of Architecture, Arts and Humanities. His current research focuses on international urbanization and planning issues, with a particular focus on water supplies, infrastructure and inequality. His research has been published in the Journal of the American Planning Association, Environment and Planning A, the Journal of Urban Health, Economic Development Quarterly, and elsewhere. His (2014) book titled Global Urbanization: The Global Urban Ecosystem is a part of the Rowman & Littlefield series on Globalization. His research has been supported by the Ford Foundation, the National Science Foundation, the National Institutes of Health and the Social Science Research Council, among others.

Prior to Clemson, he was an Associate Professor of Urban & Regional Planning, and of Political Science at the University of Hawaii, and has held staff positions at the Ford Foundation and nonprofit organizations working on community development. He holds a B.A. from Amherst College, a Masters of Environmental Management from Yale University, and a PhD from UCLA in Urban Planning.

Recent Accomplishments:

- In September 2016, Jim Spencer was appointed by U.S. Transportation Secretary Anthony Foxx to serve as an expert on the new Federal Advisory Committee on Transportation Equity (FACTE). According to the U.S. Department of Transportation, the committee is intended “to connect people to opportunity, strengthen and revitalize communities, and ensure that transportation systems and facilities reflect and incorporate the input of all of the people and communities they touch.” The FACTE will provide independent advice and recommendations to the Secretary of Transportation about USDOT’s efforts to: 1) institutionalize DOT’s Opportunity Principles into the Department’s programs, policies, and activities; 2) empower communities to have a meaningful voice in local and regional transportation decisions; 3) strengthen and establish partnerships with other governmental agencies regarding opportunity issues; and 4) sharpen enforcement tools to ensure compliance with opportunity-enhancing regulations. The FACTE consists of 11 voting members (<https://www.transportation.gov/acte/members>) who serve two- year terms and meet approximately twice per year, include national-level elected officials, media leaders, and faculty experts. The committee’s first public meeting was held in December, 2016 in Washington, D.C., and the committee is awaiting the committee’s mandate and future activities under the new Trump Administration and Secretary of Transportation Elaine Chao.



Valerie Zimany, MFA
Professor
Department of Art

Valerie Zimany received her BFA from the University of the Arts, Philadelphia, PA. After completing her MFA studies at Kanazawa College of Art as a Fulbright Fellow and Japanese Government Scholar, Valerie spent three years on a city-sponsored residency at the Utatsuyama Craft Workshop in Kanazawa, Japan. She was recently awarded a second Fulbright grant by the U.S. Department of Education for her proposal *Porcelain Fever: Contemporary Kutani Practitioners and Processes*, and returned to Kanazawa as a guest researcher at the Institute of Art and Design, Kanazawa

College of Art in Summer and Fall 2011. Valerie's work has been included in numerous solo and group exhibitions in venues such as the 9th International Ceramic Competition Mino, the 5th World Ceramic Biennale Korea, the Archie Bray Foundation for the Ceramic Arts, Helena, MT, The Clay Studio, Philadelphia, PA, the Society for Contemporary Craft, Pittsburgh, PA, the 701 Center for Contemporary Art, Columbia, SC, and more. Her works are in multiple public and private collections. Valerie was named an American Craft Council Searchlight Artist for 2007, a Ceramics Monthly Emerging Artist for 2008, and a Niche Award Finalist in 2011. Besides exhibiting, Valerie's work can be seen in the Lark Books *500 Ceramic Sculptures* and *500 Prints on Clay*, and is the subject of "Valerie Zimany: Recasting The Japanese Tradition," a full feature article in the November 2008 issue of Ceramics Monthly. Also acting as an independent curator, Valerie has organized concurrent exhibitions for the National Council on Education for the ceramic arts including: *Method:Multiple* and *Episodic, Clustered, and Migrating* (NCECA 2011), *To Wander Out of Place: Artists and Asia* (NCECA 2012), and *Valerie Zimany: Porcelain Fever* (NCECA 2013). Internationally, she recently directed the exhibition *Porcelain Fever: Contemporary Artists and Kutani Now* in cooperation with the non-profit art space ArtGummi, Kanazawa City Hall, and the 21st Century Museum of Contemporary Art Kanazawa, Japan.

Recent Accomplishments:

- Dr. Zimany's ceramic artworks are currently on view in three international exhibitions at prominent institutions across the country. Her sculpture "Chigiri-e (Bakusou)" is featured in Transference: Transfer Printing and Contemporary Ceramics, an international juried and invitational exhibition at The Clay Studio in Philadelphia, Pennsylvania. Transference explores how the combination of ceramics and transfer print technology enables the immediacy of printmaking to be joined with the enduring nature of fired clay. Artists use everything from traditional intaglio printing methods to modern technology to make prints that are immediate, personal, digitized, and/or imbued with historic references. The combination of historic process with contemporary ideas and design continues to result in dynamic, thoughtful works of art that resonate through the fields of art, design, history, and technology. The exhibition runs from Oct. 7 – Nov. 28, 2016. "Chigiri-e (Moonwalker)" was selected for Points of Departure,

an international juried exhibition at the John Michael Kohler Arts Center in Sheboygan, Wisconsin from Oct. 20, 2016 through Jan. 1, 2017. A vessel grouping of Zimany's "Toddlers" is highlighted in A to Z: AMOCA's Permanent Collection at the American Museum of Ceramic Art in Pomona, California. Zimany's work was accessioned into the museum collection in 2012 as a gift of Gail A. and Robert M. Brown. The exhibition runs through April 23, 2017.

College of Behavioral, Social and Health Sciences



Dr. Tracy Fasolino, PhD, FNP-BC, ACHPN
Professor
School of Nursing

Dr. Fasolino is a nurse researcher who focuses on stimulation pedagogies for training healthcare providers and the role of palliative care in patients with advanced chronic illnesses. She has conducted several research projects on the use of stimulation pedagogies for undergraduate and graduate nursing students. Through collaborative efforts with other nurse educators, Dr. Fasolino has redesigned simulation experiences for students to improve critical thinking skills and management of deteriorating patients. Students have assisted in developing virtual training sessions to help direct patient care nurses identify rapidly

deteriorating patients. She has been actively engaged with other colleges to develop stimulation experiences to enrich students learning and improve quality of life for patients with advanced chronic illnesses. As a palliative care nurse researcher, Dr. Fasolino has actively worked to develop partnerships with healthcare teams in order to advance the science and engage clinicians. She continues to work with interdisciplinary teams to create and implement models of care for palliative care patients. The strength of her research is guided by an active clinic practice as a Palliative Care Nurse Practitioner in a partnering health system. She is able to identify gaps in knowledge and deficiencies in care management in her role as an NP. The graduate students involved in her research have explored the knowledge and understanding of palliative care by healthcare providers. In addition, students are engaged with Chaplains and Massage Therapists to explore the role of complementary and alternative medicine to reduce symptom burden for patients with advanced chronic illnesses. Lastly, Dr. Fasolino has been influential with reducing readmissions for a health system in the Upstate. She applied a prediction-model study, designed a risk stratification tool, and worked to develop models of care for patient with advanced diseases. As a result of these efforts, the health system has been nationally recognized for the lowest readmission rates in the U.S.

Recent Accomplishments:

- Six regional, state, and national conference presentations with graduate and healthcare clinicians as co-authors/presenters.
- Five manuscripts in refereed journals as primary or co-author with 14 citations in referred journals.
- Total of \$279,943 funded over the past 5 years for advancing nursing science and stimulation pedagogies.
- NIH Early Career Reviewer Program at the Center for Scientific Review (CSR).
- Appointed as a researcher reviewer for international conference - American Academy of Hospice & Palliative Medicine/Hospice & Palliative Nursing.

- Co-PI for SC statewide initiative on the use of Physician Ordered Scope of Treatment (POST) form.
- Recipient of scholarship from submitted essay to AAHPM/HPNA organization.
- Board certified Family Nurse Practitioner from American Nurses Credentialing Center as Family NP
- Board certified Hospice & Palliative Nursing Advanced Practitioner from Hospice & Palliative Care Nursing organization.
- Recognition for clinical expertise by Upstte health system for NP Award of Excellence.
- Receipt of Palmetto Gold Nurse Recognition & Scholarship Program.
- College of Health, Education & Human Development Faculty Innovation Award.



Dr. Richard Pak, PhD
Professor
Department of Psychology

Dr. Pak is one of very few human factors researchers that studies the interaction between aging and technology. Through understanding how the process of aging affects our minds, how those changes affect our ability to use technology, and furthermore, how to redesign

technology so that everyone can use it easily, Dr. Pak and his team are making strides towards making helpful advances in automation and robotics more accessible for older adults while improving their health and wellness. By pulling together the growing field of autonomous systems and a deep concern for the quality of life of our aging population, Dr. Pak's research uniquely tackles the problems of older adult's everyday lives. In fact, his co-authored book, *Designing Displays for Older Adults*, condensed scientific psychology for professional audiences who may be designing technology for older adults, thereby systemically affecting a large portion of the aging population. In short, his fundamental research moves towards an understanding of the aging brain, and the technological applications that his research creates enables Dr. Pak and his team to imagine a future in which growing older is eased by the automated technology that surround us.

Recent Accomplishments:

- Elected fellow of the American Psychological Association
- Invited panelist, Federal Highway Administration's Driver Acceptance of Vehicle Automation Expert Panel Meeting
- Invited participant in the Air Force Office of Scientific Research (AFOSR) sponsored workshop on human-machine trust
- Ten peer-reviewed publications in scholarly journals
- Recipient of third Google Faculty Research Award (\$100,000) to study trust and autonomous technology
- Recipient of Air Force Office of Scientific Research grant to study automation and older adults (\$245,000)

- Forthcoming book: [Aging, Health, and Technology](#) (to be published by Elsevier)



Katherine Weisensee, PhD
Professor and Interim Chair
Department of Sociology, Anthropology and Criminal Justice

Dr. Weisensee is a biological and forensic anthropologist that seeks to understand biological variation in human populations using human skeletal and other phenotypic data. The Weisensee lab utilizes three-dimensional morphometric approaches for documenting variation among humans using developmental models to document how the environment impacts growth and development. During the summer of 2017, Dr. Weisensee will take students to Szeged, Hungary, which houses 30,000 human skeletons to collect data on two samples, one from pagan agriculturists and one from 200 years later after the adoption of Christianity and feudalism to document how this political

and economic transformation impacted growth and development in the populations. In addition, the Weisensee lab has ongoing research examining unidentified individuals that died while crossing the U.S.-Mexico border to improve identification methods for these individuals by documenting variation in health and disruptions of normal growth and development patterns that characterize many unidentified border crossers. To further understand patterns of death and health, the Weisensee lab is creating a GIS database of coroner records from Pickens County over the past 40 years to analyze the relationship between cause of death and socioeconomic and other related variables. The Weisensee lab assists local law enforcement agencies from the Upstate when human skeletal remains are discovered in a forensic context. Finally, the Weisensee lab has developed a relationship with the Greenwood Genetics Center to apply for funding to develop protocols for collecting morphometric data from three-dimensional facial scans from individuals affected by congenital disorders to better quantify the dysmorphologies associated with genetic syndromes which will lead to earlier diagnoses and a better understanding of the disruptions in pathways associated with craniofacial development.

Recent Accomplishments:

- Six peer-reviewed published manuscripts
- Three forensic anthropology case reports
- Five presentations at national meetings
- Mentor of ten Creative Inquiry students
- Appointed to a Faculty Scholar of the Clemson University School of Health Research
- Appointed to a Faculty Scholar of Clemson Thinks²QEP
- Chair, Faculty Senate Welfare subcommittee
- Chair, University Assessment Committee

College of Business



Michael Dorsch, PhD
Professor
Department of Marketing

Dr. Dorsch earned his MBA at Arizona State and his PhD in marketing from the University of Arkansas. He has taught at Clemson since 1993. Dr. Dorsch received national awards from two of the most prestigious journals in the Marketing discipline and was recognized for distinguished service by another during the previous year.

Recent Accomplishments:

- Has published three dozen referred papers and made 90 conference presentations.
- Received two Outstanding Reviewer Awards and was recognized as a member of a third journal's recently created Top 5% Review Team. The Top 5% Review team is composed of Editorial Review Board (ERB) members whose reviews are consistently evaluated as being in the top 5% of all reviews for their quality and insightfulness. The Outstanding Reviewer Awards are for the *Journal of Marketing*, the consensus #1 ranked Marketing journal, and the *Journal of Retailing*, a top-5 ranked Marketing journal. Dr. Dorsch's recognition as a member of the Top 5% Review Team is for the *Journal of the Academy of Marketing Science (JAMS)* that is a top-5 ranked Marketing journal.
- Has also been reappointed to the Editorial Review Boards for the *Journal of Marketing* and the *Services Industries Journal*. His other ERB memberships (e.g., *JAMS*, *JR*) and Senior Advisory Board positions (Journal of Marketing Theory and Practice – JMTP) are ongoing.



Thomas Hazlett, PhD
Endowed Professor
Department of Economics

Dr. Hazlett holds the Hugh H. Macaulay Endowed Chair in Economics at Clemson, conducting research in the field of Law and Economics and specializing in the Information Economy, including the analysis of markets and regulation in telecommunications, media, and the Internet. Prof. Hazlett served as Chief Economist of the Federal Communications Commission, and has held faculty positions at the University of California, Davis, Columbia University, the Wharton School, and George Mason University School of Law.

Recent Accomplishments:

- His research has appeared in such academic publications as the *Journal of Law & Economics*, the *Journal of Legal Studies*, the *Journal of Financial Economics* and the *Rand Journal of Economics*, and he has published articles in the *Univ. of Pennsylvania Law Review*, the *Yale Journal on Regulation*, the *Columbia Law Review*, and the *Berkeley Technology Law Journal*.
- Writing for popular periodicals include: the *Wall Street Journal*, *New York Times*, *Reason*, *The New Republic*, *The Economist*, *Slate*, and the *Financial Times*, where he was a columnist on technology policy issues, 2002-2011.
- Serves as Director of the [Information Economy Project](#) at Clemson University.
- Has provided expert testimony to federal and state courts, regulatory agencies, committees of Congress, foreign governments, and international organizations.



Jason Thatcher, PhD
Professor
Department of Management

Dr. Jason Thatcher is a Professor of Information Systems. He earned a PhD in Information Systems from the College of Business at Florida State University. He is a member of Phi Beta Kappa, Beta Gamma Sigma, Sigma Alpha Epsilon, and the PhD Project.

Dr. Thatcher is currently President of the Association for Information Systems. He recently completed his second term as VP of Membership for the Association for Information Systems. He guided the strategic realignment of services to support more opportunities for the career development and recognition of our members. He has also served as an AIS representative on the Board of Partnership for Advancing Computing Education (PACE) from July 2012 through the present. PACE charter members are Association for Computing Machinery (ACM), Association for Information Systems (AIS), Computer Science Teachers Association (CSTA), IEEE Computer Society (IEEE), National Center for Women and Information Technology (NCWIT), and Computing Research Association.

Recent Accomplishments:

- Ranked 3rd in the world by the AIS for publications in key journals, 2014-2016.
- Received The Velux Villum Fellowship awarded to distinguished international information systems researchers.
- Along with Varun Grover and alumna Jennifer Gerow received the Operational Research Society's Stafford Beer Medal for a paper published in the *European Journal of Information Systems*.
- Senior Editor at *MIS Quarterly*, *Decision Sciences*, and *AIS Transactions on Human Computer Interaction*.
- Served on the editorial boards of *Information Systems Research*, *Journal of the AIS*, *European Journal of Information Systems*, *Information Technology and People* and other journals.

- Member of the Circle of Compadres for contributions to mentoring minority PhD students in Information Systems and related STEM disciplines.

College of Education



Abigail A. Allen, PhD
Professor of Special Education
Department of Education and Human Development

Dr. Allen's research focuses on writing assessment and intervention in grades K-3 and preservice teacher preparation in Special Education. She is currently leading studies on curriculum-based measures, both in early writing and in university classrooms, and using content acquisition podcasts in literacy methods and early intervention undergraduate courses.

Recent Accomplishments:

- Co-Principal Investigator, internal Clemson ADR Grant (\$4,735, 2017-2018): *Developing Classroom Management and Student Observation Measures within the Classroom Teacher (CT) Scan*
- Published and in-press (since 2015): 4 peer-reviewed articles, 2 book chapters
- Reviewer, *Remedial and Special Education*
- Reviewer, *Assessment for Effective Intervention*
- Reviewer, *Journal of Special Education Technology*
- 2017 University of Missouri Distinguished Dissertation Award, Social Sciences Discipline
- 2015 Graduate Student Instructor of the Year, University of Missouri
- Publications Committee, Division for Learning Disabilities of the Council for Exceptional Children



D. Matthew Boyer, PhD
Professor
Education and Human Development

Situated in the Learning Sciences, Dr. Boyer's current research and development projects focus on game- and simulation-based learning, learning analytics, and learning environments. Broadly, he studies how people use technology to support their learning. At Clemson, along with Dr. Dani Herro, he is co-director of the Digital Media &

Learning Labs in the College of Education and a faculty fellow of the Spiro Institute focused on educational entrepreneurship and entrepreneurial education. As PI or Co-PI, he has received over \$1 million in external funding and has recently submitted 8 proposals for NSF funding totaling over \$9.5 million.

Recent Accomplishments:

- South Carolina CHE: ITQ HOMS Project, \$246,439, January 2015 - August 2016, Co-PI
- NSF IUSE: VRFT Virtual Reality Field Trips, \$227,369, July 2015 - June 2017, Co-PI
- NSF I-Corps L: VRFE, \$50,000, July - December 2016, PI; Entrepreneurial Lead Emerson Smith, Class of 2016, developed a company, ESIO, LLC from this project
- DOE Nuclear Energy University Program: Energize, \$799,999, October 2016 - May 2019, Co-PI



S. Megan Che, PhD
Professor of Mathematics Education
Department of Teaching and Learning

Dr. Che's research focuses on social justice in mathematics teaching and learning. An award-winning author, her scholarly efforts center on student experiences in mathematics classrooms and how those experiences relate to power and agency at individual and collective levels. Dr. Che has been awarded more than \$2.8 million in external funding, including an NSF-funded research project investigating all girls, all boys, and coeducational mathematics and science classrooms. She has published or has in press 24 peer reviewed publications and has given six invited presentations and 7 international presentations. Dr. Che has served as President of the SC Association of Mathematics Teacher Educators.

Recent Accomplishments:

- 9 articles published or in press since 2015
- 13 national presentations since 2015
- Kipchoge Neftali Kirkland Social Justice Award for 2015 for the paper *Educative Psychic Violence: Articulating and Resisting the Ramifications of Slavery Math Problems*
- Member, inaugural Computer Science Standards for SC for grades K-8, 2016-2017
- Member, Research Council on Mathematics Learning, Nominations Committee
- Board Member (Director at Large) of the School Science and Mathematics Association

College of Engineering, Computing and Applied Sciences



Stephen H. Foulger, PhD
Gregg-Graniteville Endowed Professor in Engineering
Departments of Materials Science and Engineering and
Bioengineering

Dr. Foulger's research is in the field of polymer synthesis and physics. His research is focused on using polymers in optoelectronic and theranostic applications, specifically when formed into colloids. His group has interests in organic light emitting devices, memristors, photovoltaics, metamaterials, and electrochromics, as well as therapeutic & imaging "nanodevices" for oncology. His group collaborates extensively with the Sonoco Institute to transition materials developed in his group into printable functional structures. Prof. Foulger is currently the Director of the Center for Optical Materials Science and Engineering Technologies (COMSET). Since coming to Clemson University in 1999, he has published 70 articles in peer reviewed journals and currently has an average citation per article of 43 and an *h*-index of 26. Of these publications, he has had 12 cover illustrations in journals with high impact factors such as *Advanced Materials*, *Soft Matter*, *Small*, and *Advanced Functional Materials*, to name a few.

Recent Accomplishments:

- He has published 9 peer reviewed articles and 1 peer reviewed proceeding.
- Dr. Foulger is active in the professional society *Optical Society of America* (OSA); he has been the *Clemson Student OSA Chapter's* faculty advisor for over 14 years, is the current vice-chair of the *OSA Materials Studies Group*, and is an associate editor of OSA's premier materials journal entitled *Optical Materials Express*.
- Dr. Foulger was awarded in 2016, as the primary investigator, the *National Science Foundation (NSF) EPSCoR Award* for the proposed work entitled "RII Track-2 FEC: The Creation of Next-Generation Tools for Neuroscience - Noninvasive Radioluminescence Approaches to Optogenetics". This latter grant involves the collaboration of four universities distributed over three states.
- He is a co-organizer of the annual *OSA Novel Optical Materials and Applications Symposium*.
- He has two current NSF funded research projects for a total of approximately \$6.4M in extramural funding.
- He has organized the funding & mentoring of 12 undergraduates in COMSET's Charles H. Townes Optical Science and Engineering Summer Program.



Julie P. Martin, PhD
Professor
Engineering & Science Education

Dr. Martin focuses on advancing fundamental knowledge of social interactions that influence students' decisions to enter and persist in engineering and science, particularly underrepresented students. A major thrust of her current research program is the National Science Foundation (NSF) Faculty Early Career Development (CAREER) Grant entitled, "Influence of Social Capital on Under-Represented Engineering Students' Academic and Career Decisions." Dr. Martin enjoys helping her students reach their full potential in their academic, professional, and personal lives. She especially enjoys teaching the Preparing for the Professoriate course she developed for the Department of Engineering and Science Education's Ph.D. and certificate programs, where she has the pleasure of working with graduate students from across Clemson's College of Engineering, Computing and Applied Sciences. I also enjoy teaching the introductory Materials Science and Engineering course, and making materials topics relevant to students in other engineering majors at Clemson. During my career, I have also taught first year engineering courses at Clemson, University of Houston and Virginia Tech.

Recent Accomplishments:

- She has published 8 peer review articles
- Clemson Graduate Student Government Excellence in Mentoring Award (2016)
- ASEE Educational Research and Methods Division Distinguished Service Award (2016)
- American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellowship (assigned to the National Science Foundation), 2012-2013,
- Women in Engineering ProActive Network (WEPAN) Distinguished Service Award, 2012
- American Society for Engineering Education (ASEE) Division of Educational Research and Methods (ERM) 2015 Best Diversity Paper Award: A series of singular testimonies: A new way to explore unearned advantages and unearned disadvantages



Ian Walker, PhD
Professor
Holcombe Department of Electrical and Computer Engineering

Dr. Walker is a leading figure in the field of continuum robots, a field his research group at Clemson has been instrumental in creating. His research group has produced over 300 scholarly publications, and his work is cited in almost every paper published in the field in recent years. While Dr. Walker's research is focused on developing and advancing the principles and methods of the field, he has also contributed to novel applications of robotics in areas as varied as architecture, teaching, space exploration, remote inspection, and ship to-ship refueling systems. His research leadership is reflected in his rank as a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), the premier electrical engineering professional society, "for contributions to underconstrained robot manipulator systems". Dr. Walker has also engaged in many years of professional service leadership within the Robotics and Automation Society of the IEEE, and he served on the National Academy of Sciences committee addressing technologies for exploration of planetary surfaces.

Recent Accomplishments:

- Dr. Walker has served as the Principal Investigator of two NSF grants and one NASA grant as well as Co-Principal Investigator on three NSF grants since 2014.
- Dr. Walker's research group, under NSF funding, designed and constructed a unique "robot room", fielding and evaluating it a public space in 2015/16. The room, designed to promote literacy in early readers (young children) was deployed - fully accessible to the public - for over a year in the Richland County Library, the largest public library in South Carolina. Beyond the originally intended scope, the library reprogrammed and successfully used the room as part of its teenage outreach programs.
- Dr. Walker served as the Clemson Technical Team Lead on the successful Advanced Robotics Manufacturing Consortium bid for the new \$253 million DoD National Network for Manufacturing Innovation (NNMI) Institute in 2016. He served as the technical contact point at Clemson for the Consortium during the kick-off and proposal development phase. His involvement included internal team-building and working to (successfully) establish Clemson as the Southeast Regional lead for, and a major player within, the Institute.
- Dr. Walker was elevated to the rank of Associate Fellow of the American Institute of Aeronautics and Astronautics in 2016. This appears to be the highest level than any person in the area of robotics has attained within this Society.
- Dr. Walker served as Co-Editor of a Special Issue on continuum robots in the journal *Advanced Robotics* in 2015 and had numerous invitations to give Plenary/Keynote/Panel/Invited talks on the topic.

College of Science



Sean Brittain, Ph.D.

Professor

Department. of Physics & Astronomy

The goal of my work is to understand how diffuse gas and dust in disks around forming stars turns into planets like Jupiter or Saturn, how the initial conditions of planet formation compare to the current state of planets that exist around mature stars, and what our early solar system might have looked like just as the earth was forming. Understanding the formation of planets remains one of Astronomy's most rewarding challenges. It represents a significant

component of the search for our own cosmic origins, and bears on the possibility of life on other worlds. Consequently, it figures prominently in the recommendations of the most recent NRC Decadal Survey for Astronomy and Astrophysics and is a principal component of the NASA Science Directorate strategic plan.

When clouds of gas and dust in interstellar space grow sufficiently massive, they collapse into stars. A by-product of this process is the formation of a disk of remnant material around the star. Such disks are the birth places of planets. I use high resolution infrared spectroscopy to measure the properties of gas in putative planet forming disks. Spectroscopy is a method of spreading out the light into a sort of rainbow. Each molecule in the gas emits light at specific wavelengths resulting in a rainbow that looks like a picket fence. We refer to this picket fence shaped rainbow as a spectrum. Gas moving toward us has a spectrum that looks bluer and gas moving away from us has a spectrum that looks redder. By measuring the shape and relative intensity of the light making up a spectrum, I determine the properties of the gas around the star (*viz.* temperature, composition, density, and spatial distribution). This analysis provides evidence of forming planets. The identification of forming planets in circumstellar disks is central to understanding how these objects form. Such observations allow us to connect the initial conditions in disks to the kind of planets that form, provide unique insights into the physics of the planet formation process, and provide direct tests of theoretical models of planet formation.

Recent Accomplishments:

- Published 12 peer-reviewed articles (54 total, h-index=26, 1820 citations)
- National media interest in this work was reflected by articles in USA Today and the Atlantic
- Presented invited talks at the Univ. of Groningen (the Netherlands), ESO Science Center (Santiago, Chile), Caltech, U. of Oklahoma, U. of Arizona, NASA Goddard, and NASA Ames.

- Presented 10 contributed talks at conferences.
- Currently advising 2 Ph.D. students and 2 undergraduate students (in 10 years at Clemson I have supported a postdoc, graduated 3 Ph.D. students, 8 M.S. students, and supervised 36 undergraduate student researchers).
- Served as an external committee member for PhD theses at the University of Groningen and Univ. of Missouri, St. Louis.
- Managing \$1 million in active awards to Clemson (PI or co-PI on 20 proposals awarded totaling \$4.8 million since arriving at Clemson in 2006).
- Awarded 22 nights of time to observe on the NASA IRTF, Kitt Peak, Gemini, Subaru, and Keck telescopes.
- Formed a partnership with Laurens 55 School District to provide STEM content training for K-12 teacher.



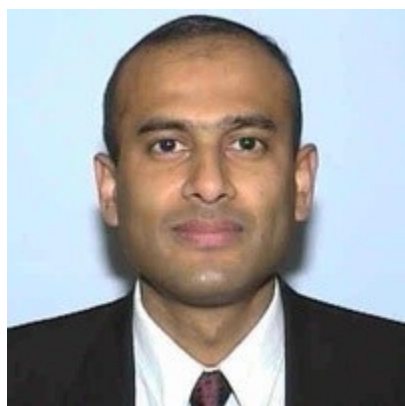
Dr. Stephen Creager, PhD
Professor
Department of Chemistry

Dr. Creager leads a research team focused on electrochemical approaches to energy storage and conversion, for example using batteries, fuel cells, electrolysis cells, and capacitors. His team's longrange goal is to create fundamental knowledge and new materials that enable electrical energy to be stored and used with greater efficiency and flexibility compared with existing technologies. In

his most recent work, he and his team created a miniature test cell that enables intensive and reliable testing on very small batches of experimental catalyst and polymer electrolyte materials for hydrogen fuel cells and water electrolysis cells. Rapid screening studies using this cell and other similar cells will accelerate the pace of discovery of new materials for next- generation fuel cells for hydrogen-powered cars, electrolysis cells for water splitting to hydrogen and oxygen, and advanced batteries for electric vehicles and grid-scale electrical energy storage. These cells will also be used to support a new collaborative project with the Savannah River National Laboratory, scheduled to start in summer 2018, separating isotopes of hydrogen, e.g. protium, deuterium and tritium, by an electrochemical process that could ultimately prove useful for treating tritiumcontaminated water, for example from the Fukushima nuclear plant accident. Dr. Creager's current research is supported by the US Department of Energy and the Clemson Creative Inquiry program, and his work has previously been supported by the National Science Foundation, the US Army Research Labs, the National Aeronautical and Space Administration, and others.

Recent Accomplishments:

- Currently leads a team of three undergraduate students and four graduate students
- Co-author on 12 journal publications (105 total)
- Presented 8 invited / contributed talks at professional meetings
- Served on 7 invited professional review panels (NSF, DOE, National Academies)
- Reviewer for the NSF Graduate Fellowship Program, spring 2015
- Founding faculty advisor to Student Chapter of The Electrochemical Society, 2014 - present
- Previously served as Chemistry Department Chair (2007-13) and interim Associate Dean of the Graduate School (2005-2007)
- Major advisor for 17 PhD and 8 MS graduates since 1994



Taufiqar R. Khan, PhD
Professor
Department of Mathematical Sciences

Dr. Khan is an applied mathematician whose research focuses on modeling, simulation, and inverse problems involving complex systems. His research focuses on image reconstruction particularly developing novel algorithms for tomography applications including diffuse optical tomography and electrical impedance tomography. These tomography methods are alternatives to traditional radiology techniques such as x-ray mammography, CT scans, PET/SPECT and MRI. Optical

tomography particularly has tremendous potential compared to CT because it uses visible light and does not involve any harmful radiation. Therefore, optical tomography can be repeatedly used and has applications in early screening of breast cancer and neo-natal brain imaging. However, the mathematical problem for optical tomography is more complicated than that of CT because it is highly non-linear and very sensitive to measurement noise. Dr. Khan's research group has proposed a novel algorithm for stable image reconstruction in optical and electrical impedance tomography using sparsity approach. His work also has wide range of broader impacts including geo-physical imaging with applications to oil recovery, detecting disturbance propagation including blackouts in power systems, and control of autonomous vehicles using car following models for intelligent transportation systems.

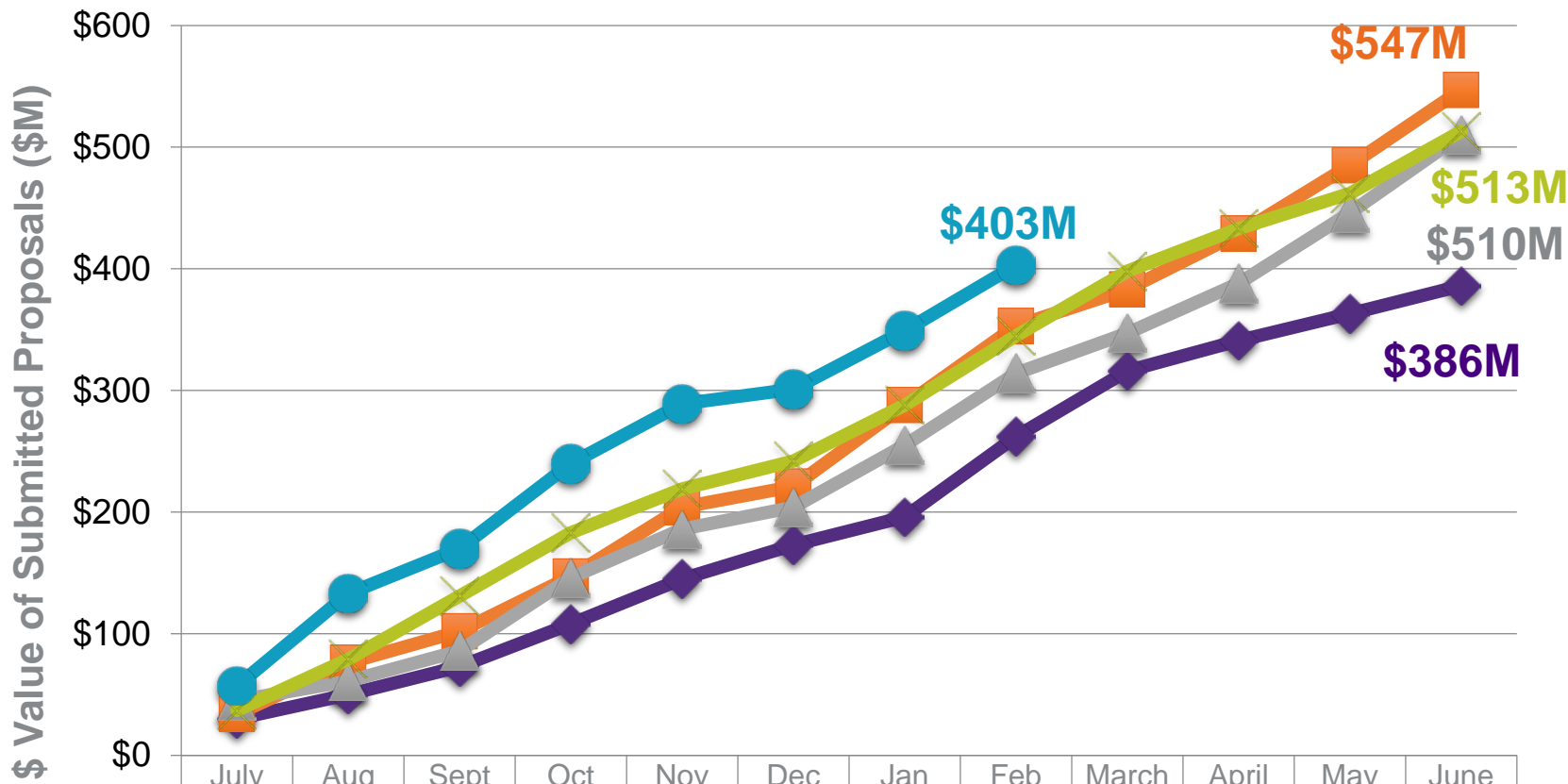
Recent Accomplishments:

- Published seven peer-reviewed manuscripts (two journal articles and five proceedings)
- Presented at more than 12 national and international conferences

- Eight invited talks at national and international meetings
- Invited keynote speaker at ICCM in Auckland, New Zealand, invited colloquium speaker at the Australian National University
- Funding through the National Science Foundation (over \$2.9 million as a co-Principal Investigator) and the Department of Education GAANN program
- Serves in the Editorial Board of International Journal of Applied Nonlinear Science and International Journal of Applied Mathematical Analysis and Applications
- Recently (past two years) graduated nine students including three students who participated in the graduate exchange program that Dr. Khan built with the University of Bremen, Germany Two PhD students – one joined as a postdoc at the University of Washington (Seattle) and another one started a tenure track Assistant Professor position at Goucher College (Maryland) Six master's students who have gone to industry or continuing their PhD An undergrad honors student who joined Los Alamos National Lab
- Currently Dr. Khan's research group consists of six graduate students. His group collaborates with Clemson researchers across colleges including the Department of Environmental Engineering & Earth Sciences and Civil Engineering. Dr. Khan's group also has an active collaboration with the Center of Industrial Mathematics at the University of Bremen, Germany. This collaboration is funded through the Humboldt Foundation and the German Science Foundation.

Research Metrics

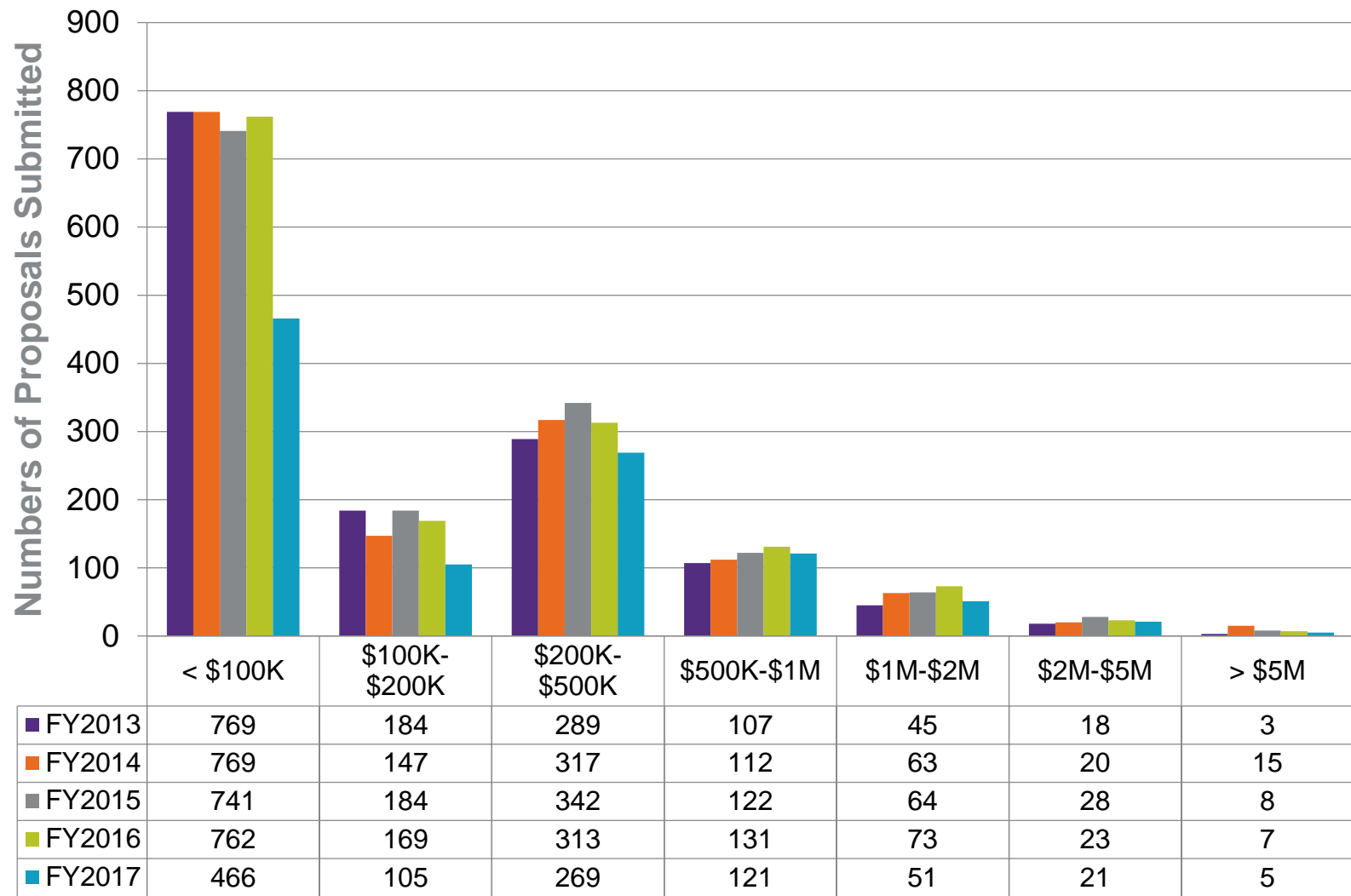
CLEMSON CUMULATIVE SUBMISSIONS: \$ REQUESTED (2013-2017*)



	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June
FY 2013	\$30	\$50	\$73	\$108	\$145	\$173	\$196	\$262	\$316	\$341	\$363	\$386
FY 2014	\$34	\$76	\$102	\$147	\$204	\$221	\$288	\$353	\$383	\$429	\$485	\$547
FY 2015	\$45	\$61	\$86	\$146	\$186	\$204	\$255	\$314	\$347	\$388	\$446	\$510
FY 2016	\$37	\$79	\$131	\$183	\$219	\$242	\$288	\$345	\$398	\$433	\$462	\$513
FY 2017	\$57	\$133	\$170	\$240	\$289	\$301	\$349	\$403				

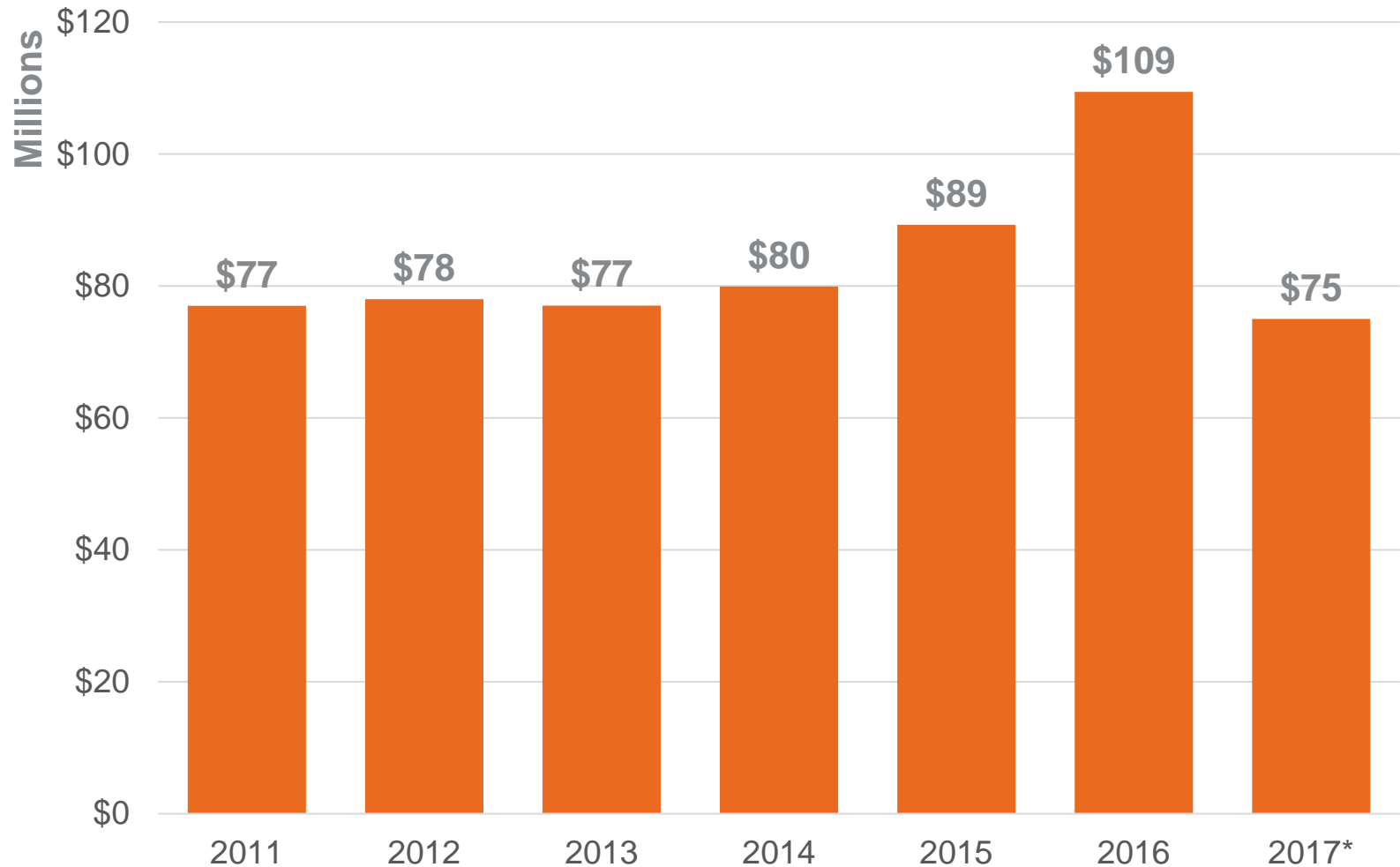
* As of February 28, 2017

CLEMSON CUMULATIVE SUBMISSIONS: \$ REQUESTED (2013-2017*)



* As of February 28, 2017

CLEMSON CUMULATIVE AWARDS (2013-2017*)



* As of February 28, 2017

	2013	2014	2015	2016	2017	Data Trends
					As of Feb 28, 2017	2013-2016
RESEARCH INPUTS						
a. Proposal Submissions (Count)	1,414	1,443	1,489	1,478	1,038	
1 AAH	38	51	65	62	56	
2 CAFLS	235	230	224	222	131	
3 CBSHS	81	93	102	104	80	
4 CECAS	549	555	582	617	435	
5 COE	51	54	39	45	24	
6 COB	7	15	13	15	7	
7 COS	242	247	263	239	171	
8 CCIT	12	12	6	3	6	
9 PSA	88	90	118	97	106	
10 VP for Res & Interdisc Inst	31	17	7	17	9	
11 All Other	80	79	70	57	13	
b. Proposal Submissions (Value)	\$ 386,106,648	\$ 547,095,092	\$ 510,484,443	\$ 513,180,239	\$ 403,007,619	
12 AAH	\$ 3,580,723	\$ 14,849,844	\$ 12,839,717	\$ 10,263,562	\$ 1,411,669	
13 CAFLS	\$ 34,372,635	\$ 43,999,698	\$ 36,519,514	\$ 23,617,486	\$ 22,291,370	
14 CBSHS	\$ 13,290,053	\$ 21,511,560	\$ 26,844,900	\$ 33,953,358	\$ 31,086,317	
15 CECAS	\$ 188,119,992	\$ 283,220,894	\$ 278,574,540	\$ 298,715,448	\$ 230,226,906	
16 COE	\$ 13,990,537	\$ 14,850,254	\$ 11,982,507	\$ 15,246,312	\$ 11,774,725	
17 COB	\$ 975,025	\$ 2,209,136	\$ 4,025,430	\$ 2,035,401	\$ 921,817	
18 COS	\$ 75,761,887	\$ 118,510,356	\$ 100,001,493	\$ 106,950,376	\$ 70,263,416	
19 CCIT	\$ 37,911,464	\$ 12,473,160	\$ 2,116,258	\$ 2,219,976	\$ 5,010,591	
20 PSA	\$ 8,554,512	\$ 16,989,642	\$ 26,480,496	\$ 5,530,132	\$ 21,097,604	
21 VP for Res & Interdisc Inst	\$ 4,191,314	\$ 5,660,278	\$ 5,861,000	\$ 6,131,772	\$ 5,799,729	
22 All Other	\$ 5,358,506	\$ 12,820,270	\$ 5,238,588	\$ 8,516,416	\$ 3,123,475	
c. Research Awards	\$ 77,027,434	\$ 79,924,631	\$ 89,276,598	\$ 109,442,077	\$ 75,012,617	
23 AAH	\$ 224,473	\$ 590,154	\$ 656,030	\$ 1,400,972	\$ 1,472,161	
24 CAFLS	\$ 7,284,564	\$ 6,659,619	\$ 14,149,829	\$ 8,619,438	\$ 8,007,231	
25 CBSHS	\$ 2,737,876	\$ 3,385,989	\$ 4,776,199	\$ 5,065,880	\$ 3,159,971	
26 CECAS	\$ 34,201,429	\$ 37,723,081	\$ 43,231,494	\$ 45,535,064	\$ 37,025,291	
27 COE	\$ 2,629,505	\$ 4,089,157	\$ 3,203,419	\$ 2,945,717	\$ 2,383,996	
28 COB	\$ 2,023,722	\$ 1,114,979	\$ 1,312,998	\$ 783,916	\$ 595,506	
29 COS	\$ 10,344,423	\$ 7,780,394	\$ 9,938,990	\$ 15,605,625	\$ 13,412,626	
30 CCIT	\$ 630,904	\$ 5,872,195	\$ 631,877	\$ 9,400,333	\$ 404,701	
31 PSA	\$ 14,827,292	\$ 12,284,142	\$ 9,588,294	\$ 12,965,629	\$ 3,686,391	
32 VP for Res & Interdisc Inst	\$ 1,790,060	\$ 268,882	\$ 573,565	\$ 5,139,315	\$ 4,003,976	
33 All Other	\$ 333,188	\$ 156,039	\$ 1,213,903	\$ 1,980,188	\$ 860,768	
d. Notable Awards						
34 NSF CAREER Awards (by start date)	4	1	3	5	7	
35 NIH R01-Equivalent Awards (by start date)	-	-	2	2	1	
36 NIH Career Awards (by start date)	1	-	-	-	-	
37 Air Force Young Investigator Awards	-	-	1	2	-	
38 DOE Early Career Awards	1	-	-	-	-	
e. SUPPORTING WORKFORCE:						
39 Graduate Student Enrollment	4,206	4,372	4,670	4,664	4,425	
40 Sponsored Graduate Research Assistants	822	745	707	693	696	
41 Postdoctoral Fellows	48	64	83	85	90	
42 Research Faculty: Permanent 100% Non-E&G Funded	6	6	6	11	17	
43 Research Faculty: Temporary 100% Non-E&G Funded	18	18	15	14	24	
RESEARCH PROCESS						
f. Sponsored Research Expenditures by Business Unit **	\$ 75,388,679	\$ 69,907,663	\$ 73,307,908	\$ 79,493,329	\$ 52,564,765	
44 AAH	\$ 504,683	\$ 378,112	\$ 419,440	\$ 1,104,015	\$ 725,377	
45 CAFLS	\$ 8,768,472	\$ 7,706,442	\$ 6,752,344	\$ 8,631,050	\$ 5,545,970	
46 COB	\$ 1,239,726	\$ 1,200,289	\$ 1,081,898	\$ 958,613	\$ 500,387	
47 CECAS	\$ 34,969,267	\$ 34,550,052	\$ 34,968,963	\$ 37,483,798	\$ 24,768,292	
48 CBSHS	\$ 3,050,080	\$ 2,817,714	\$ 3,680,307	\$ 4,068,139	\$ 2,604,879	
49 COE	\$ 3,286,747	\$ 3,256,328	\$ 3,793,915	\$ 2,510,444	\$ 1,633,642	
50 COS	\$ 13,209,952	\$ 10,501,024	\$ 9,286,770	\$ 11,327,997	\$ 9,732,013	
51 CCIT	\$ 1,996,620	\$ 1,631,199	\$ 3,400,258	\$ 2,775,609	\$ 312,791	
52 PSA	\$ 4,746,123	\$ 4,858,414	\$ 5,847,737	\$ 5,588,699	\$ 3,413,533	
53 VP for Res & Interdisc Inst	\$ 1,878,676	\$ 1,302,734	\$ 1,892,429	\$ 3,531,216	\$ 2,476,482	
54 All Other	\$ 1,738,332	\$ 1,705,355	\$ 2,183,847	\$ 1,513,750	\$ 851,398	

**Clemson University
Research Report Card
Fiscal Year 2017**

	2013	2014	2015	2016	2017	Data Trends
					As of Feb 28, 2017	2013-2016
g. Sponsored Research Expenditures by emphasis area	\$ 75,388,679	\$ 69,907,663	\$ 73,307,908	\$ 79,466,329	\$ 52,564,765	
55 Advanced Materials	\$ 14,258,840	\$ 11,288,090	\$ 10,713,746	\$ 10,358,364	\$ 6,100,873	
56 Cyberinfrastructure and Big Data Science	\$ 10,277,111	\$ 10,513,388	\$ 10,137,409	\$ 8,874,268	\$ 4,932,459	
57 Energy, Transportation and Advanced Manufacturing	\$ 4,687,300	\$ 5,680,684	\$ 7,236,983	\$ 7,645,169	\$ 10,612,719	
58 Health Innovation	\$ 13,115,231	\$ 10,248,431	\$ 10,188,088	\$ 12,470,389	\$ 9,370,267	
59 Human Resilience	\$ 8,200,415	\$ 7,708,375	\$ 9,700,880	\$ 9,762,842	\$ 4,600,097	
60 Sustainable Environments	\$ 18,331,776	\$ 16,877,332	\$ 17,926,296	\$ 21,723,962	\$ 10,877,015	
61 Other	\$ 6,518,006	\$ 7,591,364	\$ 7,404,505	\$ 8,631,335	\$ 6,071,335	
h. Sponsored Research Expenditures by	\$ 75,388,679	\$ 69,907,663	\$ 73,307,908	\$ 79,493,329	\$ 52,564,765	
62 Federal Gov	\$ 62,890,679	\$ 56,872,229	\$ 58,457,288	\$ 65,135,890	\$ 43,016,606	
63 Foundations, Societies, and Associations	\$ 4,221,409	\$ 4,294,121	\$ 4,743,649	\$ 4,137,246	\$ 2,803,308	
64 Industry/Other	\$ 4,930,465	\$ 5,641,543	\$ 6,069,562	\$ 6,870,782	\$ 4,494,333	
65 International	\$ 813,542	\$ 577,879	\$ 765,179	\$ 778,835	\$ 337,402	
66 Local Gov	\$ 597,732	\$ 614,527	\$ 578,235	\$ 530,909	\$ 315,251	
67 State Gov	\$ 1,934,852	\$ 1,907,364	\$ 2,693,993	\$ 2,039,667	\$ 1,597,864	
i. Sponsored Research Expenditures per T/TT						
68 AAH	\$ 3,299	\$ 2,264	\$ 2,343	\$ 5,841	\$ 1,163	
69 CAFLS	\$ 88,570	\$ 81,120	\$ 69,612	\$ 84,618	\$ 13,022	
70 COB	\$ 14,415	\$ 13,047	\$ 11,510	\$ 9,683	\$ 1,464	
71 CECAS	\$ 169,754	\$ 160,698	\$ 163,406	\$ 163,685	\$ 27,675	
72 CBSHS	\$ 27,982	\$ 26,853	\$ 33,764	\$ 42,376	\$ 4,823	
73 COE	\$ 54,779	\$ 51,688	\$ 62,195	\$ 38,037	\$ 6,543	
74 COS	\$ 95,724	\$ 72,421	\$ 61,912	\$ 77,589	\$ 14,942	
75 CU average (Total exp/Total T/TT faculty)	\$ 83,858	\$ 75,089	\$ 78,826	\$ 85,753	\$ 14,177	
RESEARCH OUTPUTS/OUTCOMES						
76 Doctorates Awarded (Aug, Dec, May)	187	217	237	233	149	
77 STEM Doctorates Awarded (Aug, Dec, May)	118	153	165	138	127	
78 Disclosures	102	129	70	60	44	
79 Patents	16	15	15	14	14	
80 Licenses/Options	9	7	7	5	4	
81 Licensing Revenue	\$ 1,134,289	\$ 762,811	\$ 360,131	\$ 354,827	\$ 277,948	
82 Start-up Companies (based on licenses/options above)	1	4	4	2	1	
THE BOTTOM LINE	2013	2014	2015	2016	As of Feb 28, 2017	
Research Awards	\$ 77,027,434	\$ 79,924,631	\$ 89,276,598	\$ 109,442,077	\$ 75,012,617	
Other Sponsored Program Awards (CCIT Medicaid)	\$ 24,995,729	\$ 28,371,149	\$ 32,569,780	\$ 49,606,193	\$ -	
* Awards Total	\$ 102,023,163	\$ 108,295,780	\$ 121,846,378	\$ 159,048,270	\$ 75,012,617	
** Research Expenditures	\$ 75,388,679	\$ 69,907,663	\$ 73,307,908	\$ 79,493,329	\$ 52,564,765	
Other Sponsored Programs Expenditures	\$ 24,995,729	\$ 28,371,149	\$ 32,569,780	\$ 49,606,193	\$ -	
Less CURF Indirect Expenditures	\$ 1,303,354	\$ 743,951	\$ 684,695	\$ 574,081	\$ 215,371	
Sponsored Research and Programs Expenditures	\$ 99,081,054	\$ 97,534,861	\$ 105,192,993	\$ 128,525,441	\$ 52,349,395	
* See section c. above						
** See section f. above						

Significant Awards

Clemson University's Top Ten Awards
Received Between January 9, 2017 and March 30, 2017

PI	Total Award	(Sponsor)Project Title	Abstract
Feng Luo	\$4.3M	(USDA) Selection, Molecular and Genetic Analysis of HLB Tolerant/Resistant Variant Citrus Plants	Clemson partners with University of Florida, Texas A&M, and Agriculture Research Stations in Florida and California to use high-throughput computing to make citrus crops more disease tolerant.
Frank Feltus	\$3.0M	(NSF) CC*Data: National Cyberinfrastructure for Scientific Data Analysis at Scale (SciDAS)	Clemson will work with UNC Chapel Hill and Washington State University to make the national cyberinfrastructure more efficient and more effective for large-scale scientific computing.
Kuang-Ching Wang and Ronald Gimbel	\$1.6M	(DOD) Complete and Resilient Documentation (CARD) for Operational Medical Environments	Clemson researchers will work with Palmetto Health to develop sophisticated training materials to train medical personnel to operate in the field.
Luiz Gustavo Jacobson	\$550K	(NSF) CAREER: Light, Materials, Interaction! Integrating Research and Education from High school to Graduate School	This project will use varieties and compositions of luminescent materials, which make up items like electronic screens, medical imaging technologies and lighting, to engage students in engineering education
Ashok Mishra	\$506K	(NSF) CAREER: Quantifying Drought and Vulnerability Indicators for Water Security in a Changing Environment	The investigator will examine the relation between drought and water supply by looking at their relation to one another. Then, the investigator will use this data to develop tools for water management in the Savannah River Basin.

Sapna Sarupria	\$504K	(NSF) CAREER: Large Scale Simulations Enabled Materials Engineering for Heterogeneous Ice Nucleation	The investigator will examine simulations of ice nucleation, the process by which ice forms around a particle, to simulate other more complex molecular processes.
Amin Khademi	\$500K	(NSF) CAREER: Innovative Methods for Designing Adaptive Clinical Trials	Using principles of stochastic dynamic programming frameworks, the investigator will optimize the complex processes of clinical trials for drug development.
Simona Onori	\$500K	(NSF) CAREER: A Fundamental Modeling Approach for Emission Optimization-Based Control in Gasoline Direct Injection	This project is focused on developing testing and modeling to test gasoline particulate filters (GPFs) to support the fuel efficiency and exhaust control of automobiles with gasoline direct injection.
Sophie Joerg	\$500K	(NSF) CAREER: Perceptually Guided Hand Motion Synthesis	The investigator will develop computing assets like complex algorithms to support the animation of fingers and hands for use in motion pictures and computer games.
Marissa Leigh Shuffler Porter	\$500K	(NSF) CAREER: Detecting Patterned Profiles for Functional and Dysfunctional Teamwork	Teams and teamwork are critical for organizational success. The investigator will examine the current approaches to team development interventions and seek to new approaches to teamwork in organizations.

Item 2. Clemson Health Research Programmatic Review

CU-GHS Collaborations

Dr. Windsor Sherrill

Item 2. Clemson Health Research Programmatic Review

CU-MUSC-GHS Bioengineering Collaborations

Dr. Martine LaBerge