THE UNIVERSITY OF ARIZONA
COLLEGE OF ENGINEERING

# Electrical & Computer Engineering

## COMPUTER SCIENCE & ENGINEERING FACULTY RECRUITMENT

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This profile is intended to provide information about the University of Arizona tenured, tenured elibible and career-track faculty positions in the department of Electrical & Computer Engineering. It is designed to assist qualified individuals in assessing their interest in these positions.

▶ ▶ ▶ **engineering.arizona.edu**          ▶ ▶ ▶ **ece.engineering.arizona.edu**

# Multiple Faculty Opportunities

Fueled by visionary leadership and resourced for success, the Department of Electrical and Computer Engineering (ECE) at the University of Arizona is entering an era of unprecedented growth in student enrollment and faculty hires across all areas of Computer Science and Engineering (CSE) for a start date of Fall 2025.

The new forward-looking CSE curriculum is designed to bridge the talent gap in computing, train future industry leaders and drive research for next-generation technologies.

And so, the ECE Department invites applications for tenure-track or tenured positions – assistant professor (multiple) and career-track – assistant/associate professor of practice. *Further details are provided on Page 4 of this document.*



# Premier University

The University of Arizona is a premier R1 research institution. It is one of only seven in the country that share these characteristics.

- state flagship land grant institution
- large medical school within the main campuses
- member of the Association of American Universities

The university is ranked among the National Science Foundation's top 25 for research funding, and it is a Times Higher Education top 20 U.S. public research institution. It is a designated space grant institution with deep NASA funding and strong physical sciences. Forbes has recognized the UA for its combination of first-rate educational opportunities and affordable pricing. Further, the UA is the state's first four-year public university to be federally recognized as a Hispanic Serving Institution. The designation is granted to institutions with at least 25% Hispanic undergraduate student enrollment.

# Computer Science & Engineering Research Enterprise

The ECE department is seeking faculty passionate about working with students and training the next generation of researchers. The department is particularly looking to fill multiple positions in the following areas:

- Programming languages, compilers and runtime systems including software for AI/ML systems and next-generation hardware, parallel programming models for heterogenous systems and reliability and robustness of software
- Foundations of AI including machine learning, natural language processing, computer vision, algorithms and complexity, theory, robotics, intelligent decision making, data science, optimization, fairness, trustworthiness and applications to engineering and scientific disciplines
- Computing Systems: Areas of interest include all layers of the systems and the architecture stack, IoT/edge computing systems, embedded systems, heterogeneous computing systems as well as emerging areas such as AI accelerators, hardware-software codesign
- Security, Resilient and Trustworthy Systems including all areas of software security, systems and hardware security, privacy, network security, next generation wireless systems and applied cryptography

# Extensive Faculty Onboarding

Our faculty onboarding program empowers professors to become drivers of the college's success, while engaging them in lifelong learning and career growth. During the first year, faculty focus on trainings and workshops directed toward effective project management, grant funding proposal strategies, engaging pedagogy and academic leadership. Extended topics include project budgeting, tailored growth of research enterprises, hands-on training for learning management systems, strategic online learning, engaging diverse student populations, and others. New faculty also have opportunities to grow professionally through mentorship, learning communities and cohort groups.

## Multi-Year Expansion

ECE has a comprehensive BS program, a combined 5-year BS-MS program, as well as MS and PhD programs. The department is ranked in the top 20 percent of public universities in the nation and is in a rapid expansion phase. In 2023, a new CSE program was launched, leading to an ambitious, multi-year hiring effort. In this second round of hiring, ECE seeks to attract, develop, and retain excellent faculty with outstanding research credentials and future promise. There is particular interest in candidates who will contribute to the growth of the CSE program, diversity and excellence of the university's academic community through their research, teaching, and service.

## Cultivate Career Growth

Wherever you may be in your career, the department is known for promoting professional development through a collaborative and nurturing environment. With annual expenditures exceeding $7M, our faculty are at the forefront of pioneering research. They lead three NSF-sponsored research centers and play major roles in others, including two NSF Engineering Research Centers.

Faculty collaborate across the university and around the world with interdisciplinary programs and centers devoted to a wide array of fields. More than a third of the faculty members are fellows in their respective professional societies. And the department is guided by an entrepreneurial spirit. Faculty members have founded or cofounded 14 active startup companies.

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# Commitment to Diversity and Inclusion

The American Society for Engineering Education and its Engineering Deans Council recognized the University of Arizona with a Bronze Award in the inaugural ASEE Diversity Recognition Program. UA Engineering was the first program in Arizona to receive this distinction. The honor is given to colleges that sign the ASEE Deans Diversity Pledge, build the infrastructure to support diverse populations, have at least one K-12 or community college pipeline activity, and commit to a diversity and inclusion plan that includes measurable goals.

Women engineering faculty members are represented prominently within the college. Kathleen Melde leads faculty affairs and inclusion, Kelly Simmons-Potter is the associate dean of academic affairs and Kriss Pope is the assistant dean of finance and administration.

The UA Chapter of the ASEE Collaborative for Engineering Education Research and Outreach provides an interdisciplinary campus network for promoting engineering education and providing students with service, research and professional opportunities. The university is also home to student chapters of the National Society of Black Engineers, Society for Advancement of Hispanics/Chicanos and Native Americans in Science, Society of Asian Scientists and Engineers, Society of Hispanic Professional Engineers, and Society of Women Engineers.

## Specific Areas of Interest for Hires

- **Assistant Professor** *(Multiple Positions)*
  https://arizona.csod.com/ux/ats/careersite/4/home/requisition/21051

- **Assistant/Associate Professor of Practice**
  https://arizona.csod.com/ux/ats/careersite/4/home/requisition/20932

# Established Entrepreneurial Culture

The University of Arizona embraces the entrepreneurial spirit of its faculty, students and staff, and engineering is a major driver of invention and technological advancement. From experiential learning for students to industry sponsored research and strong commercialization support, the college has a long history of entrepreneurial success – including more than 20 active startups and several major acquisitions.

## Design-Focused Undergraduate Curriculum: Craig M. Berge Design Program

Through a generous donation, the college launched the Craig M. Berge Engineering Design Program in 2019. From first-year competitions and maker fests to industry-sponsored capstone projects, this four-year program ties design, manufacturing and commercialization to all levels of the undergraduate curriculum. It immerses students in hands-on design, community projects and business instruction, major-specific design courses, and real-life projects. In 2024, more than 90 design teams and 70 sponsors participated in the Craig M. Berge Design Day, which showcases senior projects.

## Tech Launch Arizona, the Commercialization Arm

Inventors work with Tech Launch Arizona to secure their intellectual property, typically through patent applications, and identify the best paths to commercialization. Additionally, TLA puts on workshops and seminars and provides seed funding for product prototypes.

## McGuire Center for Entrepreneurship

Resources such as the New Venture Program in the McGuire Center for Entrepreneurship at the Eller College of Business also assist students and faculty with moving products to market.

# Accomplished, Visionary College Leadership

**David W. Hahn**, *Craig M. Berge Dean, College of Engineering*
A champion of diversity in engineering, David Hahn has more than two decades of experience in higher education and with national agencies and laboratories.

Hahn joined the college as dean in 2019 as it embarked on establishment of a four-year undergraduate design program with renewed commitment to strengthening experiential education and focusing on today's most pressing issues – food and water, energy, health care, and security.

He had a 20-year career at the University of Florida, where he served most recently as chair of mechanical and aerospace engineering. Under his leadership, the university built a 4,000-square-foot student design center, his department grew to the largest on campus in terms of student enrollment, and the female student population in mechanical and aerospace engineering increased to 50% above the national average.

**Michael H. Wu**, *Department Head, Electrical and Computer Engineering*
Michael Wu received his bachelor's degree in 1996 and his doctorate degree from the State University of New York (SUNY) at Buffalo in 2002. He joined the Electrical and Computer Engineering Department at the University of Arizona as department head in 2022.

His current research focuses on security and privacy in intelligent computing and communication systems. A Fellow of IEEE, he received the NSF CAREER Award in 2004 and the IEEE Percom Mark Weiser Best Paper Award in 2018.

Wu enjoys working in leadership because he can touch so many different areas – much like the field of ECE itself, which is applicable to fields including quantum computing, cybersecurity, artificial intelligence, medical technology, drones, and autonomous vehicles.

*"Such recognition by ASEE reinforces our strong commitment to diversity and inclusion and sends the message to our students and faculty members that we are serious about these endeavors."*

**DAVID W. HAHN,** *Craig M. Berge Dean of the College of Engineering*

# Working at UArizona and Living in Tucson

University of Arizona employees appreciate its collegial and inclusive culture, commitment to diversity and shared decision making. Members of the university community enjoy competitive benefits, a nationally recognized work/life program, innovative leadership development initiatives, generous tuition reductions for depenedents, and family friendly options, such as paid parental leave. For extensive information about the benefits of working at the University of Arizona visit **talent.arizona.edu**.

The university is located in a tech corridor well represented in aerospace and defense, border technology, optics and photonics, solar and renewable energy, mining and bioscience. The city may be in a semi-arid region, which certainly lends to the UArizona College of Engineering's expertise in water conservation and energy sustainability. But the Sonoran Desert – one of the most diverse desert ecosystems in the world – is anything but typical. Mountain ranges towering upwards of 9,000 feet surround the city of a half million, and many students, faculty members and their families spend their free time hiking and biking the canyon floors and mountain trails. In town, a streetcar service connects the university to a bustling Fourth Avenue and downtown with endless choices for dining, family and cultural events, nightlife, concerts and theater.

See **visitTucson.org** to find out why and how Tucson is calling you!

# ECE by the Numbers

## Top 20%
**ELECTRICAL ENGINEERING**
Public Universities, 2024
U.S. News & World Report

## Top 25
**ONLINE ENGINEERING GRADUATE PROGRAM**
Public Universities, 2024
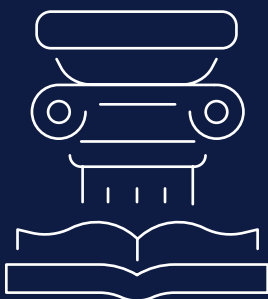U.S. News & World Report

**ENROLLMENT**
**Fall 2023**

### 469
**UNDERGRADUATE STUDENTS**
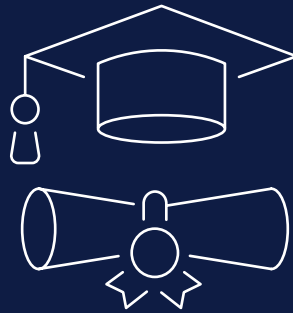Main Campus, Online and Microcampus

### 243
**GRADUATE STUDENTS**
Main Campus and Online

## 4.5 out of 5
**BEST GRADUATE SCHOOL PROGRAMS**
Money Magazine, 2024

**DEGREES AWARDED**
2022 - 2023 Academic Year

**92** BS
**102** MS
**11** PhD

**40**
**CORE FACULTY**

**10**
**IEEE FELLOWS**

**10**
**NSF CAREER AWARDEES**

## Top 20
**U.S. PUBLIC RESEARCH INSTITUTION**
National Science Foundation, 2024

### $7.6 M
**ANNUAL RESEARCH EXPENDITURES**
2024

**6**
**RESEARCH CENTERS**

**14**
**OPERATIONAL STARTUP COMPANIES**

**112**
U. S. Patents Issued
2001 - 2024

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