

## Department of Transportation Selects OU to Lead Regional Efforts



The Southern Plains Transportation Center has been named the 2023 Region 6 University Transportation Center. The OU research team includes, from left, Royce Floyd, Renee McPherson, Musharraf Zaman, Arif Sadri and Michael Molina.

The Department of Transportation has selected OU to lead a [University Transportation Center](#) that focuses on improving the durability and extending the life of the country's transportation infrastructure. OU is one of 34 universities nationwide selected in the 2022 University Transportation Center competition. Located on the OU-Norman campus, Southern Plains Transportation Center scholars will receive \$3 million per year, matched by the Oklahoma Department of Transportation, for research leading to climate change mitigation in the transportation sector. Musharraf Zaman, a professor in both the School of Civil Engineering and Environmental Science and the Mewbourne School of Petroleum Geological Engineering, is the center's director.

## OU to Construct New Interdisciplinary Engineering Building

OU Engineering will soon clear space for a new Infrastructure Innovation Building (I2B), which is being designed as a multidisciplinary facility servicing faculty and students from five of OU Engineering's seven schools. The building, supported in part by the State of Oklahoma, will provide shared lab spaces that support collaboration and research in transportation, electrical and hydrogen vehicles, energy infrastructure expansion, water, air mobility and autonomous vehicles. [More about OU Engineering's research clusters and initiatives.](#)



By developing artificial intelligence programs to predict coastal fog at the Port of Corpus Christi, researchers could potentially mitigate the effects of these weather events and have a dramatic impact on the shipping industry and ports across the United States.

## NSF AI Institute Makes Headway in Atmospheric Research



Amy McGovern, a professor in the School of Computer Science and the School of Meteorology, leads the [NSF AI Institute for Research on Trustworthy AI in Weather, Climate, and Coastal Oceanography](#). Launched in 2020, the researchers are making significant headway in use-inspired applications.

"The artificial intelligence team is working hand-in-hand with atmospheric scientists to develop new AI methods," she said. "That work then incorporates social scientists to ensure that our end-users trust the AI we've developed and will actually use it." [Institute update.](#)

## Heard Around the Quad:



**Michele Galizia**



**Iman Ghamarian**



**Stefan Wilhelm**

[Michele Galizia](#), an assistant professor in the School of Chemical, Biological and Materials Engineering, received the 2023 Polymeric Materials Science and Engineering Division Early Investigator Award from the American Chemical Society. The award recognizes his contributions to understanding the mechanisms regulating small molecule transport, selectivity, and durability in new-generation membrane materials for gas and liquid separations.

[Iman Ghamarian](#), an assistant professor in the School of Aerospace and Mechanical Engineering, has had a proposal approved by the Molecular Foundry, a Department of Energy-funded nanoscience research facility. Titled "Enhancing low-temperature ion conductivity in protonic ceramic fuel cells by the rational design of the electrode-electrolyte interface," he is granted access to the National Center for Electron Microscopy at the Berkeley Lab. There, he will explore new avenues to improve the performance of protonic ceramic fuel cells at lower operating temperatures.

[Stefan Wilhelm](#), an assistant professor in the Stephenson School of Biomedical Engineering, has been presented with the OU Engineering Teaching Scholar Award. Wilhelm, a recipient of a 2021 Faculty Early Career Development Award, studies nanotechnology and his CAREER award funds [BE4NANO](#) (Bionanotechnology Engagement for Native Americans in Oklahoma), an outreach program that focuses on high school juniors, including students who are members of the Kiowa and Wichita tribes in southwest Oklahoma.

## In the News:

NewsNation visited the OU campus to tour the Advanced Radar Research Center and meet with OU engineers to discuss the latest radar technologies deployed to war zones. [View here.](#)



Research by [Hazem Refai](#), a professor in the School of Electrical and Computer Engineering at OU-Tulsa, was featured on [KTUL-TV](#). He noted that the complex machine model ChatGPT and other advanced artificial intelligence programs are considered some of the biggest technological advancements since the internet's creation and will change how people live and work. Developed by OpenAI, ChatGPT (chat generative pre-trained transformer) launched as a prototype in November 2022.



[Qinggong Tang](#), an assistant professor in the Stephenson School of Biomedical Engineering, was featured in The Oklahoman. Tang, a recent CAREER recipient, is developing technology to make medical needle placements in patients more accurate, and perhaps make shots for babies and small children less traumatic. He received \$500,000 in funding through the National Science Foundation to develop technology that will provide real-time images for doctors administering needle-based medical interventions. [Story here.](#)



## Looking Back:

February is the time to recognize the significant contributions of engineers and energize the next generation of innovators. The Gallogly College of Engineering celebrated this year's Engineers Week with various special events.

Over 800 high school students and educators across Oklahoma attended the [11th Engineering Open House](#) sponsored by OG&E. Competitive design events, such as the Design, Build, Fly Glider Challenge, allowed students to compete for scholarships.

Engineers Week 2023 was a Jurassic adventure through engineering evolution. Dalton Brasington, director of outreach and recruitment, provides a firsthand account in [our engineering blog](#).



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