OU ENGINEER

Gallogly College of Engineering — The UNIVERSITY of OKLAHOMA

January 2023

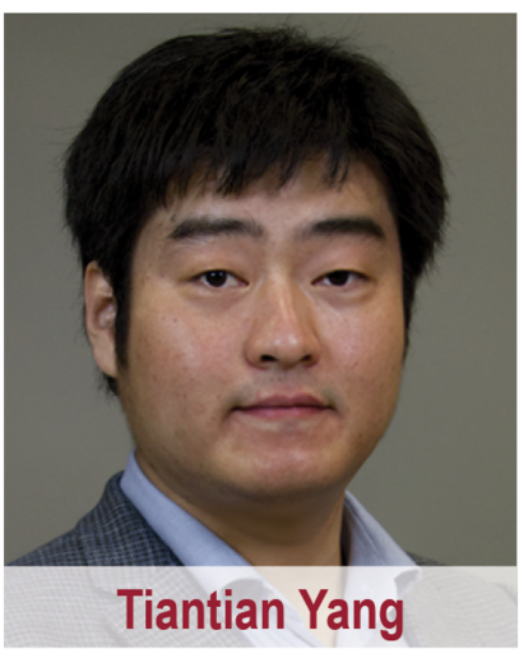
OU Engineering Research Awards on the Rise

From July to December 2022, OU Engineering faculty received $45 million in research grant awards – more than double what was awarded during the same period last fiscal year – from 122 external research sponsors, including the federal government, industrial sponsors and foundations. Significant funding sources include the National Science Foundation, the National Institutes of Health and the Department of Defense.

"The record-breaking increase reflects the exceptional research conducted by engineering faculty at OU," said Zahed Siddique, OU Engineering associate dean for research. He notes that many of the funded projects are part of the research clusters and initiatives plan that OU Engineering launched in 2020. The initiative focuses on cross-disciplinary research in thematic areas that address issues with broad and future implications for Oklahoma, the nation and the world.

Record Number of OU Engineers Earn NSF CAREER Awards

The National Science Foundation has recognized three Gallogly College of Engineering faculty members with 2023 Early Career Development Awards, an NSF award that recognizes junior faculty with the potential to serve as academic role models in research and to lead research advances. This year, the Gallogly College of Engineering is seeing unprecedented success with three winners announced and more possibly on the way.



The CAREER project by **Jay McDaniel**, School of Electrical and Computer Engineering, will focus on developing a custom unmanned aerial vehicle or UAV-based radar suite with sophisticated signal processing techniques. It entails measuring the depth and distribution of snow and ice to support actionable risk management strategies and socioeconomic resiliency from snow-related weather events. McDaniel Lab.

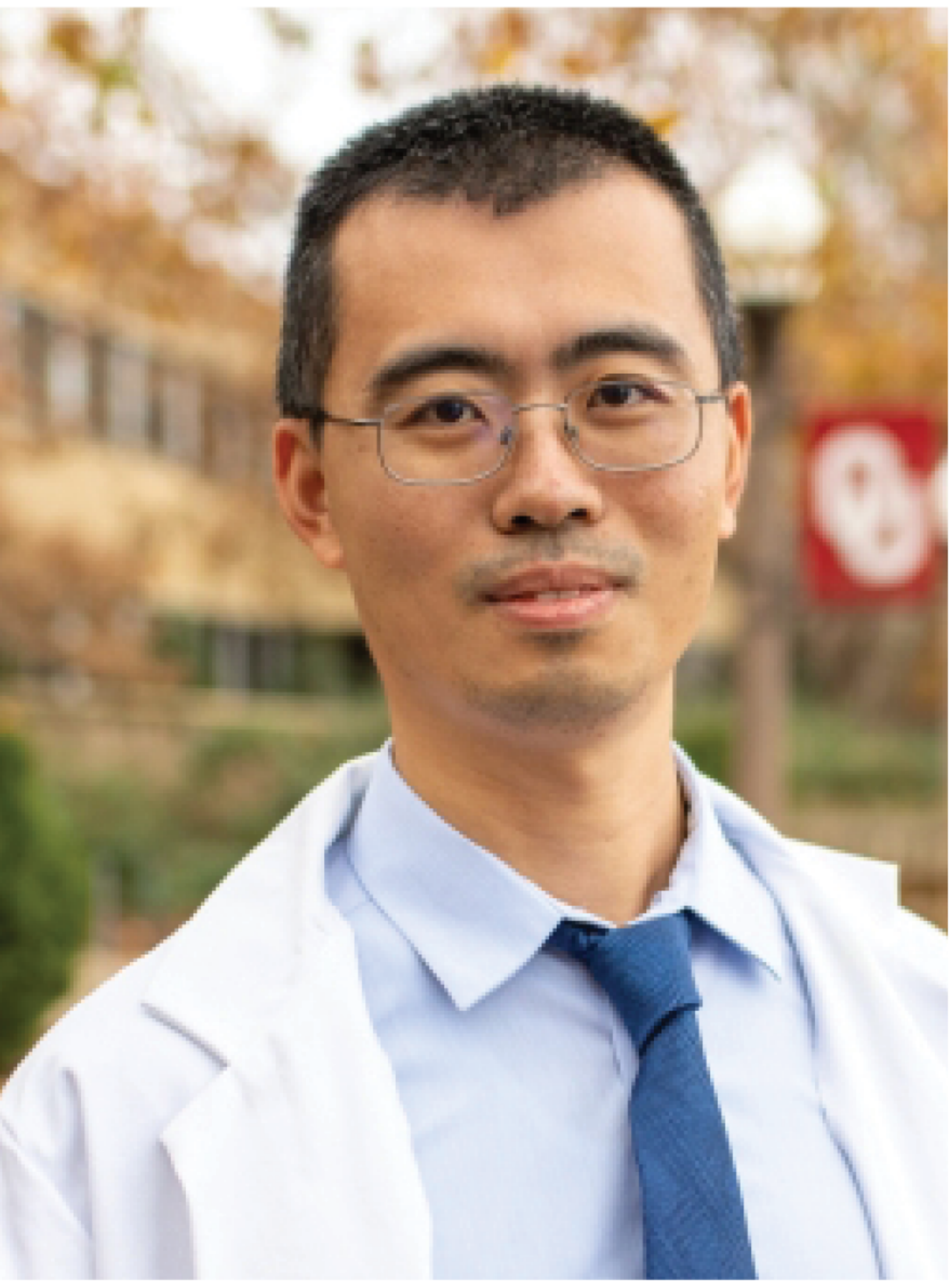
Qinggong Tang, Stephenson School of Biomedical Engineering, studies the development of novel optical imaging techniques for functional brain imaging. His CAREER project aims to develop an intelligent and miniaturized imaging platform to recognize tissue structures in real-time. Tang Lab.

Through his CAREER project, **Tiantian Yang**, School of Civil Engineering and Environmental Science, aims to develop an integrated solution that can account for the spatial and temporal variability of precipitation. His research centers on creating an artificial intelligence and data mining decision support tool that will allow reservoir operators to use improved ensemble forecasts to develop adaptive release strategies. Yang Lab.

OU Engineer Focuses on Restoring Movement After Stroke

OU-Tulsa biomedical engineer Yuan Yang, Stephenson School of Biomedical Engineering, has received nearly $2 million in funding from the National Institutes of Health and the American Heart Association to examine the impact of strokes and the movement impairments suffered by stroke patients.

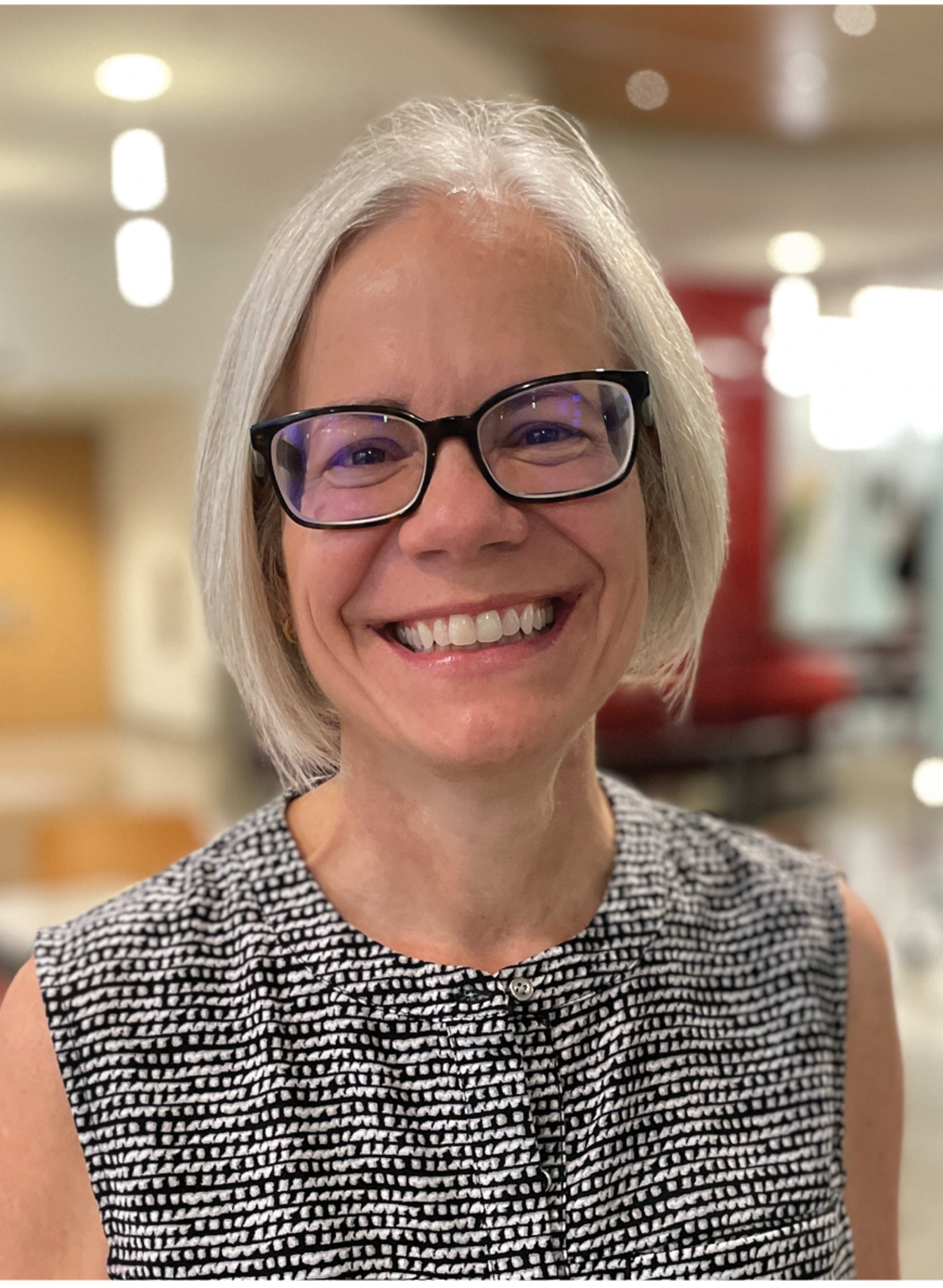
The NIH awarded Yang $1.6 million for a five-year project titled “Shift from Unilateral to Bilateral Sensory-Motor Connectivity in Chronic Hemiparetic Stroke.” The AHA awarded Yang $231,000 to study pathological changes in the nervous system associated with brain injuries or neurological disorders. Yang Lab.



Shehab Inducted into Oklahoma Higher Education Hall of Fame

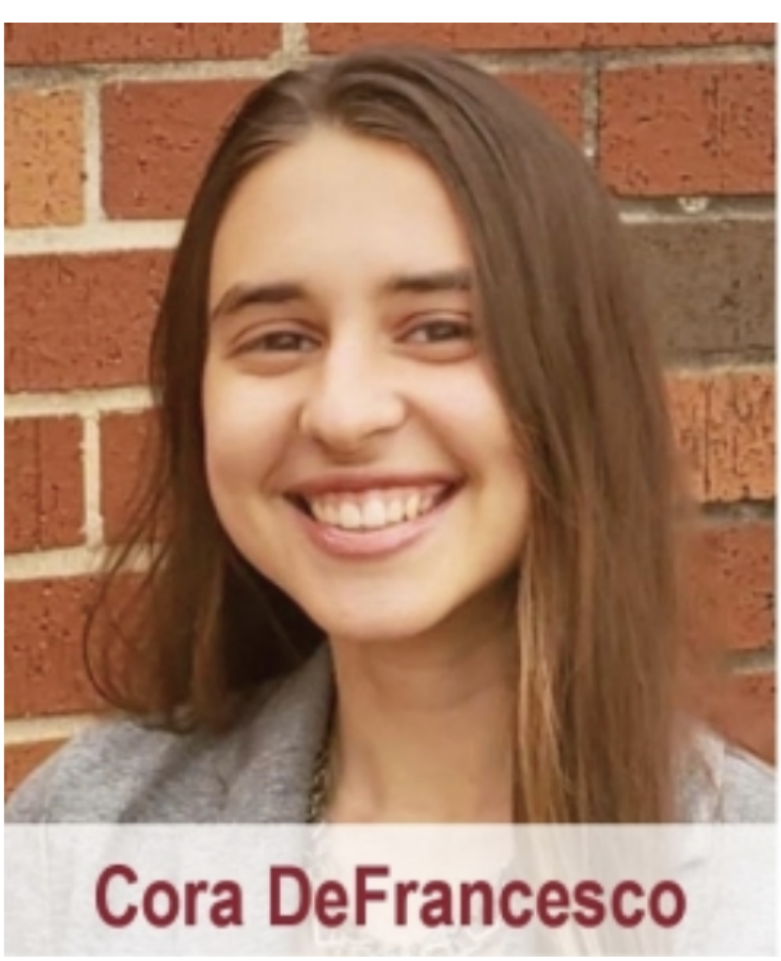
Randa Shehab, senior associate dean for OU Engineering and co-coordinator for the Data Science and Analytics Institute, recently was inducted into the Oklahoma Higher Education Hall of Fame. She was among 11 statewide honored as part of the 2022 Hall of Fame Class.

Shehab has devoted her career to broadening access to engineering education. She started her academic career as an industrial engineering professor and since that time, has trained and mentored more than 4,650 undergraduate students and served as an adviser to more than 30 graduate students.



OU Engineering Students Named Astronaut Scholars

In fall 2022, the Astronaut Scholarship Foundation recognized Cora DeFrancesco, now a graduate student in the School of Electrical and Computer Engineering, and Mulan Tang, a senior in the Stephenson School of Biomedical Engineering, at the Inventors Gala in Orlando, Florida. The two were among 68 undergraduate students nationwide selected as Astronaut Scholars.



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