Northwestern | McCORMICK SCHOOL OF ENGINEERING

Civil and Environmental Engineering

FROM THE CHAIR / Spring 2020

Dear friends and colleagues,

In these extraordinary and challenging times, I want to share with you how CEE faculty and students at Northwestern are tackling global challenges — from water-energy technologies and antibiotic-resistant microbes to emergency evacuation using ridesourcing. I also want to highlight our innovative efforts to enliven the teaching of mechanics and design. Finally, in keeping with the axiom that you are only as good as your students, we feature the accomplishments of one of our alumnae, now a professor of environmental health.

As spring quarter starts and we begin our journey into the world of virtual teaching and learning, I want to thank my colleagues for their herculean efforts to shift everything online. Please be safe and well during this surprising pandemic.

Kimberly Gray
Kay Davis Professor and
Chair of Civil and Environmental Engineering
McCormick School of Engineering

US-Israel Consortium Launches $21.4 Million Initiative to Develop Water-Energy Technologies

Codirected by Professor **Aaron Packman**, the multi-institutional, international program will develop new energy-efficient technologies that focus on water desalination, purification, and reuse.

Read about the initiative »

Confronting the Global Challenge of Antibiotic-resistant Microbes

Featured on Big Ten Network, Professor **Erica Hartmann** works to create environmentally friendly and balanced cleaning practices that allow people to coexist harmoniously with microbes. **VIDEO**

Read about the research »

Context Steers Emergency Ridesourcing Acceptance

A study from Professor **Amanda Stathopoulos** and PhD student Elisa Borowski incorporated research methods from transportation engineering, sociology, and psychology to investigate the factors influencing the acceptance of emergency ridesourcing in US cities.

Read about the research »

Course 'Hangout' Offers Hands-on Mechanics

Offered to undergraduates enrolled in the Engineering Analysis 2 course, the informal, hands-on program led by Professor **James Hambleton** gave students the opportunity to work in teams to design, build, and test prototypes as part of two design competitions.

Read about the program »

Investigating and Reducing Impact Air Pollution Disparities in Environmental Health

Alumna **Christina Hemphill Fuller** ('00) studies chemical exposures in the natural world in hopes of preserving green spaces and improving air quality in cities.

Read about the research »

HONORS & AWARDS

Professor **Ange-Therese Akono** and her group were awarded a National Science Foundation GOALI grant to investigate the fatigue response of ceramic nanocomposites in hopes of discovering a new generation of smart materials with potential applications in low-carbon concrete alternatives, acoustic and thermal insulators, porous membranes for separation processes, and corrosion-resistant coatings.

Professor **Horacio Espinosa** was elected to the National Academy of Engineering in recognition of his contributions bridging nanoscale experimentation and atomistic simulations. Northwestern Engineering professor Jorge Nocedal was also elected.

Postdoctoral student **Mohammad Rasoolinejad** received the Outstanding Paper 2019 Award from the journal *Materials and Structures*.

FACTS & FIGURES

90	6	5
Years of research and education	National Academy of Engineering members	NSF Young Investigator Awards

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