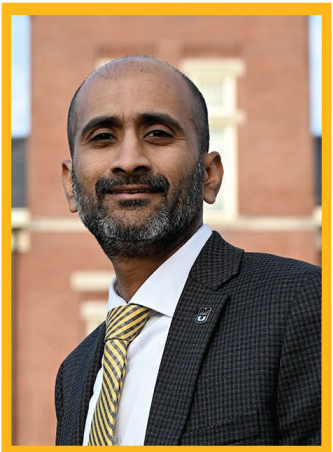
Civil & Environmental Engineering

Civil & Environmental Engineering
University of Missouri

2023-2024 Annual Report



Scan to learn more!

In the Department of Civil and Environmental Engineering at Mizzou, we're exploring innovative solutions to pressing worldwide challenges. Our dedicated faculty have made significant strides in water resources, transportation, structural engineering and geotechnical engineering.

This fall, we launched a Bachelor of Science in Environmental Engineering that will allow students interested in sustainability to more directly receive the coursework and experiences needed to be successful. As demand for sustainable solutions grows, Mizzou will equip the next generation of environmental engineers with the skills necessary to build a better world.

Thanks for taking a few minutes to read our highlights from the past year.

Praveen Edara, P.E.
Chair, Professor
Civil & Environmental Engineering

SCAN HERE TO TAKE A TOUR!

Step inside Mizzou Engineering with our 360° virtual tour of our classrooms, labs and student spaces. Learn about our degrees, extracurricular opportunities and support resources from the comfort of your home.

Show Me
THE NUMBERS

People in CEE

308 Undergraduate Students

98 Graduate Students

25 Faculty Members

Research Expenditures

↑**24%**

$6,110,394 in the year 2024

$4,913,684 in the year 2023

Number of proposals in 2024: **84**

Number of proposals in 2023: **64**

Research Areas

- Environmental & water resources
- Geotechnical
- Structural
- Transportation

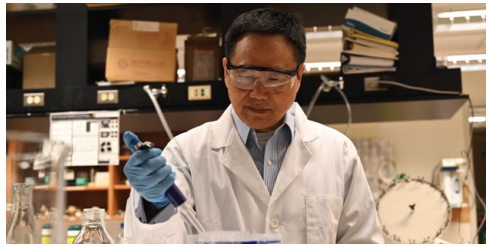
Research Centers

- Missouri Center for Transportation Innovation (MCTI)
- Missouri Water Center (MWC)
- Missouri Work Zone Safety Center of Excellence (MOWZES)

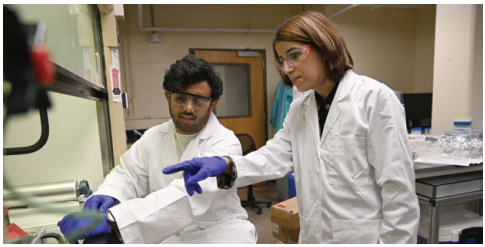
Tier I Research Institution • AAU Member

Research HIGHLIGHTS

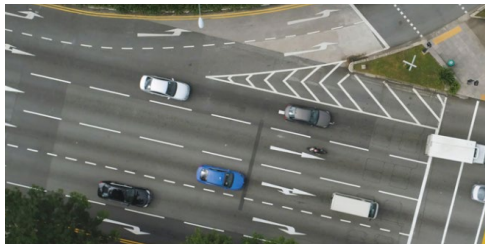
Sarah Orton is creating better analytical tools and methods to predict and prevent building collapses by studying how falling debris impacts structures using funding from the National Science Foundation.



Baolin Deng is developing tools to monitor water quality at the future site of the Roy Blunt Reservoir near Milan, Missouri. The project is part of a three-year, $5 million grant from the U.S. Environmental Protection Agency (EPA).



Maryam Salehi is designing a fabric-like water filter that can be attached to a faucet so it can remove microplastics and lead from tap water. Her research is supported by Brown and Caldwell and the National Science Foundation.



Henry Brown is leading a project to help determine what measures state departments of transportation are using to help keep motorists safe under the umbrella of the National Cooperative Highway Research Project (NCHRP).

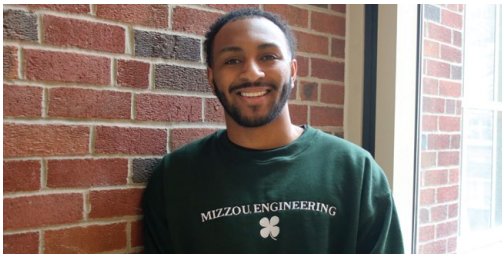
Hani Salim and his team have outlined a new way to simulate and predict how laminated glass windows might fail during an explosion using an approach that integrates detailed modeling with relation considering both elasticity and damage.

Binbin Wang and collaborators created an innovative mathematical model that can provide fast and reliable predictions on how far wind can carry a plant's seeds.

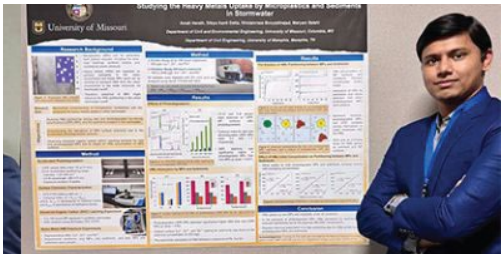
Student SUCCESS

Mizzou launched a new undergraduate degree in ***environmental engineering*** in the fall of 2024. The program combines biological, chemical and civil engineering disciplines to address pressing global environmental challenges. The degree focuses on important environmental topics such as water quality, pollution, waste management and sustainability.

Jaweed Nazary and fellow researchers found that satellite imagery is key to pinpointing exactly which locations are most susceptible to ground collapse due to ice melt. He presented his team's findings to NASA headquarters and the American Geophysical Union Conference.



Wayne Carter was one of 10 students nationally named among the 2024 American Society of Civil Engineers class of New Faces of Civil Engineering – College Edition.



Dibya Kanti Datta won first overall for his poster outlining the investigation of the deposition and release of lead in plastic drinking water plumbing at the Missouri Water Works Association (MO-AWWA) student poster competition.

Graduate students ***Elli Castonguay*** and ***Runze Sun*** received scholarships from the Missouri Water Center to continue their research. Castonguay is looking into remediation methods for mining pollution in southern Missouri. Sun is researching how to remove pre- and poly-fluoroalkyls (PFAS), or "forever chemicals," from water.

The ***Mizzou Steel Bridge Team*** qualified for the National Student Steel Bridge Competition after their third place finish at the American Society of Civil Engineers Mid-America Student Symposium.

CEE ACCOLADES

Baolin Deng, a pioneer in understanding environmental processes that impact health and ecosystems, was named a Curators' Distinguished Professor.

Feng "Frank" Xiao was honored as the 2023 Emerging Investigator lecturer by the Association of Environmental Engineering and Science Professors (AEESP).

A Mizzou Engineering team placed second at the Transportation Research Board (TRB) Transportation Forecasting Competition for Multivariate, Multitask Long-Short-Term Memory for Pedestrian Action Forecasting and Intent Prediction. The team was comprised of ***Yaw Adu-Gyamfi, Abdul Musah, Neema Owor, Linlin Zhang*** and ***Xiang Yu.***

Alumni SPOTLIGHT

The Civil and Environmental Engineering Academy of Distinguished Alumni (CEADA) inducted five new members in September. The 2024 inductees are: ***Jessica Adams-Weber*** (BS '08), ***Andrew Boeckmann*** (BS '05, MS '06, PhD '19), ***Brian Chandler*** (BS '98), ***Brian Haeffner*** (BS '90, MS '92) and ***Matthew Spencer*** (BS '04).

William S. Thompson Jr. (BS CiE '68, LHD '05) was inducted into the Mizzou Hall of Fame in Fall 2024. Thompson is the Chairman Emeritus of PIMCO and the founder of the Thompson Center for Autism & Neurodevelopment at Mizzou.

William "Bill" Baker (BS CiE '75, ScD '17) received the 2024 Jefferson Club Golden Quill Alumni Excellence Award for demonstrating outstanding achievement in his field and reflecting the University's core values of respect, responsibility, discovery and excellence.

Ed Hassinger (BS CiE '83) was appointed director of the Missouri Department of Transportation in November. He previously held a number of roles with MoDOT in his 40 years with the organization, including chief engineer and deputy director.