In the September issue of OU ENGINEER, learn how interdisplinary research teams are helping solve environmental challenges.

Connecting Wastewater to Health Issues

Wastewater-based epidemiology is a useful tool to monitor trends in the transmission of the coronavirus. Jason Vogel and Keith Strevett, faculty in the OU School of Civil Engineering and Environmental Science, are part of an OU wastewater surveillance team at the forefront of a new technique that examines wastewater.

Supported by the Oklahoma State Department of Health, their research recently expanded to 30 communities that will continue to examine wastewater and its connection to health issues such as SARS-CoV-2, influenza, monkeypox and vector-borne diseases. NPR reports that Oklahoma doesn't have to rely solely on testing to find COVID and monkeypox.

OU Student Researchers Examine Impact of Heavy Industry in Oklahoma City Neighborhood

OU environmental engineering and environmental science students spent over a year learning about the residents and environmental issues of JFK, an Oklahoma City neighborhood with heavy industry in its backyard. As part of the effort, students gathered soil and water samples, placed outdoor air-quality monitors and indoor sound meters in homes that now measure the decibel levels of nearby industrial explosions and related activities.

Robert Knox and Robert Nairn, both of the School of Civil Engineering and Environmental Science, teach the yearlong service-learning course. Learn more about this real-world work.

OU International WaTER Conference is set for Sept. 26-27. Register today for this virtual event!

The OU International WaTER Conference is scheduled for Sept. 26-27, 2022. The conference is designed to bring together participants from multiple disciplines world-wide in response to the United Nations Millennium Development Goals of bringing water and sanitation to emerging regions. The bi-annual event offers attendees a forum for sharing experiences and discussing challenges and solutions.

The highlight of the conference occurs when the University of Oklahoma International Water Prize is awarded to recognize an individual who has made significant contributions to the field of water supply and sanitation for developing regions.

2022 OU International Water Prize Winner Dawn Martin-Hill will give the plenary address at a ceremony at the First Americans Museum in Oklahoma City on Sept. 26. Read more about Martin-Hill here.

Register here.

Helping Communities Prepare for Hurricanes

An interdisciplinary team consisting of scientists, oceanographers, engineers and social scientists have developed a new decision support tool to support evacuation decision making. Called an integrated scenario-based evacuation tool, it helps emergency managers decide when and where to issue official evacuation orders.
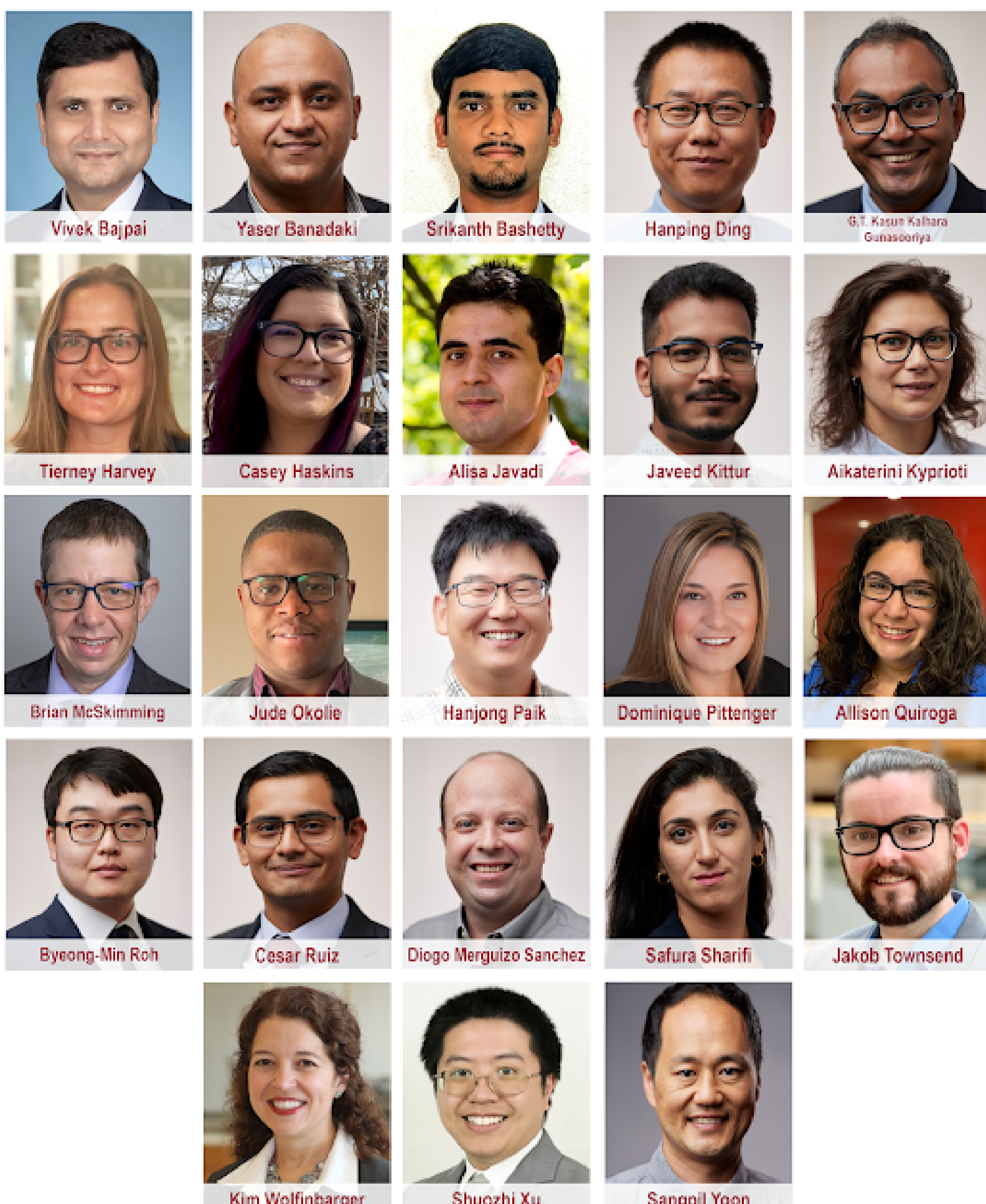
The OU team includes Kendra Dresback, Randall Kolar and Christine Szpilka, all of the OU School of Civil Engineering and Environmental Science, and Humberto Vergara, Cooperative Institute for Severe and High-Impact Weather Research and Operations at OU. The University of Delaware is the lead institution on the National Science Foundation study that is titled Hazards SEES Type 2: Dynamic Integration of Natural, Human, and Infrastructure Systems for Hurricane Evacuation and Sheltering.

Characterizing the Impact of Future Floods

2022 has been a year of notable flood events. From destructive flooding in the Northeast to catastrophic flooding in Tennessee, 2022 has been the deadliest for flooding in the United States since 2017. Yang Hong and Zhi Li, both of the School of Civil Engineering and Environmental Science, along with Jonathan Gourley, of the National Oceanic and Atmospheric Administration, recently published "Spatiotemporal characteristics of US floods: Current status and forecast under a future warmer climate" in Earth's Future Journal. The team notes that future floods in the U.S. are becoming more frequent, wider spread, yet less seasonal. Read the article here.

OU Engineering Welcomes 23 New Faculty Members

Twenty-three new faculty members joined the Gallogly College of Engineering at OU for the 2021-2022 academic year. These talented professionals bring skills and insights from top universities, leading laboratories and industry innovators across the nation and around the world. These experts in civil, computer science, aerospace, architectural, electrical, industrial, mechanical, biomedical and chemical engineering strengthen an already remarkable community of students, researchers and entrepreneurs. Learn more here.

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