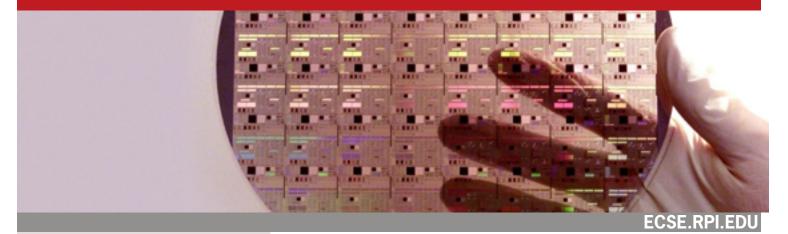
# Rensselaer Department of Electrical, Computer, & Systems Engineering



# CORE SKILLSETS AND COURSES:

## Computer Systems

Computer components and operations, Computer architecture and networking, Computer operating systems

• Data and Information Probability and statistics, Signal processing, Analog and digital communications

Learning and Control
 Time and frequency domains, Feedback
 control, Digital control, Machine Learning

- Image Science and Vision
  Computer graphics, Machine vision,
  Image processing
- Circuits and Electronics Analog and digital circuits, Circuit analysis, simulation, and design, Microelectronics, Integrated circuits, VLSI
- Energy and Power Electromagnetic fields and waves, Power grids, Renewable sources,

Electric machines • Design and Teamwork Embedded control, Engineering design, Multidisciplinary capstone design

# **CONCENTRATION AREAS**

- Intelligent Systems and Machine Learning
- Computer Networks
- Communications and Information
- Control, Robotics and Automation
- Graphics and Vision
- Comptuer Hardware Systems
- Microelectronics
- Photonics, Optics, and Optoelectronics
- Energy and Power Systems

# ABOUT ELECTRICAL, COMPUTER, AND SYSTEMS ENGINEERING

Founded in 1907, we're one of the first Electrical Engineering programs in US

STUDENTS

- 776 Undergraduates
- 49 Masters
- 98 Doctoral

RANKED 31 (EE) and 35th (CSE) in 2018 US News & World Report Graduate Rankings

## DEGREES OFFERED

- Electrical Engineering (B.S., M.S., M.Eng., Ph.D.)
- Computer Systems Engineering (B.S., M.S., M.Eng., Ph.D.)
- Minors in Electrical Engineering, Computer Systems Engineering

#### DUAL MAJOR OPPORTUNITIES

Computer Science, Mechanical Engineering, Biomedical Engineering, Applied Physics

UNDERGRADUATE OPPORTUNITIES Undergraduate Research Projects, Internships, Co-ops, Study Abroad

GRADUATE STUDENT SUPPORT Almost all doctoral students receive financial assistance

# FACULTY

- 28 Tenured/Tenure-Track
- 8 Lecturers and Professors of Practice
- 7 IEEE Fellows, 5 NSF CAREER Awards
- \$12M annual research expenditures

## STAFF

- 6 Techical Support Staff
- 5 Administrative Support Staff

# RESEARCH AREAS

- Al and Machine Learning
- Communication and Networking
- Computer Hardware Systems
- Control, Robotics, Automation
- Electronics and Photonics
- Computer Vision Systems
- Power Electronics & Systems

#### **AFFILIATED RESEARCH CENTERS**

- Center for Materials, Device, and Systems (CMDIS) | <u>cmdis.rpi.edu</u>
- Center for Automation Technologies and Systems (CATS) | <u>cats.rpi.edu</u>
- Center for Future Energy Systems
  (CFES) | <u>cfes.rpi.edu</u>
- NSF Engineering Research Center for Lighting Enabled Systems and Applications (LESA) | <u>lesa.rpi.edu</u>
- NSF Engineering Research Center for Ultra-Wide-Area Resilient Electric Energy Transmission (CURENT)
- Cognitive and Immersive Systems Laboratory (CISL) | <u>cisl.rpi.edu</u>
- Center for Initiatives in Pre-College Education (CIPCE) | <u>cipce.rpi.edu</u>

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