

GRAPHICS AND COMPUTER VISION



NETWORKING AND CYBER-PHYSICAL SYSTEMS

COMPUTER HARDWARE SYSTEMS



COMMUNICATIONS AND INFORMATION

PHOTONICS, OPTICS, AND OPTOELECTRONICS



CONTROL, ROBOTICS, AND AUTOMATION

MICRO/NANO-ELECTRONICS



ENERGY AND POWER SYSTEMS

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 communication

· Learning and Control

Time and frequency domains; Feedback control; Digital control; Machine learning

• Image Science and Computer 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

FOCUS AREAS

- · Al and Machine Learning
- Computer Vision and Image Processing
- Communications and Computer Networks
- Control Systems
- · Robotics and Automation
- · Computer Hardware Systems
- Electric Power and Energy
- · Microelectronics and Photonics
- · Mixed Signal Electronics

Rensselaer

ABOUT ELECTRICAL, COMPUTER, AND SYSTEMS ENGINEERING

Founded in 1907, one of the first Electrical Engineering programs in the U.S.

Students

- 591 Undergraduates
- 16 Masters Students
- 95 Doctoral Students

Ranked 42th (EE), 42th (CSE) in 2023 U.S. News & World Report Graduate Rankings



Ranked 24th in 2022 TFE Times Best Master's of Computer Engineering Programs

Ranked 25th in 2022 College Factual Best Electrical Engineering Programs

Ranked 26th (EE), 25th (CSE) in 2022 U.S. News & World Report Undergraduate Rankings

Degrees Offered

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

Dual Major Opportunities

 Electrical and Computer Systems Engineering, Computer Science, Applied Physics, ITWS

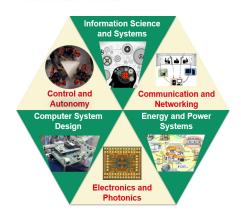
Undergraduate Opportunities

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

Graduate Student Support

 Almost all doctoral students receive financial assistance

RESEARCH AREAS



AFFILIATED RESEARCH CENTERS

- Center for Materials, Devices, and Integrated Systems (CMDIS) <u>cmdis.rpi.edu</u>
- Center for Future Energy Systems (CFES) <u>cfes.</u> <u>rpi.edu</u>
- NSF Engineering Research Center for Lighting Enabled Systems and Applications (LESA) <u>lesa.</u> <u>rpi.edu</u>
- NSF Engineering Research Center for Ultra-Wide-Area Resilient Electric Energy Transmission (CURENT)
- Cognitive and Immersive Systems Lab (CISL)_ cisl.rpi.edu
- Center for Mobility with Vertical Lift (MOVE) move.rpi.edu
- Center for Initiatives in Pre-College Education (CIPCE) <u>cipce.rpi.edu</u>

CONTACT US

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FACULTY

- 27 Tenured/Tenure-Track
- 6 Lecturers and Professors of Practice
- 11 IEEE Fellows, 8 NSF CAREER Awards
- \$10M annual research expenditures

STAFF

- 3 Technical Support Staff
- 4 Administrative Support Staff

