

Civil and Environmental Engineering

FROM THE CHAIR / Spring 2024

Dear friends and colleagues,

Welcome to our 2024 spring newsletter. I am delighted to share with you the many recent achievements of our faculty and students.

Read about the work of **Ludmilla Aristilde** and her students which details how soils trap carbon and offers important insights about the global carbon cycle. **George Wells** and **Aaron Packman** are core partners in one of the 10 National Science Foundation Innovation Engines that will fund water research in the Great Lakes Region.

Transportation faculty **Pablo Durango-Cohen** and **Hani Mahmassani** have also received significant Department of Energy funding to reimagine the nation's multi-modal freight system. The research of **Erica Hartmann** is opening new routes to combat antimicrobial resistance using designer viruses. **Amanda Stathopoulos** and her students are working to translate complex behavioral patterns about transportation choices to better guide decision-making.

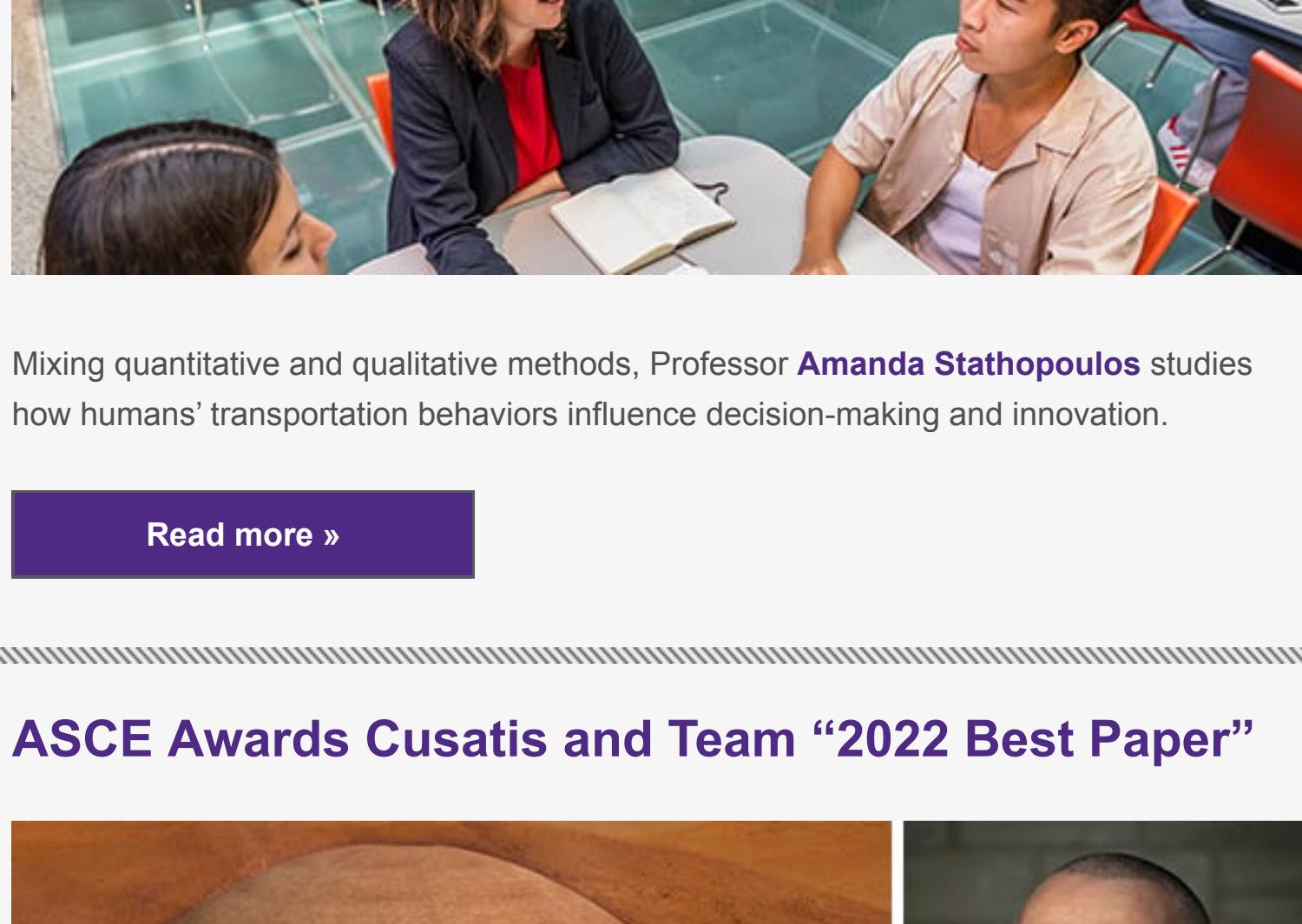
Our students never cease to amaze us. **Kara Rodby** ('19) recently joined an energy startup and was named to *Forbes' 30 under 30*. **Gianluca Cusatis** and his students were awarded 2022 Best Paper by the American Society of Civil Engineers for their work on constructing habitats on Mars. We welcome **Eric Garcia** as our new assistant chair and share his Faculty Spotlight, along with that of **Arantza Alarcon-Fleming**. Our faculty continue to demonstrate their excellence with their many awards.

As we close on another highly successful academic year, we thank you for your support and wish you a happy, sunny summer.



Kimberly Gray
Roxelyn and Richard Pepper Family Chair
Professor of Civil and Environmental Engineering
McCormick School of Engineering

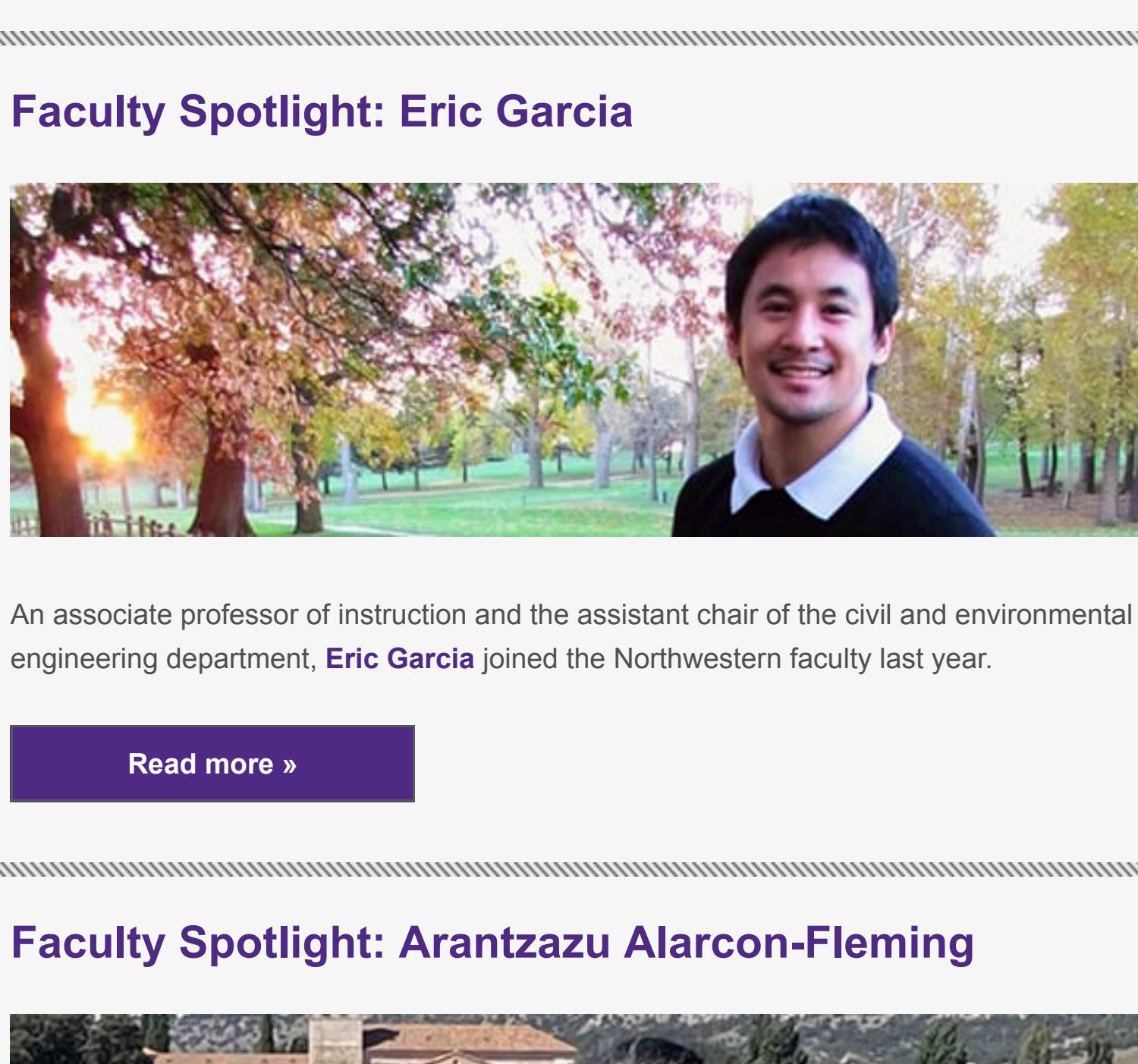
Understanding How Soil Traps Carbon



New findings from Professor **Ludmilla Aristilde** explain how soil sequesters plant-based carbon preventing its release to the atmosphere.

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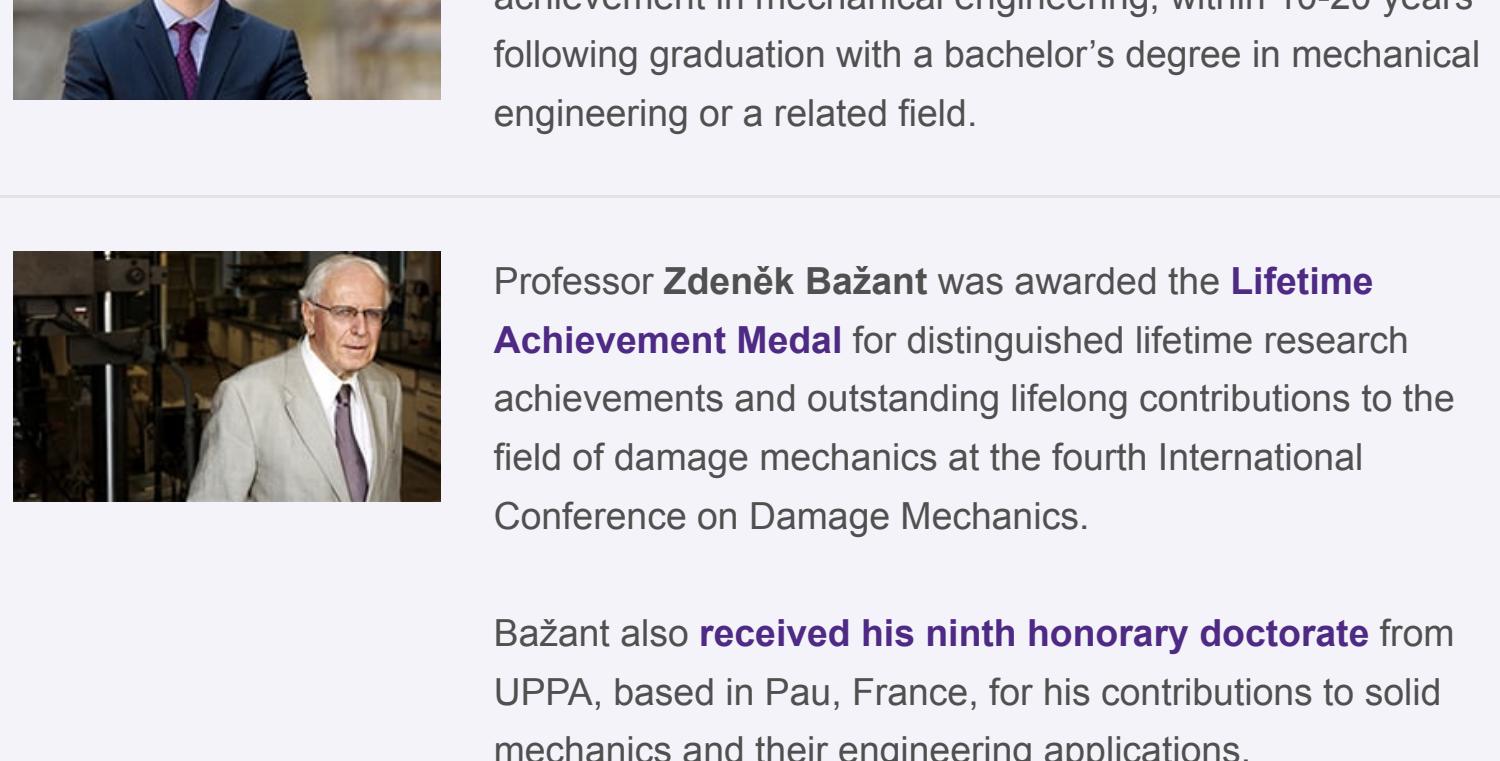
Great Lakes Project Selected to Receive up to \$160 Million from NSF



Northwestern will serve as a core partner on the project, with Professor **George Wells** serving as Northwestern's principal investigator while Professor **Aaron Packman** is a key member of the leadership team.

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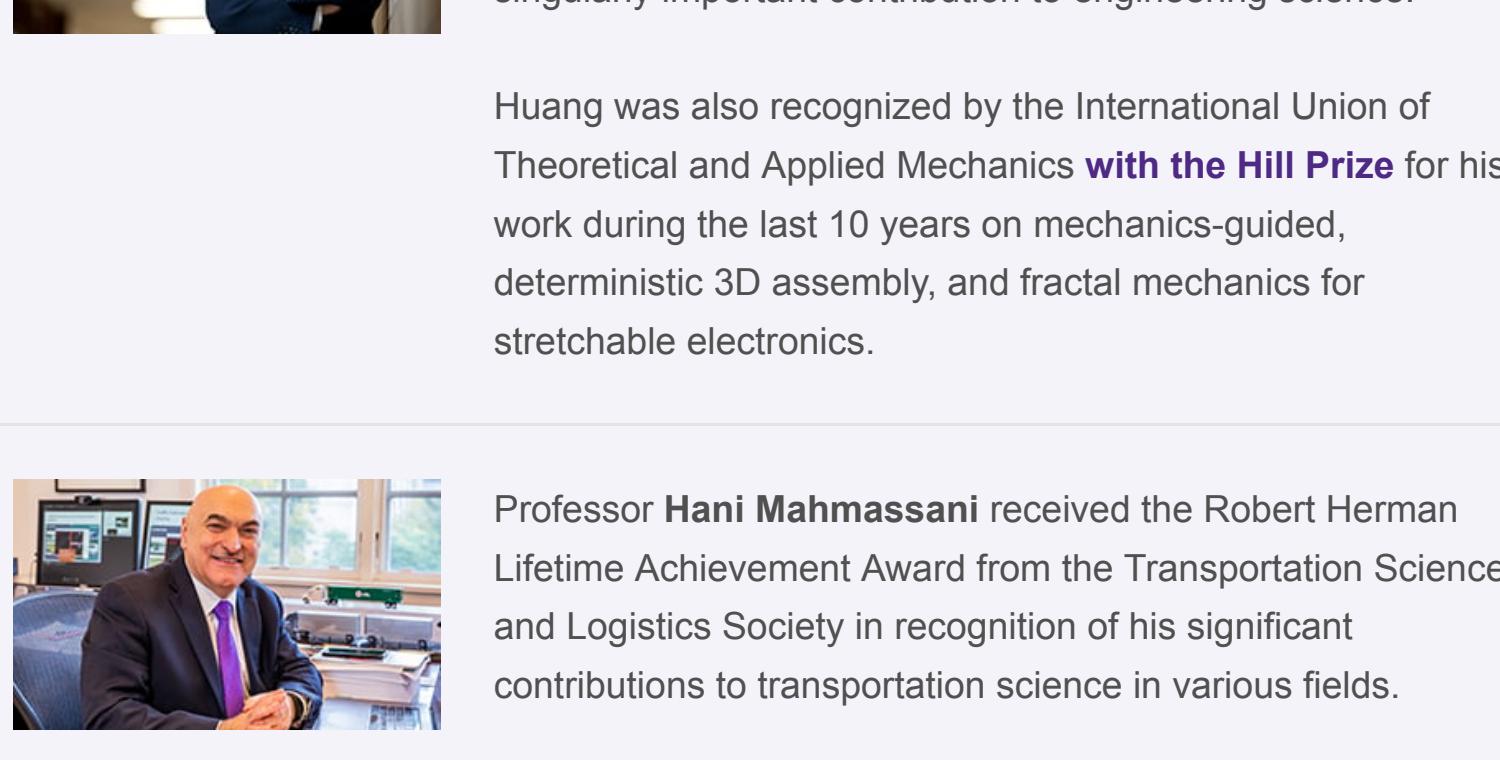
NUTC Awarded \$2.2 million INTERMODAL Grant



The Northwestern University Transportation Center was selected for a \$2.2 million INTERMODAL grant by the Advanced Research Projects Agency - Energy of the US Department of Energy.

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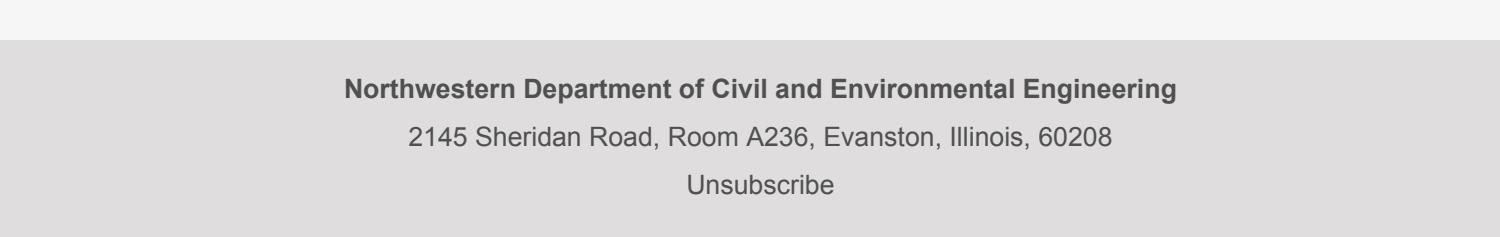
Engineering Viruses to Kill Deadly Pathogens



A study by Professor **Erica Hartmann** marks a critical step in creating new therapies to treat antibiotic-resistant infections.

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Alumna Kara Rodby Charges Forward, Named to *Forbes' 30 Under 30*



After graduating with her BS in environmental engineering, **Kara Rodby** ('17) went to MIT where she recently completed her PhD, which led her to a career at Volta Energy Technologies.

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Faculty Spotlight: Eric Garcia

An associate professor of instruction at Northwestern Engineering, **Eric Garcia** joined the Northwestern faculty last year.

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Faculty Spotlight: Arantza Alarcon-Fleming

A professor of instruction at Northwestern Engineering, **Arantza Alarcon-Fleming** discusses her career, proudest accomplishments, and what has inspired her during her career.

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FACULTY HONORS

The 2024 ASME Gustus L. Larson Memorial Award presented to Professor **Sinan Keten** recognizes outstanding achievement in mechanical engineering within 10-20 years following graduation with a bachelor's degree in mechanical engineering or a related field.

Professor **Zdenek Bažant** was awarded the **Lifetime Achievement Medal** for distinguished lifetime research in the field of damage mechanics at the fourth International Conference on Damage Mechanics.

Bažant also received his ninth honorary doctorate from UPPA, based in Pau, France, for his contributions to solid mechanics and their engineering applications.

It will award the **Zdenek P. Bažant Medal**, recognizing an individual who has made significant contributions to the field of outstanding leadership.

Professor **Ahmad Hadavi** was named a fellow by the American Society of Civil Engineers. Hadavi is the deputy director of the Master of Science in Project Management program and a clinical professor in the Department of Civil and Environmental Engineering.

Beginning in 2024, the Society of Engineering Science will rename its **Engineering Science Medal** the **Yonggang Huang Engineering Science Medal**, recognizing a singularly important contribution to engineering science.

Huang was also recognized by the International Union of Theoretical and Applied Mechanics with the **Hill Prize** for his work during the last 10 years on mechanics-guided, deterministic 3D assembly and fractal mechanics-guided, stretchable electronics.

Professor **Hani Mahmassani** received the Robert Herman Lifetime Achievement Award from the Transportation Science and Logistics Society in recognition of his significant contributions to transportation science in various fields.

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FACTS & FIGURES

98 Years of research and education

7 National Academy of Engineering members

10 Young Investigator Awards

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