

# SNAPSHOT

**DEPARTMENT OF** 

# **ELECTRICAL AND COMPUTER ENGINEERING**





Our faculty, staff and students work collaboratively to address some of society's most complex technological challenges, and we are globally known for our innovative research advances. Our diverse faculty—more than 27% of whom are women—are leaders or affiliates of nine research centers and institutes at UW-Madison. Their innovations make an

impact in areas ranging from energy sustainability and advanced materials and design to machine learning in healthcare. And in the past six years alone, ECE faculty have received 140 patents and disclosed nearly 200 inventions.



Students at every stage of their educational career benefit from engaging classroom experiences with exceptional instructors; state-of-the-art instructional, lab and design spaces; and opportunities to conduct

research. Our faculty members have earned prestigious honors for their teaching excellence including Chancellor's Distinguished teaching Awards and national/international teaching recognitions from the IEEE Education Society.



As the largest department in the College of Engineering, we have grown an alumni base of over 12,000 ECE Badgers. Whether

overseeing Qualcomm's technical roadmaps

for wireless chipsets, creating new technologies that enables deaf and hard-of-hearing people to communicate, serving as the first woman president of the IEEE Engineering in Medicine and Biology Society, or leading as CEO of Rockwell Automation, our alumni have made extraordinary contributions to the lives of people throughout the world.

STUDENT ÉNROLLMENT

NATIONAL PUBLIC RANKING according to U.S. News & World Report

435
UNDERGRADUATE
Electrical engineering

254
GRADUATE

GRADUATE
Electrical & computer
engineering

624

Computer engineering

178

PHD Electrical & computer engineering Electrical engineering

**14**<sup>th</sup>

UNDERGRADUATE

9th
GRADUATE

Computer engineering

12<sup>th</sup>

UNDERGRADUATE

9th

## BS

- · Computer Engineering
- Computer Engineering: Machine Learning and Data Science
- · Electrical Engineering
- Electrical Engineering: Machine Learning and Data Science

# PhD

 Electrical and Computer Engineering

### MS

- Electrical and Computer Engineering: Research
- Electrical and Computer Engineering: Machine Learning and Signal Processing (accelerated 12-16 month program)
- Electrical and Computer Engineering: Professional (accelerated 12–16 month program)
- Electrical and Computer Engineering: Power Engineering (online)

\*76K+

UNDERGRADUATE Electrical engineering

\$94K+

UNDERGRADUATE
Computer engineering



Undergraduates placed in a job or post-graduate studies within a year of graduation

\*approximate per year



#### **ACCOMPLISHED FACULTY**

26

National Science Foundation Career Award recipients 3

Presidential Early Career Award for Scientists and Engineers (PECASE) recipients 26
Fellows of IEEE and

other societies

#### RESEARCH FACILITIES

#### **RESEARCH AREAS**

Applied Electromagnetics and Acoustics

Communications, Networks, Privacy and Security

Computer Systems and Architecture

Plasma Science and Fusion Energy

Machine Learning, Signal Processing, and Information Theory

Solid-state Electronics and Quantum Technologies

**Optics and Photonics** 

**Energy Systems** 

Optimization and Control

#### HSX - Helically Symmetric eXperiment

Materials Research Science and Engineering Center

Wisconsin Centers for Nanoscale Technology

- Nanoscale Fabrication Center
- Soft Materials Characterization Lab
- Nanoscale Imaging and Analysis Center

Wisconsin Electric Machines and Power Electronics Consortium (WEMPEC)

Wisconsin Energy Institute

Wisconsin Institute for Discovery

Power Systems Engineering Research Center

Center for High Throughput Computing

Wide-Bandgap Materials and Devices Lab with III-Nitride MOCVD Reactor

#### DEPARTMENT CHAIR



Susan Hagness
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Department Chair

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