



Professors Jin Wen and Simi Hoque Host NSF Workshops in China and Syracuse, NY

The NSF awarded Co-Principal Investigators Jin Wen and Simi Hoque a \$60,000 grant to host two workshops on “Connecting Women Faculty in Sustaining Building Research (WISB).” The first workshop was sponsored by Dalian University of Technology in China this past July. The second workshop was held at Syracuse University in September.



Professors Simi Hoque and Jin Wen

A gender gap in the growth in sustainable building research has left women in the field with diminished network opportunities. The well-attended workshops addressed these and other issues by providing a multinational, multidisciplinary platform for collaboration among women faculty and researchers in the field. The workshops also emphasized career paths for those at the beginning of their academic careers, thus broadening the contributions to sustainable building research and to society at large.

The first workshop, held in Dalian, China on July 5th and 6th, included twenty-two American female faculty in the sustainable building area along with twenty female faculty from China and Europe. Participants were recruited by a careful selection and invitation process to include faculty from different ranks and disciplines, including engineering, architecture, and science, who work in the sustainable building field.

The keynote speakers for this workshop included Dr. Michelle Addington, Dean of the University of Texas at Austin School of Architecture and Dr. Yingxin Zhu, Vice-Dean of the School of Architecture and Department Head of Building Science at Tsinghua University.

The main topical areas addressed at the workshop included Human Building Interactions (HBIs) and their impact on building sustainability, data enabled intelligent operations for sustainable buildings, sustainable envelope, materials, and design for buildings, and sustainable buildings for urban sustainability. Research needs, gaps, and future directions in these topical areas were discussed. Two career panels were held to explore career barriers and work-life balance challenges that are commonly faced by female faculty.

The second WISB workshop was held at Syracuse University on September 23rd, as part of the 2018 International Building Physics Conference (IBPC). While organizing the Dalian WISB workshop, Professors Wen and Hoque, as well as other steering committee members, realized that there were many women researchers, especially junior faculty, post-doc researchers, and PhD students, who could not participate in the Dalian workshop but expressed a strong desire to attend. Program officers from the National Science Foundation and the Department of Energy faced similar situations. Wen and Hoque proposed a follow-up workshop in the United States, taking advantage of the IBPC 2018.

Drexel to Establish 4-Week Summer STEM Program with Girls Inc. of Philadelphia

Associate Professor Simi Hoque and Assistant Director of Outreach and Development, Kim Spina, are working with Girls Inc. of Philadelphia to establish a 4-week summer STEM program for girls called the Eureka! Project on Drexel's campus. The program is designed to engage girls 12 to 18 in exploring STEM.

The long-term goal of the Eureka! Project is to motivate girls to pursue post-secondary education and careers in STEM fields. The Eureka! cohort of 30 girls begins a five-year journey that starts in the summer before they enter eighth grade and continues through high school. Each year, the girls from the previous summer return while a new cohort of 30 eighth grade girls begins the four-week, nonresidential summer program held on Drexel's campus with activities revolving around STEM, sports/physical activity, and personal development. Hoque and Spina are working with the Drexel Recreation Center, the Innovation Studio, Professor Jeffrey Popyack from the College of Computing and Informatics, and Professor Adam Fontecchio, the Director of the Center for Advancement of STEM Teaching and Learning Excellence (CASTLE), to organize the program, which will launch in 2019.



Professor Trish Gallagher demonstrates distributing force over an area using balloons during the 2018 Summer STEM

Faculty, students, and alumni who are interested in volunteering for the Drexel STEM University camp are encouraged to contact Dr. Simi Hoque or Mrs. Kim Spina at sth55@drexel.edu or smithkl@drexel.edu.

CAEE Hosts 2018 AEES Kappe Lecture

Dr. Mark Rood (pictured right), the Ivan Racheff Professor of Environmental Engineering at the University of Illinois at Urbana-Champaign (UIUC), presented a lecture entitled “Optical Remote Sensing of Particulate Matter to Quantify Plume Opacity and Mass Emission Factors” on October 16, 2018 in Mitchell Auditorium.



Dr. Mark Rood

Mark has more than 36 years of research experience pertaining to gas separation and aerosol characterization. He studied at the Illinois Institute of Technology, Chicago, University of Washington, Seattle, and Stockholm University, Sweden, prior to becoming a professor at UIUC. Mark has published more than 130 peer-reviewed journal papers, co-authored one ASTM method, and has six patents pertaining to gas separation techniques and ambient plume characterization. Mark is co-chief editor for *Environmental Technology and Innovation*, member of the Advisory Board for *Particuology*, was chief editor for ASCE's *Journal of Environmental Engineering*, and was an associate editor for the *Journal of the Air and Waste Management Association*. He is a Board Certified Environmental Engineer Member with the American Academy of Environmental Engineers and Scientists. He is a Fellow and was a director for the Association of Environmental Engineering and Science Professors and the Air and Waste Management Association.

For more information on this years AAEEES 2018 Kappe Lecture Series, please go to: www.aaees.org/kappelectureseries/kappelecturer.php.

CAEE Hosts 2018 Pipes Engineering Alumni Lecture



Dr. Jade Mitchell

Dr. Jade Mitchell (pictured left), an Associate Professor in the Biosystems Engineering Department at Michigan State University, presented a lecture entitled “Risking Resistance” on October 29th in Mitchell Auditorium.

Jade's research focuses on the application of risk-based decision frameworks to emerging environmental and human health issues. She is keenly interested in problems that exist at interfaces between chemical and microbial stressors like antibiotic resistance. Because of uncertainties across complex exposure pathways, risk modeling for antibiotic resistance is inhibited. Jade discussed her current research projects that utilize mechanistic and decision analytic models to support an understanding of resistance genes as environmental hazards. She also covered balancing risk trade-offs and the research questions she focused on for targeted risk management decisions and the identification of critical control points. She also discussed how her research program has developed beginning with her graduate studies at Drexel in the Center for Advancing Microbial Risk Assessment.

Jade has taught courses in engineering design, engineering economics, optimization, and microbial risk assessment and modeling. She won a teaching excellence award in 2017. Her work has been presented and published nationally and internationally. Jade has a MS in Civil Engineering ('07) and a PhD in Environmental Engineering ('10) from Drexel University.