College of Sciences and Engineering
University of South Carolina Aiken

Visiting Scholars Program AY 2024-2025

The College of Sciences and Engineering at USCA is committed to serving the region.
The faculty below are part of the Visiting Scholars Program. Please contact the instructor if your students or organizations are interested in a topic below and would like them to present on a topic. This is a cost-free service provided by USCA.

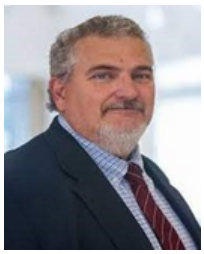
Topics: Biology/Environmental, Chemistry, Computer Science, Cybersecurity, Engineering, Exercise Science, General Interest, Pre-Pharmacy, Pre-Med, Software Engineering, Psychology, and Applied Clinical Psychology through the graduate program

William H. Jackson, Ph.D., Chair of Biological, Environmental, and Earth Sciences; Professor of Biology; BillJ@usca.edu
Dr. Jackson is interested in various aspects of gene therapy as a way to treat infectious diseases and those diseases that have a genetic origin. These interests have led him to the use of RNA interference as a means of reducing HIV replication in infected cells His focus interests are Virology, Genetics, Cellular/Molecular Biology, and Immunology.

Kelly Gibson, Ph.D., Associate Professor of Environmental Earth Sciences, KellyGi@usca.edu
Her research focuses on understanding how oceans and coastal environments are changing in response to present and past climate change. To do this, Dr. Gibson and her students use the geochemistry and composition of marine sediments and fossils to explore past and present ocean acidification, productivity and carbon cycling, and ocean temperature change. She is also passionate about fostering awareness and love of ocean health for not just coastal but also inland communities.

Kristina Ramstad, Ph.D., Asscoiate Professor of Biology, KristinaR@usca.edu
Dr Ramstad is a conservation geneticist. Her work draws on genomic techniques and field based ecological studies to improve our understanding and management of at-risk species. After studying sockeye salmon in Alaska for both her MSc (University of Washington) and PhD (University of Montana) research, Dr Ramstad moved to New Zealand and spent eight years studying conservation genetics of kiwi. She took up her current role at USCA in 2015 and will tell you that her current research obsession is with the wood storks of the steamy and mysterious swamps of the US South.

Jessica Sullivan, Ph.D., Associate Professor of Environmental Earth Sciences, Jessicasu@usca.edu
Dr. Sullivan received her BS in Marine Science and PhD in Geological Sciences from the University of South Carolina in 2005 and 2015, respectively. Before joining the faculty at USCA, she held numerous positions in industry, including the City of Charleston Department of Traffic and Transportation, the City of Columbia Department of Utilities and Engineering and the South Florida Water Management District. Since joining the faculty at USCA, she's enjoyed integrating her industry background with her academic pursuits and incorporating her real-world experiences into the classroom curriculum. Dr. Sullivan teaches classes in Environmental Earth Science, Introductory GIS, Geomorphology, Meteorology, and the Anthropocene. Her research lab focuses on investigating the process-form feedback mechanisms of coastal salt marshes, terrestrial rivers, and freshwater floodplains. She uses field observations, remote sensing, and numerical modeling to investigate how wetland landscapes evolve in the context of natural and human-caused change.



Scott McKay, Ph.D., Dean of Sciences & Engineering, Associate Vice Chancellor of Research and Strategic Projects, Professor of Chemistry, Scott.Mckay@usca.edu
Careers, research, and education pathways in the Sciences, Engineering and Computer and Cyber Sciences. What's new in the College of Sciences & Engineering and Applied Research Initiatives at USCA.

Gerard Rowe, Ph.D., Chair of Chemistry and Physics and Professor of Chemistry, GerardR@usca.edu
Dr. Gerard Rowe synthesizes novel inorganic complexes which have been modeled after the active sites of enzymes. These complexes will then serve as stable catalysts in important processes such as those that might be used in fuel cell technology.

Ken Roberts, Ph.D., Associate Professor of Chemistry, KenR@usca.edu
Dr. Kenneth (Ken) M. Roberts is a biochemistry associate professor with an interest in the study of enzymes – a fancy word for 'proteins that catalyze chemical reactions.' He investigates the chemical nature of enzyme reactions through various types of spectroscopy and kinetic analyses. Dr. Roberts and his undergraduate students investigate specific enzyme-catalyzed reactions by asking questions such as: what atoms and bonds are involved in the chemistry? in what order do the bonds break or form? how fast are these steps and why? how does the enzyme facilitate this chemistry and only this chemistry? Growing an understanding in how enzymes drive difficult reactions with incredible efficiency can aid in our understanding of the reaction chemistry as well as improve our ability to repeat or modify the reactions to our own objectives. In the classroom, Dr. Roberts teaches first-year chemistry as well as upper-level biochemistry courses.

Bryan Borders, Ph.D., Assistant Professor of Chemistry, Bryan.Borderse@usca.edu
Dr. Borders graduated with a Ph.D in materials science in engineering from Washington State University. His research focuses on using spectroscopy, the study of the interaction between light and matter, to study the properties of materials. His projects range from studying materials that can detect mercury contamination in water to looking at how 3D printed materials behave under stress. Dr. Borders also runs the 3D printing lab on campus where he develops new teaching and research tools for professors on campus. In addition to teaching chemistry, Dr. Borders teaches honors classes on the science of cooking and developing scientific skepticism by critically examining stories of cryptids (e.g. Bigfoot and the Loch Ness Monster).

Sonia Tariq, Ph.D., Assistant Professor of Analytical Chemistry, Sonia.Tariq@usca.edu
Dr. Sonia Tariq graduated with a Ph.D in Chemistry from University of East Anglia, U.K. She spent a year as a postdoctoral Fulbright scholar at Pennsylvania State university at the department of material and chemical Engineering. She has a vast experience of teaching and administration from Lasbela university, Pakistan. Her research interests include development of chemical sensors for environment and food. She has successfully developed sensor for marine sediments and has also developed colorimetric3D sensing membranes.

Mohammad Hailat, Ph.D., Chair of Computer Science, Engineering, and Mathematics; Professor of Mathematics; MohammadH@usca.edu
Dr. Mohammad Hailat is interested in the classification problem of root systems associated with Lie algebras. He is also interested in some areas of graph theory, such as basis number of graphs, friendship theory and related topics.

Ahmed Ahmed, Ph.D., Assistant Professor of Computer Science, Ahmed.Ahmed@usca.edu
Dr. Ahmed earned his Ph.D. in Electrical and Computer Engineering from Tennessee Tech University. He holds a B.Sc. and an M.Sc. in Electronics and Communication Engineering. His research interests include machine learning, reinforcement learning, cryptography, cybersecurity, wireless mobile communications, 5G networks, and cognitive radio.

Ali AlSabeh, Assistant Professor of Computer Science, Ali.AlSabeh@usca.edu
Dr. AlSabeh earned his Ph.D. in Informatics from the University of South Carolina in 2024, where he was a member of the CyberInfrastructure Lab (CI Lab). During his doctoral studies, he developed training materials for hands-on activities on network protocols (e.g., OSPF and BGP), network and host security, Software-Defined Networking (SDN), and cloud security. His research interests include malware analysis and security in high-speed programmable networks.

Asif Hoda, Ph.D., Visiting Assistant Professor of Engineering, Asif.Hoda@usca.edu
Dr. Asif Hoda has a PhD in Mechanical Engineering from Louisiana State University and he is currently a visiting Assistant Professor of Engineering at USC-Aiken. Dr. Hoda has a worldwide professional experience of more than fifteen years and has worked in the United States, Malaysia and Suadi Arabia. His research efforts are focussed on multi-disciplinary numerical simulation and modeling, turbomachinery, alternative energy and physical oceanography. Apart from his research interests, Dr. Hoda has a passion for teaching and student mentoring. Pragmatic application oriented teaching and learning, and leading by example are at the core of Dr. Hoda's academic philosophy. Dr. Hoda is very excited to be a part of the USC-Aiken team for outreach to stakeholders in the community at large and is looking forward to giving back to the community that he has benefitted from in more ways than one.

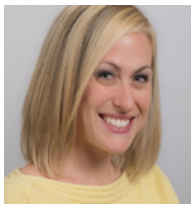
Tom Reid, Ph.D., Assistant Professor of Mathematics, Thomas$@usca.edu
Dr. Thomas (Tom) Reid is interested in using statistical and mathematical modeling, including digital simulation, to see how variables affect real-world systems and determine optimal settings for those variables.

Titan C. Paul, Ph.D., Associate Professor of Engineering, TitanP@usca.edu
Dr. Paul received his Ph.D. in Mechanical Engineering from the University of South Carolina. To date, the majority of his experience has been studying nanotechnology-based thermal systems for energy applications and thermal management. He has established himself as an expert in both micro and macro scale heat transfer. His research interest is broadly concentrated on thermal storage and thermal transport- focusing mainly on thermal management of high-density microelectronics and solar technology studied from both computational and experimental methods. Along with his teaching duty at UofSC Aiken, he has maintained an active research portfolio and is actively engaged with undergraduate research.

Bethany Fralick, Ph.D., Associate Professor of Engineering, BethanyF@usca.edu
Dr. Bethany Fralick graduated with a Ph.D. in mechanical engineering from USC Columbia. Her foundational research investigates the three-dimensional evolution of mechanical percolation in nanocomposites with random microstructures. Dr. Fralick also researches engineering design as hands on experiences, cognitive flexibility, and how engineering is best taught, learned, and practiced. She has devoted her ten years at USCA to starting both the industrial process engineering and mechanical engineering programs. She is the lead engineering faculty and uses her knowledge of content, pedagogy, and assessment to ensure continuous improvement for all engineering graduates.

Andrew Hatchett, Ph.D., Chair of Exercise and Sports Science, Associate Professor of Exercise and Sports Science, AndrewHat@usca.edu
Dr. Andrew Hatchett's research interests include the effects of non-pharmaceutical supplementation on physical performance, strength and conditioning training outcomes and Olympic Weightlifting. He uses a variety of techniques and equipment in laboratory and field-based research. He welcomes the opportunity to work with any student interested in Exercise Science.

George L. Grieve, Ph.D., Assistant Professor of Exercise and Sports Sciences, George.Grieve@usca.edu
Dr. Grieve's research foci are in the areas of energy balance, physical activity, and the relationship between fitness, injuries, and performance in tactical populations (e.g., military, law enforcement, and first responders). He completed his graduate research training in the Arnold School of Public Health at the University of South Carolina. As a former nationally ranked powerlifter and US Army Combat Engineer, he is most passionate about resistance training and its impact on health and performance.



Laura Swain, Ph.D., Professor of Psychology, LauraSw@usca.edu
Dr. Swain graduated with a PhD in experimental psychology from USC Columbia. Her dissertation and research in general focused on brain functioning in those with either brain damage or neurodevelopmental disorders. After graduate school she completed four years of a postdoctoral fellowship in the Radiology Department at the University of Michigan Medical Hospital. While there she examined longitudinal changes in brain activity in those with Lou Gehrig's disease using MRI. Now, at USCA, she teaches Introduction to Psychology, Neuroscience, and Statistics/Research Methods. At USCA, her research involves using electroencephalogram (EEG) to measure brain activity related to social cognition, including empathic processing and attention.

Olivia Smith, Ph.D., Assistant Professor of Psychology, olivia.smith@usca.edu
Dr. Smith obtained her Ph.D. in psychology with a minor in statistics from the University of Wyoming. Her research interests lie at the intersection of psychology and law. Broadly, she studies juror decision making, public perceptions of criminal justice reform, and lay understanding of legal instruction and court processes. Through this work, her aim is to provide objective data that informs policy and the legal system. In her dissertation, she examined police lethal force incidents in mainstream media and the role of cognition and blame in subsequent policy endorsement. At USCA, she teaches Statistics, Social Psychology, Research Methods, and Psychology and Law.

Bridget Cho, Ph.D., Assistant Professor of Psychology, bridget.cho@usca.edu
Dr. Cho graduated with a Ph.D. in clinical child psychology from the University of Kansas and completed her clinical internship at the University of California Davis with a focus on child maltreatment. Her research interests include childhood adversity and its effects on development, parent-child relationships, and systems and programs that serve vulnerable families. In addition to teaching undergraduate courses in areas such as clinical, developmental, and multicultural psychology, Dr. Cho teaches and supervises graduate students in the Applied Clinical Psychology master's program at USC Aiken.