

DEPARTMENT FACULTY AND  
RESEARCH INTERESTS

**Akyurtlu, Alkim**, Ph.D., Penn State  
Computational electromagnetics, metamaterials and antennas

**Armiento, Craig**, Ph.D., MIT  
Fiber optics, semiconductor and devices

**Chandra, Kavitha**, Eng.D, University of Massachusetts Lowell  
Acoustics, Communications networks and performance models

**Chigan, Tricia**, Ph.D., SUNY at Stony Brook  
Communication networks and network security

**Dutta, Joyita**, Ph.D., University of Southern California  
Biomedical image reconstruction and analysis

**Hu, Tingshu**, Ph.D. University of Virginia  
Dynamic systems and control

**Ibe, Oliver**, Sc.D., MIT  
Mobile and converged communications

**Lu, Xuejun**, Ph.D., University of Texas Austin  
Optoelectronics, nanophotonics, and fiber optics

**Luo, Yan**, Ph.D., University of California Riverside  
Computer architecture, network systems

**Mah'd, Mufeed**, Ph.D., University of Western Ontario  
Digital signal and medical image processing

**Margala, Martin**, Ph.D., University of Alberta  
Digital and mixed-signal VLSI design and VLSI testing

**Megherbi, Dalila**, Ph.D., Brown University  
Digital Image Processing, Computer Vision, Machine Learning & Computational Intelligence, Networking, Distributed High Performance Computing, and Embedded Systems

**Mil'Shtein, Samson**, Ph.D., University of Jerusalem  
Semiconductor electronics and technology

**Pakdelian, Siavash**, Ph.D., Texas A&M University  
Electric machines and drives, Power electronics

**Prasad, Kanti**, Ph.D., University of South Carolina  
Reliability analysis and enhancement for GaAs and silicon devices

**Rao, Tenneti C.**, Ph.D., Indian Institute of Science  
Electromagnetics

**Son, Seung Woo**, Ph.D., Penn State  
High performance computing

**Therrien, Joel**, Ph.D., University of Illinois, Urbana-Champaign  
Nanoelectronic devices

**Thompson, Charles**, Ph.D., MIT  
Acoustics, systems and field theory

**Vokkarane, Vinod**, Ph.D., University of Texas, Dallas  
Communication networks and reliability

**Wang, Xingwei**, Ph.D., Virginia Tech  
Optical biosensing and biomedical devices, sensors

**Weitzen, Jay**, Ph.D., University of Wisconsin, Madison  
Wireless communication

**Wickramarathne, Thanuka**, Ph.D., University of Miami  
Signal Processing, Multi-Sensor Data Fusion

**Yu, Hengyong**, Ph.D., Xi'an Jiaotong University  
Medical Image Processing

**Zhang, Hualiang**, Ph.D., HKUST  
Applied Electromagnetics, High-Frequency Circuits and Systems

DEGREES AND CERTIFICATES

**Computer Engineering Programs**  
Master of Science (M.S.)  
Doctor of Philosophy (Ph.D.)

**Electrical Engineering Programs**  
Master of Science (M.S.)  
Doctor of Philosophy (Ph.D.)

**Graduate Certificate Programs**  
Communications Engineering  
Field Programmable Gate Array  
Microwave and Wireless Engineering  
Stochastic Systems  
VLSI and microelectronics  
Biomedical Engineering  
Energy Conversion  
Integrated Engineering Systems  
Nanotechnology  
Photonics and Optoelectronics  
Telecommunications



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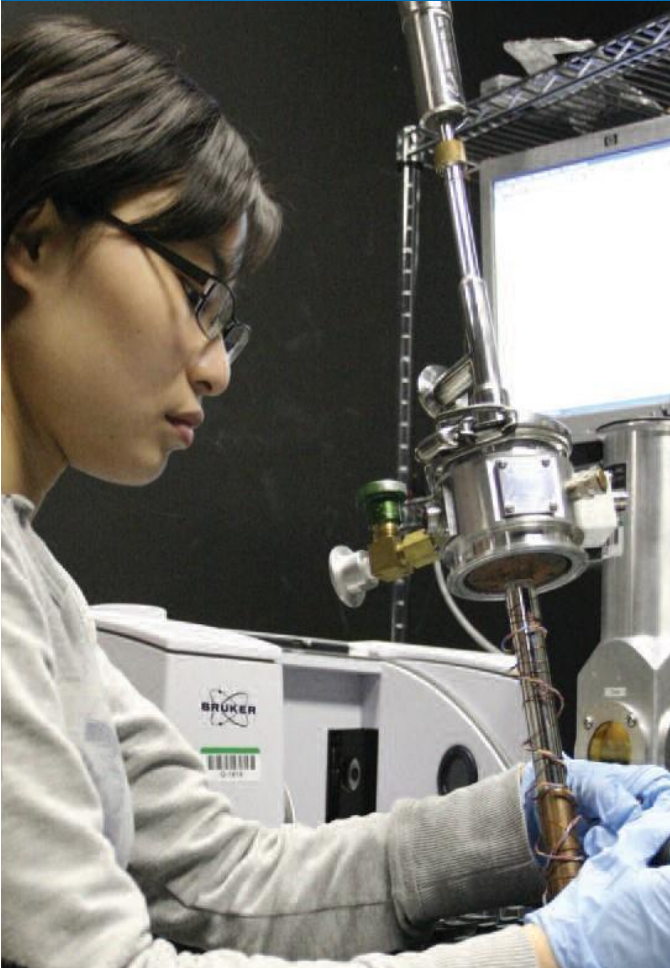
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The Francis College of  
Engineering



# Electrical & Computer Engineering

Graduate Programs



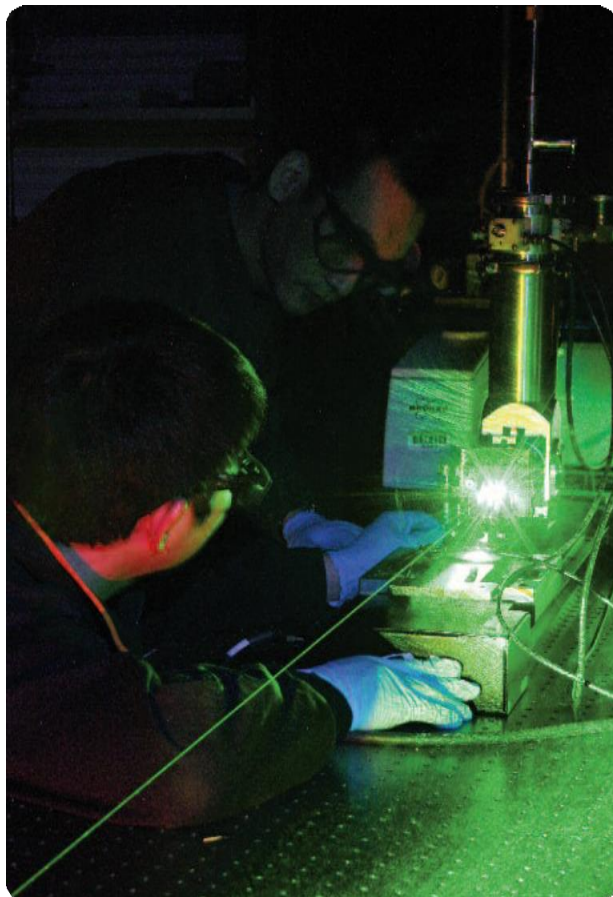
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## ELECTRICAL & COMPUTER ENGINEERING GRADUATE PROGRAMS

### WHO WE ARE

The Department of Electrical and Computer Engineering (ECE) at the University of Massachusetts Lowell offers graduate programs leading to Master of Science (M.S.), and Doctor of Philosophy (Ph.D.) degrees. Our research is funded by the National Science Foundation, the Air Force Office of Scientific Research, the Defense Advanced Research Projects Agency, the Office of Naval Research and various companies, including Raytheon and Intel.



### FIELDS OF SPECIALIZATION

Our experienced faculty has active research programs in a diverse number of specialization areas including:

- Additive Manufacturing
- Alternative Energy Sources
- Communications
- Computer Architecture
- Control Systems
- Digital Signal Processing
- Distributed Networking
- Embedded Systems
- High Performance Computing
- Metamaterials
- Nanotechnology
- Optoelectronic Devices
- Power distribution
- Printed Electronics

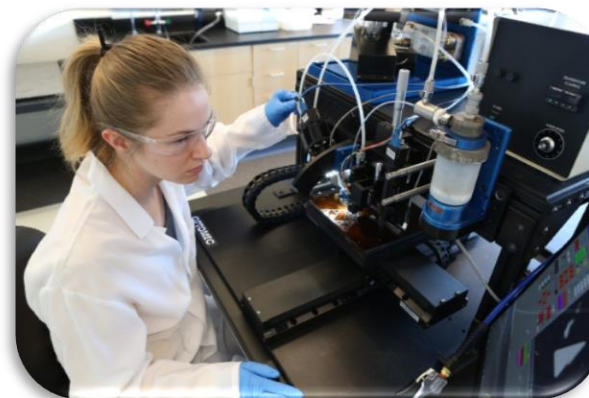
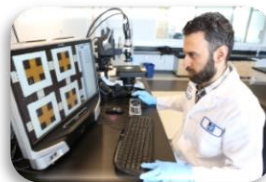
### RESEARCH CENTERS AND LABORATORIES

#### Research Centers

- Advanced Electronics Technology Center
- Center for Advanced Computation and Telecommunications
- Center for Machine/Human Intelligence, Networking and Distributed Systems
- Center for Photonics, Electromagnetics and Nanoelectronics
- Raytheon-UML-Research Institute

#### Research Labs

Advanced Digital Systems Design and Microprocessors Laboratory, Computer Architecture Laboratory, Distributed Semiconductor Industrial Processing Laboratory, Microwave Laboratory, Networking, Artificial and Machine Intelligence and Computer Vision Laboratory, Renewable Energy Laboratory, Computer Architecture and Network Systems Laboratory, VLSI Design Laboratory

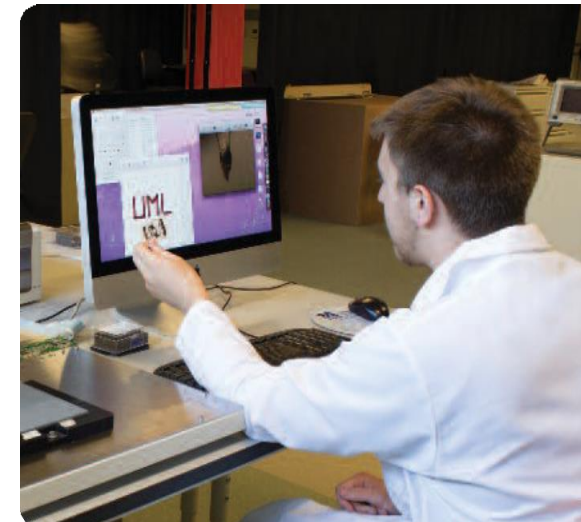


### ADMISSION REQUIREMENTS

All applicants for either the M.S. or Ph.D. programs in electrical engineering must take the GRE general examination. Official transcripts and three letters of recommendation must be submitted along with the graduate application. Foreign students without a bachelor's degree from a U.S. institution are required to take the TOEFL or IELTS examination. After the minimum requirements are met, the EE Graduate Committee evaluates each case on an individual basis.

### FINANCIAL SUPPORT

A number of ECE Department Teaching Assistant (TA) positions are available for doctoral students. Research Assistant (RA) positions may be awarded to incoming students who have outstanding credentials. The students are also encouraged to seek out faculty members whose research fields closely match the area in which they would like to pursue their degree.



### DEADLINES

Although there are no deadlines to apply, in order to be considered for a department Teaching Assistantship, applications for the Fall semester must be completed by **February 15** and **October 1** for the Spring semester of the following year.

### CONTACTS

For more information on the Electrical and Computer Engineering Graduate Programs, please visit:

<http://www.uml.edu/ecegrad>

Graduate Program Coordinators:

Master of Science:

Prof. Xuejun Lu

E-mail: [xuejun\\_lu@uml.edu](mailto:xuejun_lu@uml.edu)

Telephone: 978-934-3359

Doctoral:

Prof. Alkim Akyurtlu

E-mail: [ECE\\_Doctoral\\_Coordinator@uml.edu](mailto:ECE_Doctoral_Coordinator@uml.edu)

Telephone: 978-934-3336