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Sustainability Seminar Series, 2019

Dec 3rd, 4:00 PM - 5:00 PM

Turning Disaster Data into Knowledge: Field Reconnaissance, Damage Assessment, and Lessons Learned from Hurricane Sandy, Harvey, and Michael

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MONTCLAIR STATE
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The Doctoral Program in Environmental Science & Management
and MSU Sustainability Seminar Series Present:

Turning Disaster Data into Knowledge: Field Reconnaissance, Damage Assessment, and Lessons Learned from Hurricane Sandy, Harvey, and Michael

WHEN: December 3, 4:00 pm WHERE: CELS 120 lecture hall

Jie Gong
Rutgers University



Associate Professor in the Department of Civil and Environmental Engineering at Rutgers University. He received his M.S. and Ph.D. from Texas Tech University and University of Texas at Austin respectively. His research focuses on studying the convergence approaches in remote sensing, infrastructure analysis, artificial intelligence, and system modeling and simulation for resilient coastal communities. Dr. Gong currently serves as the assistant Director and Liaison to the School of Engineering at Rutgers for NSF Research Traineeship for Coastal Climate Risk and Resilience Program.

The recent hurricanes in 2012, 2017, and 2018, and efforts of researchers to capture vast quantities of perishable data through support of the National Science Foundation and other agencies, have created enormous databases of hurricane impacts to coastal structures that can be used to extract fundamental knowledge as to why these structures perform as they do during hurricanes. But exploration of these large data sets, untangling the complex factors contributing to various hurricane damages, and forming a holistic understanding of damage mechanisms are challenging tasks, requiring convergent approaches in system modeling, data science, and cyberinfrastructure design. In this presentation, Dr. Gong will discuss three hurricane reconnaissance trips, the associated data collection and analysis, and the advances in analytics for damage modeling with new AI and cyberinfrastructure approaches. He will also explain the findings as to the dominant factors contributing to damages based on the synthesis of these hurricane events and their implications to the New Jersey coastal community.