

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.

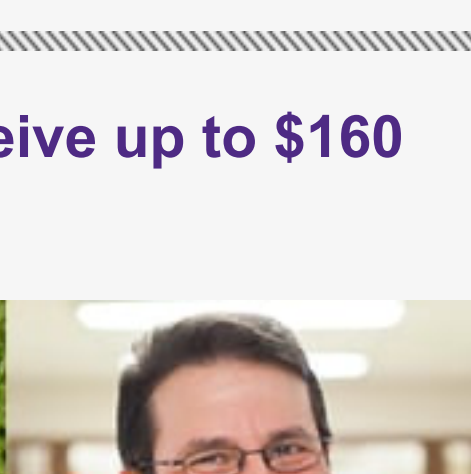
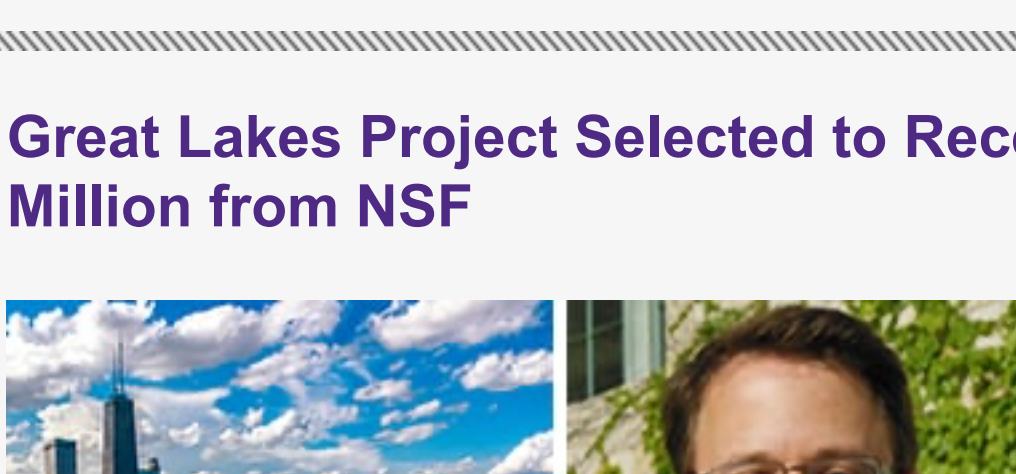
Our students never cease to amaze us. **Kara Rodby** ('19) recently joined an energy startup and was named to *Forbes*' 30 under 30. **Gianluca Cusatis** and his students were awarded 2022 Best Paper by the American Society of Civil Engineers for their work on constructing habitats on Mars. We welcome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

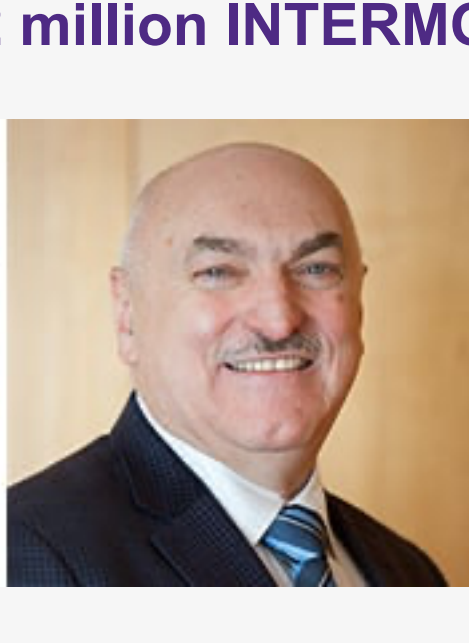
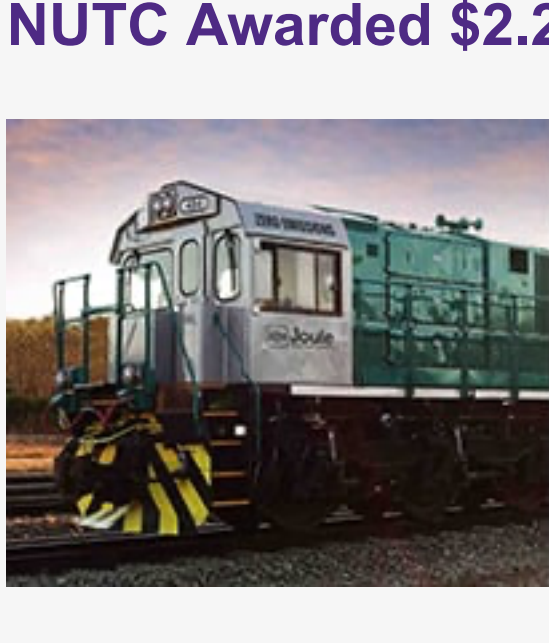
Understanding How Soil Traps Carbon



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

[Read more »](#)

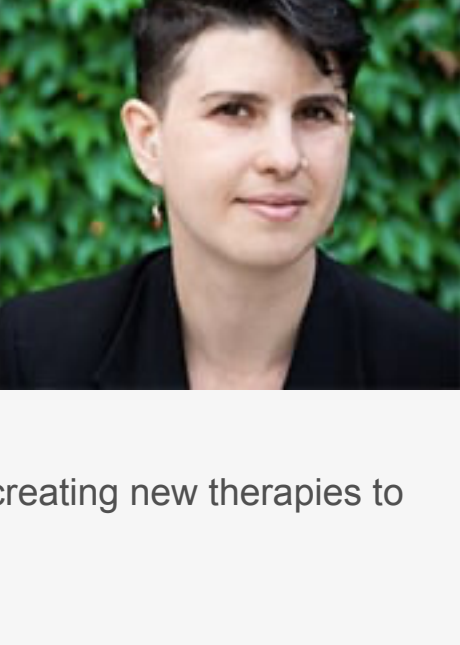
Great Lakes Project Selected to Receive up to \$160 Million from NSF



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.

[Read more »](#)

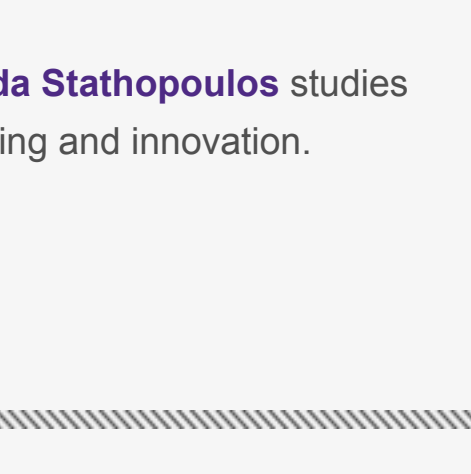
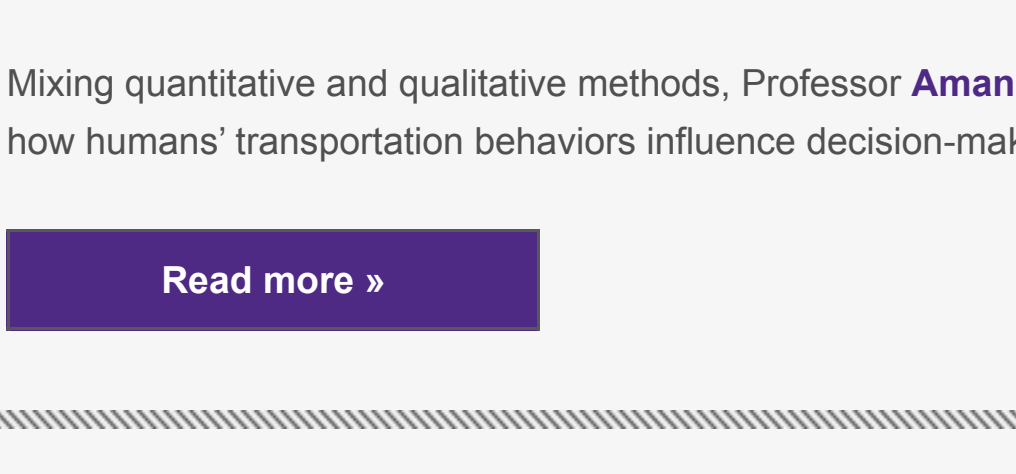
NUTC Awarded \$2.2 million INTERMODAL Grant



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.

[Read more »](#)

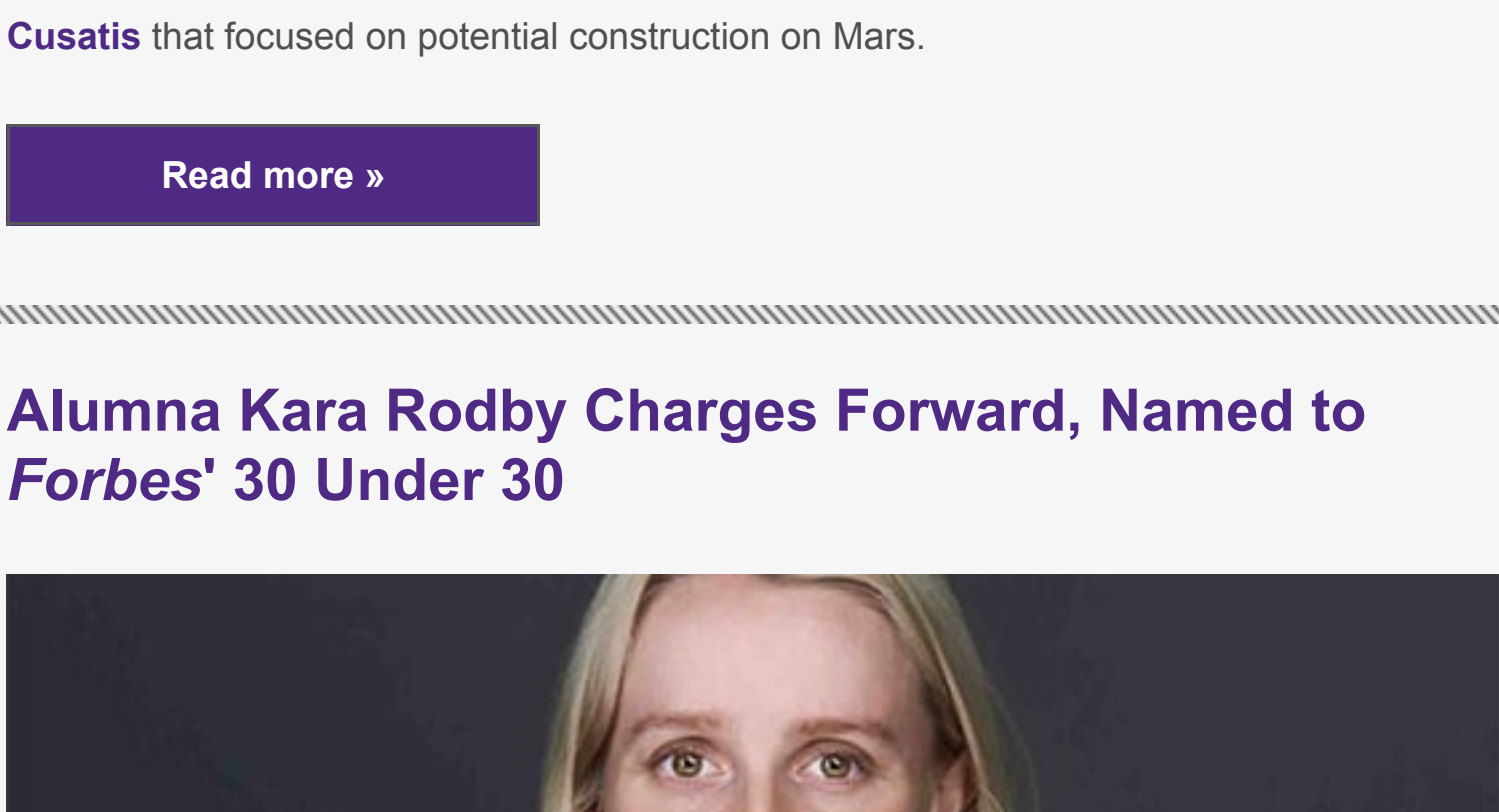
Engineering Viruses to Kill Deadly Pathogens



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

[Read more »](#)

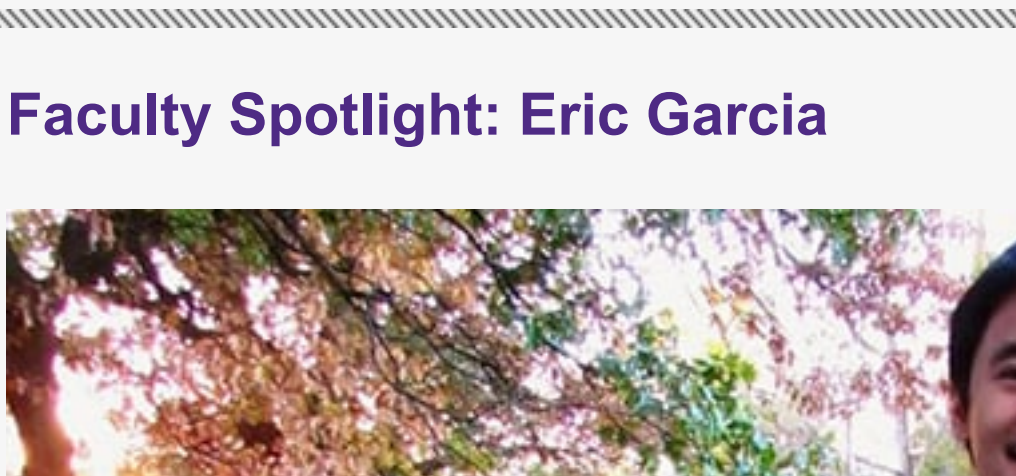
Deep Thinking about Transportation Systems



Mixing quantitative and qualitative methods, Professor **Amanda Stathopoulos** studies how humans' transportation behaviors influence decision-making and innovation.

[Read more »](#)

ASCE Awards Cusatis and Team "2022 Best Paper"



The American Society of Civil Engineers recognized research by Professor **Gianluca Cusatis** that focused on potential construction on Mars.

[Read more »](#)

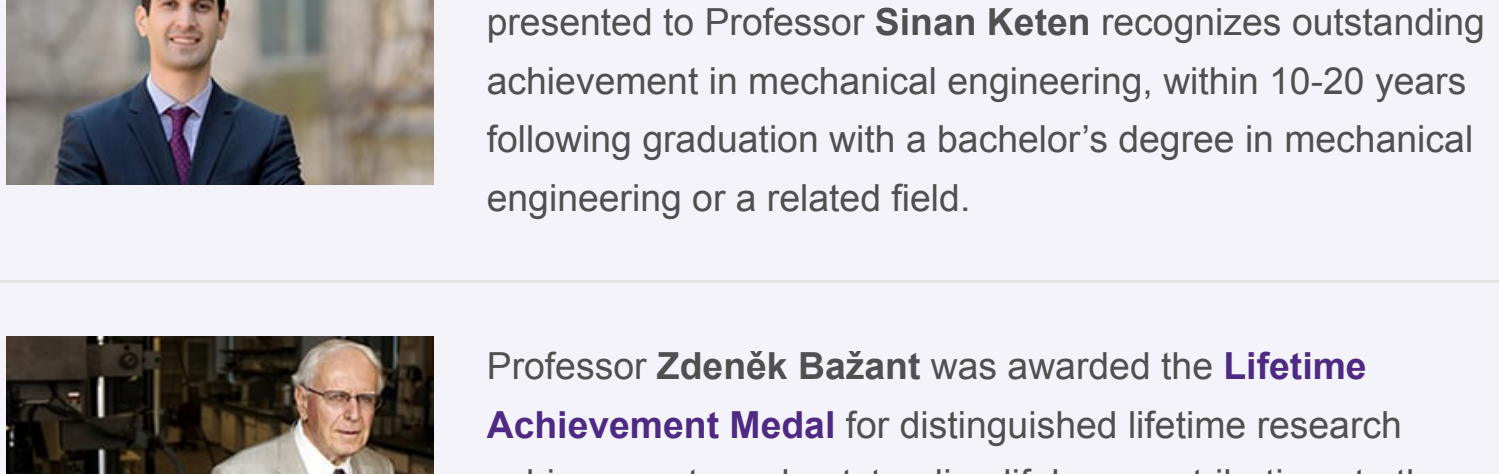
Alumna Kara Rodby Charges Forward, Named to *Forbes*' 30 Under 30



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.

[Read more »](#)

Faculty Spotlight: Eric Garcia



An associate professor of instruction and the assistant chair of the civil and environmental engineering department, **Eric Garcia** joined the Northwestern faculty last year.

[Read more »](#)

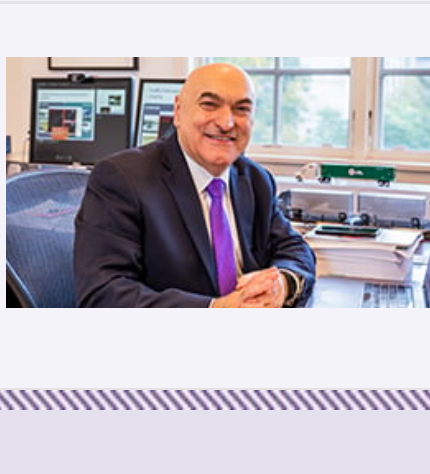
Faculty Spotlight: Arantzazu Alarcon-Fleming



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

[Read more »](#)

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 **Zdeněk Bažant** was awarded the **Lifetime Achievement Medal** for distinguished lifetime research achievements and outstanding lifelong contributions to 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.

The American Society of Mechanical Engineers **announced it will award the Zdeněk P. Bažant Medal**, recognizing an individual who has made significant contributions to the field of mechanics through research, practice, teaching, and/or 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 for 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.

FACTS & FIGURES

98

Years of research and education

7

National Academy of Engineering members

10

Young Investigator Awards



[Make a Gift](#) [Update Contact Info](#)