UC SANTA BARBARA

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Rising Stars

When the 70 or so women from across the country who have been invited to participate in the 2019 Rising Stars in Electrical Engineering and Computer Science (EECS) Workshop gather at the University of Illinois at Urbana Champaign next fall, UC Santa Barbara's Hongwei Zhao and Chunfeng Cui will be among them.

The Rising Stars of EECS seeks the brightest and most promising women in the field during the early stages of their academic careers. Previous workshops have taken place at the Massachusetts Institute of Technology, Carnegie Mellon University, Stanford University and UC Berkeley.

"It will be a great opportunity to learn from the best in academia and connect with other up-and-coming women," said Zhao, who defended her Ph.D. in electrical and computer engineering (ECE) in June.

The annual workshop unites women who are interested in pursuing academic careers in computer science, computer engineering and electrical engineering. Participants will present their research, interact with faculty from top-tier universities and receive advice for advancing their careers.

"I could not be more grateful or happy to be invited," said Cui, who is a post-doctoral researcher for Zheng Zhang, a professor in the ECE department. "I look forward to meeting my academic peers and sharing our experiences as female researchers."

Cui received her Ph.D. in computational mathematics with a specialization in numerical optimization for tensor data analysis from the Chinese Academy of the

Sciences. Cui's research spans two main areas: uncertainty quantification for electronic and photonic design automation; and tensor methods for machine learning. A tensor is a mathematical object that generalizes multi-dimensional data in the context of machine learning.

Earlier this year, Cui was one of 32 women named 2019 Rising Stars in Computational and Data Sciences and was invited to a workshop hosted by the University of Texas at Austin's Institute for Computational Engineering and Sciences. There she met dozens of women who she said provided invaluable advice and insight

"It's inspiring to see more and more independent, successful and well-respected women in both academia and industry," said Cui, who also received the 2018 Best Paper Award of IEEE Electrical Performance of Electronic Packaging and Systems (EPEPS). "Their existence lights my own path and gives me confidence that I can become whoever I want."

Zhao will soon begin a post-doctoral research position with her Ph.D. advisor, Jonathan Klamkin. She received her master's degree from the Institute of Semiconductors, Chinese Academy of Sciences and completed her undergraduate studies in electronics at Huazhong University of Science and Technology.

Zhao's research interests include silicon photonics with emerging materials, such as graphene and tin oxide, and compound semiconductor integrated circuits. Her current research focuses on Indium Phosphide (InP)-based photonic integrated circuits for free-space communications.

"As I continue seeing better results in my research, the more interested, inspired and committed I become," Zhao said. "I am excited to be part of a field where my work can make a difference in society by solving difficult problems through research."

Tackling challenges in the world and mentoring students are two factors that push Cui to pursue a career as a professor. She has advice for other female engineering students.

"You may face doubts and struggle with confidence, but you should always be proud of yourself," she said. "Getting into UCSB's College of Engineering shows you already possess the qualities of a great engineer. Get to know the excellent female faculty and staff at UCSB and use them for inspiration and affirmation. They're proof

that your work will be as outstanding as any man’s can be.”

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.