We are excited to welcome six new faculty members this fall semester. The College of Engineering and Computing at Florida International University (FIU) is an exciting place to be! With two schools, six departments, and nearly 6,000 students, we are the 19th largest engineering program in the country. As a college in a top-tier research university, we are actively engaged in cutting-edge research and education, and developing high-impact solutions for our local to global community.

The College of Engineering and Computing at FIU is ranked #1 in the continental U.S. for graduating bachelor’s and master’s Hispanic engineers, #1 for Hispanic women in engineering, and #5 for African-American engineers. The new faculty has joined a college which the National Science Foundation ranked #91 out of 358 in its Higher Education Research and Development rankings for federal research expenditures across all engineering disciplines. They join a university classified by Carnegie as a Highest Research Activity R1: Doctoral University, and as a Carnegie Community Engaged University. FIU is also an Ashoka U Changemaker institution and is ranked #17 by Washington Monthly for overall contribution to the public good in social mobility, research and service. We are at home in Miami, which is a globally connected city with a diverse population and international outlook.

Our new members bring with them tremendous talent, enthusiasm, and commitment to educate tomorrow’s engineers and prepare them to meet our society’s grand challenges, such as those identified by the National Academy of Engineering. They will add innovative research in artificial intelligence and game theory to big data and cloud computing, in brain plasticity and neural engineering to advanced imaging and molecular biology for precision medicine to target cardiovascular diseases, and in modeling construction projects to align the built environment with society’s values. We are also proud to welcome our first faculty member dedicated to research in engineering and computing education and the study of retaining women and minorities in computer science and engineering.

We look forward to a bright future for our new colleagues!

Warm wishes,
Ranu Jung, Ph.D. Interim Dean
Wallace H. Coulter Eminent Scholar Chair in Biomedical Engineering

Sam Ganzfried
Assistant Professor
FIU is ambitious, innovative, diverse, and highly underrated, and I am excited to contribute to its ongoing phase of extreme growth.

Sam Ganzfried received a Ph.D. in computer science from Carnegie Mellon University in 2015 for his dissertation, Computing Strong Game-Theoretic Strategies and Exploiting Suboptimal Opponents in Large Games, and also holds an A.B. in math from Harvard University. Ganzfried’s research interests include artificial intelligence, game theory, multi-agent systems, multi-agent learning, large-scale optimization, large-scale data analysis and analytics, and knowledge representation. He created two-player, no-limit Texas hold ‘em agent, Claudico, which competed in the inaugural 2015 Brains vs. Artificial Intelligence competition against the strongest human specialists in the world, and Tartanian7 that won the 2014 Annual Computer Poker Competition.

In the SCIS Chair’s Words:
Dr. Ganzfried is a well-renowned computer scientist who works in the areas of artificial intelligence and game theory. He will be a star in the years to come at FIU, and has already positioned himself as a leader in game theory due to its application in stock markets and poker games. His interdisciplinary background is a strong plus for FIU’s College of Engineering and Computing, and College of Business.

- S.S. Iyengar, Ph.D.
Liting Hu
Assistant Professor
FIU has grown tremendously and so has its faculty, staff and student population. The School of Computing and Information Sciences has top leaders of the corresponding fields, and the potential for professional growth is great.

Liting Hu’s academic research is focused around big data, cloud computing, system virtualization and distributed systems. She is particularly interested in enterprise-motivated, real-world problems that embody complicated data analytics. Specifically, Hu’s Ph.D. work developed streaming processing systems that analyze live twitter logs to generate time-critical decisions with millisecond-latency and MapReduce-equivalent throughput. Additional work includes customer beneficial “fair” resource sharing between applications for multi-tenant cloud networks, dependency detection and power management for virtualized data centers. Hu obtained her Ph.D. in computer science from the Georgia Institute of Technology.

In the SCIS Chair’s Words:
Dr. Hu’s interests are in systems and big data. She works in an interdisciplinary area of big data analytics, which has a lot of relevance to medical applications.

– S.S. Iyengar, Ph.D.

Monique Ross
Assistant Professor
I am interested in working at FIU because of the potential to impact broadening participation in computing fields. FIU has a unique demographic composition that allows me to explore the barriers and advantages of a minority-serving institution. Its strategic plan to increase women and minority success is in line with my research and teaching goals, which is centered around the growth and success of women and minorities in computer science and engineering.

Monique Ross is examining methods of retaining women and people of color through two major areas of interest: expanding her qualitative inquiry into black women’s experiences in the engineering industry to other women of color; and, content, assessment and pedagogical alignment in discipline-based engineering education in order to impact graduation rates of underrepresented minorities. Ross will use research designed around discipline-based engineering education to inform pedagogy utilized in introductory programming courses in engineering. The goal is to garner more interest in computer-related engineering careers, and contribute to the retention of women and minorities in these fields. Revising courses for proper alignment can drastically increase retention in computing programs and change the landscape of these courses. Ross earned her M.S. in software engineering and computer science from Auburn University, and her Ph.D. in engineering education from Purdue University.

In the SCIS Chair’s Words:
Dr. Ross will be a leader in STEM-related disciplines at FIU. She will be a key player in the FIU Beyond Possible 20/20 vision for improving the retention and graduation rates of FIU students. Her area of interest is software engineering, and her experience at Raytheon Company will be an asset in training our students in STEM-related areas.

– S.S. Iyengar, Ph.D.
Lu Zhang
Assistant Professor

FIU is a young, vibrant, and fast-growing university that values innovation, creativity, high quality teaching, and state-of-the-art research. The OHL School of Construction has outstanding faculty with diverse research and teaching expertise. I am looking forward to working with these excellent people.

Lu Zhang’s research interests include human-centered value analysis, human-building interactions, smart building and infrastructure monitoring and analysis, building and civil information modeling, and semantic information modeling. She recently completed her doctoral degree in civil engineering with a specialization in construction management from the University of Illinois at Urbana-Champaign. Her Ph.D. research focused on studying the impact of alternative planning and design decisions on the environmental, social, and economic value of building systems to owners, contractors and building end-users. She developed a building information modeling (BIM)-integrated, value-sensitive decision support prototype system that aims to predict and analyze the value of a building system to its stakeholders. Her research facilitates value-sensitive decision making towards better synergy between human values and the built environment. Her research experience is diverse and multidisciplinary; her master’s degree thesis at University of Michigan investigated the safety and health issues of construction workers.

In the OHL Chair’s Words:
Dr. Zhang’s diversified interests fit very well with the research agenda being developed and pursued at FIU by various departments, colleges and centers, including the OHL School of Construction. Her talent will strengthen our school’s team of researchers and other units within the College of Engineering and Computing.

— Irtishad U. Ahmad, Ph.D., P.E.

Zachary Danziger
Assistant Professor

The Department of Biomedical Engineering at FIU is home to outstanding innovative research in neurotechnology, and I look forward to joining their ranks and collaborative atmosphere.

Zachary Danziger’s work in neural engineering and neuroscience aims to mechanistically understand diseases that affect the nervous system, and use that insight to treat the underlying dysfunction by creating new technology. He has two ongoing areas of research in neural engineering. The first is in brain-computer interfaces (commonly called BCIs), which allow paralyzed users to control assistive devices, such as power wheelchairs, directly using brain activity. He optimizes the design of BCIs to make these difficult-to-control systems more efficient and effective for the user. He is also creating new paradigms to study the basic learning processes and brain changes that occur during BCI use to target the most promising new directions for BCI research. The second area is in neurourology where his work focuses on identifying how neural weakness (caused by diabetes, spinal injury, or natural aging) results in bladder dysfunction, and how symptoms can be alleviated through targeted neural stimulation. Danziger has been studying how current nerve stimulation treatments recruit bladder voiding reflexes and developing a novel stimulation therapy that exploits the communication between the urethra and bladder to improve bladder emptying. Danziger obtained his Ph.D. in biomedical engineering from Northwestern University and was a postdoctoral fellow at Duke University.

In the BME Interim Chair’s Words:
Dr. Danziger’s pioneering research in neurourology contributes to tomorrow’s technology that will successfully treat urological disorders, and has cross applications for treating neurological conditions. His work will further strengthen the Department of Biomedical Engineering’s educational offerings in the area of therapeutic and reparative neurotechnology.

— Wei-Chiang Lin, Ph.D.
Joshua Hutcheson  
Assistant Professor

FIU provides an excellent environment to complete interdisciplinary research with the established strengths of the Department of Biomedical Engineering and the state-of-the-art Biomolecular Sciences Institute.

Joshua Hutcheson's work focuses on the mechanisms through which tissues are built and maintained and the pathological changes that lead to disease. His work primarily targets cardiovascular diseases—the leading cause of death in Western societies. His research will combine advanced imaging, materials science, biomechanics, and molecular biology to connect cellular processes to tissue function. By understanding the ways that cells sense and respond to each other and to changes in their environment, we can develop new ways to detect initiators of disease and find interventions that restore tissue to a normal state.

Accomplishing these goals requires an interdisciplinary effort, with researchers working at the interface between bioengineering and molecular biology.

Hutcheson earned his Ph.D. in biomedical engineering from Vanderbilt University, and was a postdoctoral fellow at Harvard University.

In the BME Interim Chair's Words:

Dr. Hutcheson’s research studies the pathological changes that lead to disease, primarily those that affect the cardiovascular system. His multidisciplinary collaborations will help shine new light on cardiovascular research. The Department of Biomedical Engineering will greatly benefit from his expertise in the area of cell/tissue engineering.

—Wei-Chiang Lin, Ph.D.

Facilities

The College of Engineering and Computing is housed at the university's Engineering Center in West Miami-Dade and Modesto A. Maidique Campus.

The College has the following research facilities:

Wall of Wind (WOW)

FIU’s 12-fan Wall of Wind (WOW) is among seven national multi-user large facilities in the country under the Natural Hazards Engineering Research Infrastructure (NHERI) program, and one of only two nationwide dedicated to studying extreme wind events. The WOW is the largest and most powerful university research facility of its kind, capable of simulating Category 5 hurricane winds. National Science Foundation-funded researchers use the “Experimental Facility” to work on wind engineering projects, and are part of a network of scientists who study various aspects of natural hazards.

Solar Research Facility

A commercial-scale solar installation consisting of more than 4,400 solar panels powers research initiatives that will help further advance solar generation in Florida. The 1.4 megawatt solar array provides clean electricity to Florida Power & Light Company (FPL), and allows engineering faculty and students to use the installation to conduct important research on renewable energy.

Tech Station

Tech Station is an 8,000 sq. ft. hub for technology innovation, training and community engagement that attracts top computing talent. It exposes students to collaborative thinking in a modern tech office and lab setting. The next wave of software developers, systems administrators and data scientists are being home grown at Tech Station. Students learn and gain hands-on experience in Tech Station's Advanced Systems Training, Software Design and Development, and IT Hardware and Services labs.
The content in this booklet was accurate at the time of printing and is subject to change at any time at the university and College of Engineering and Computing’s sole discretion.