

# College of ENGINEERING & COMPUTING

## Department of Electrical and Computer Engineering

### RESEARCH

The Department of Electrical and Computer Engineering (ECE) is recognized for its pioneering research in the areas of radio frequency (RF) and microwave engineering, Internet of Things (IoT) and energy cybersecurity. RF and microwave engineering examines the development of disruptive technologies, from antennas to millimeter waves. IoT faculty, post-docs and students focus on keeping smart devices safe with innovative technology such as continuous authentication on wearable devices. The IoT curriculum concentrates on hardware, software, wireless communications, cybersecurity and privacy. Researchers in the area of energy cybersecurity examine the power and security aspects of the nation's smart grid and how to prevent and respond to cyber intrusions to the grid.

### FACULTY

ECE faculty members have considerable industrial experience and many maintain active consulting roles to provide current and relevant knowledge to students in classroom and research settings. Currently, the department has over 30 faculty members who excel in a broad range of concentrations such as cybersecurity, digital signal processing, Internet of Things (IoT), nano-technology, power and energy, radio frequency and microwave engineering. ECE faculty members are committed to obtain patents and grants to provide their graduate students with research opportunities. Several faculty members have won prestigious awards, including the National Science Foundation's Early Career Development (CAREER) Award and the President's Council on World's Ahead Faculty Award.

### PARTNERSHIPS

ECE holds multiple partnerships. A major partner is Florida, Power & Light (FPL). ECE also has industrial partnerships with companies such as ANSYS and Motorola, where many of ECE's alumni work. ECE also collaborates with the health industry, including Baptist Hospital, Nicklaus Children's Hospital, Wien Center for Alzheimers and Oregon Health & Science University. ECE works closely with FIU's University Graduate School and Student Access and Success for the Bridge to the Doctorate program, helping minority students complete STEM doctoral degrees.

### GRADUATE DEGREES OFFERED

- M.S. Computer Engineering
- M.S. Electrical Engineering
- M.S. Computer Engineering: Network Security (Fully online)
- Ph.D. Electrical and Computer Engineering
- Five-year combined (B.S./M.S.) Computer Engineering
- Five-year combined (B.S./M.S.) Electrical Engineering

### RESEARCH HIGHLIGHTS

- Antennas and wireless communications
- Internet of Things (IoT)
- Security of cyber-physical systems
- Protecting the smart grid

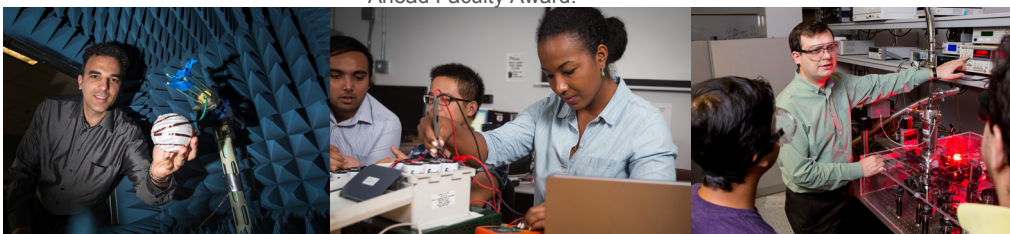
### GRADUATE RESEARCH OPPORTUNITIES

Research opportunities are available for graduate students in all disciplines offered by ECE, which include: communications, computer architecture and microprocessor design, data system software, digital signal processing, embedded system software, energy cybersecurity, integrated nano-technology, Internet of Things (IoT), networking and security, power and energy and RF & microwave systems.

### FACILITIES

**RFCOM Lab:** Devoted to world-class research in antennas, RF systems, sensors and sensing, wireless power transfer, THz, photonics, propagation, scattering, wireless communications, signal processing and sensor fusion.

**Cyber-Physical Systems Security Lab (CSL):** Security of Cyber-Physical Systems (CPS), Internet of Things (IoT), security of critical infrastructure networks and wireless and mobile devices security.



## POINTS OF PRIDE

**1<sup>st</sup>** in the nation to offer an  
**Internet of Things  
bachelor's degree**

**#12** for computer  
**engineering**  
bachelor's degrees awarded by  
school\*

\*ASEE 2017 Statistics (American Society for Engineering Education).

**#14** for best master's  
**degree programs**  
in engineering online (Master of  
science in computer engineering:  
network security)\*

\*Best College Reviews

**Ranked in Best  
Graduate**  
Electrical/Electronics/  
Communications Engineering  
Program category\*

\*U.S. News & World Report.



**Engineering  
& Computing**

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