Civil and Environmental Engineering
AT RUTGERS

Do you dream of designing highways and bridges? Does ensuring that buildings can withstand earthquakes and hurricanes appeal to you? Do you want to make your mark on the world by creating landmark towers and tunnels? Or ensuring communities have safe drinking water and sustainable ecosystems? At Rutgers, students tackle issues of global importance, including the sustainability of infrastructures, the impact of transportation on the environment, deploying emerging concepts and technologies in the construction of new facilities, and much more.

The Civil Engineering program at Rutgers prepares graduates for the practice of civil and environmental engineering at the professional level with confidence and skills necessary to meet the technical and social challenges of the future.

Our faculty members are technological innovators who take the lead on prominent state and national projects, while students engaged in our Engineers Without Borders chapter are committed to international water purification projects and food insecurity.

While we are the oldest engineering discipline at Rutgers, our current research is at the forefront of everything from intelligent transportation systems to air pollution control and high-speed railroad technology. Whether in the classroom or the laboratory, world-class CEE faculty members are dedicated to contributing to the development of a more sustainable economy, infrastructure, and environment.

THE FUTURE IS NOW

Dubbed the BEAST, Rutgers is home to the world's first outdoor laboratory capable of simulating deterioration that occurs on bridges by inflicting and intensifying stresses from the environment and heavy traffic on sections of bridges in the lab.

For more information, visit
cee.rutgers.edu

"The Rutgers pedigree is strong and Rutgers has a really good alumni presence in the industry. Everywhere I've interviewed has had at least one alum from Rutgers."
Ian Walczak

PROFESSIONAL OPPORTUNITIES

Construction engineer
Environmental engineer
Geotechnical engineer
Structural engineer
Transportation engineer
Water resources engineer

DEGREES OFFERED AND CURRICULAR OPTIONS

BS

Options:
Structural Engineering; Geotechnical Engineering; Transportation Engineering; Water Resources and Environmental Engineering; Construction Management

BS/BA Dual Degree

BS/MS Five-year Dual Degree

BS/MBA Five-year Dual Degree

MS

PhD

RUTGERS
School of Engineering

Established in 1864, Rutgers University's School of Engineering is a vibrant academic community whose richly diverse students and faculty members are committed to globally sustainable engineering. Its mission is built on a commitment to fostering the integration of education and research to achieve transformational innovation that is ethically responsible. With seven academic departments representing key engineering disciplines, the School of Engineering is recognized around the world as comprehensive and leading-edge, training the next generation of innovators across a broad spectrum of professions.

Civil and Environmental Engineering at Rutgers

PROGRAM HIGHLIGHTS

We prepare engineers able to take the lead in devising innovative and practical solutions to a wide range of civil engineering challenges.

Students take courses on everything from the design of concrete and steel structures to the planning of wastewater treatment facilities and transportation systems. They learn to plan and execute construction projects, as well as explore sustainable ways to protect the environment. They develop designs and plans for real-world structures, facilities, and systems in a required senior design project.

As seniors, students may elect to concentrate on specific interest areas, such as structural engineering; geotechnical engineering; transportation engineering; water resources and environmental engineering; and construction management.

HANDS-ON ACTIVITIES

Students gain invaluable, relevant work experience and make lasting professional network connections through engineering internship and co-op programs.

In addition to laboratory studies, CEE students regularly engage in cutting-edge research guided by faculty who are leaders in their fields in structural, construction, transportation, environmental, and geotechnical engineering.

COURSES OFFERED

Construction Engineering Management

Design of Steel Structures

Fluid Mechanics

Hydraulic and Environmental Engineering

Mechanics of Solids

Transportation Engineering

Soil Mechanics

Foundation Engineering

Reinforced Concrete Design Indeterminate Structures

Properties of Materials

RESEARCH CENTERS AND FACILITIES

Center for Advanced Infrastructure and Transportation (CAIT)

Brian and Stacey Reilly Laboratory for Sustainable Infrastructure

Structures and Material Laboratory

Soil Mechanics Research Laboratory

Urban and Coastal Water System Laboratory

Environmental Engineering Laboratory

Water Chemistry Research Laboratory

Langan Geo-environmental Laboratory

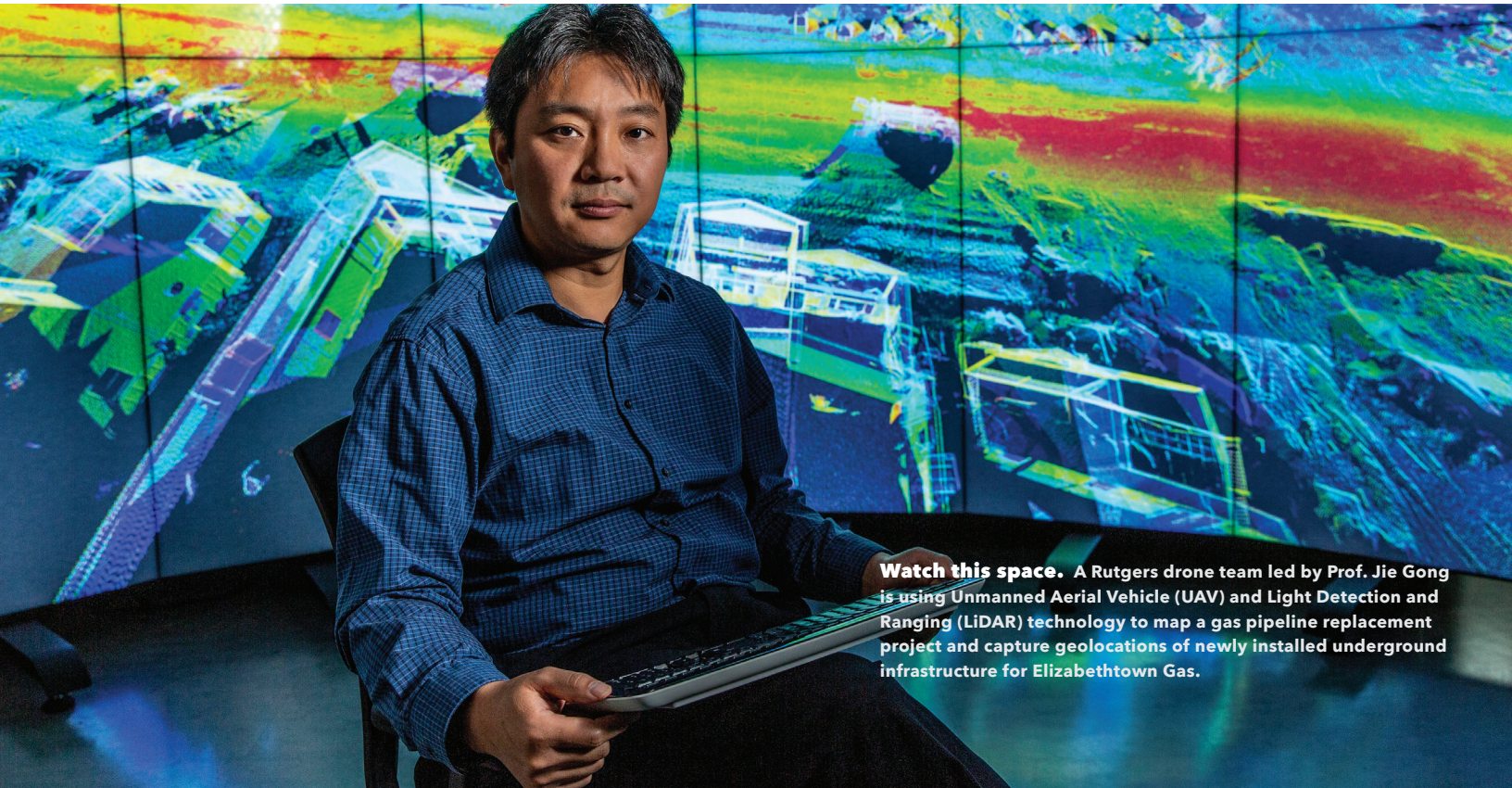
Intelligent Transportation Systems Laboratory

Visualization Laboratory

Expeditious, Connected, Holistic, Optimized, and Ethical Sensing (ECHOES) Laboratory

The Rutgers chapter of **Engineers in Action** works to improve the conditions of isolated communities through the construction of pedestrian footbridges in areas including Churo Alto in Bolivia.

Rutgers is the only academic **rail engineering** and safety program in the region, supporting railroads by training future engineers and other rail professionals and performing research to improve safety. **Prof. Xiang Liu** and his team are conducting several high-profile projects on **rail safety technologies**, including **positive train control**.



Watch this space. A Rutgers drone team led by Prof. Jie Gong is using Unmanned Aerial Vehicle (UAV) and Light Detection and Ranging (LiDAR) technology to map a gas pipeline replacement project and capture geolocations of newly installed underground infrastructure for Elizabethtown Gas.