



## New Faculty: Paul Block and Peter DeCarlo



[Dr. Paul Block](#) received his M.S. and Ph.D. in Civil Engineering from the University of Colorado at Boulder, with a specialization in water resources engineering. His specific areas of focus include climate risk management, effects of climate variability and change on water systems, hydrologic forecasting and uncertainty, and policies and mechanisms designed to increase reliability and reduce vulnerability. Prior to joining the department, Dr. Block was a researcher at Columbia University's International Research Institute for Climate and Society and the Columbia Water Center. Currently, Dr. Block is working with water managers in Ethiopia and Chile to understand and evaluate best methods for effectively utilizing climate information to guide their reservoir operations and allocation schemes, as well as long-term planning and design.

[Dr. Peter DeCarlo](#) received his Ph.D in Atmospheric Science at the University of Colorado. His specific areas of focus include instrument development and characterization, size and composition measurements of particulate matter, sources of particulate matter to the air we breath and how particulate matter impacts air quality and climate. Prior to joining the department, Dr. DeCarlo was a National Science Foundation sponsored post doctoral fellow at the Paul Scherrer Institute in Switzerland and then an AAAS Science and Technology policy fellow hosted at the EPA. His current research interests include development and characterization of new instrumentation, urban air quality studies, and the characterization and understanding of how particulate and gas phase emissions from residential cooking and heating in the developing world impact climate and health.



## Urban Sustainability Retreat

On November 8th and 9th, Drexel University's Office of the Provost hosted a sustainability retreat with a focus on "urban sustainability through the lenses of food, water and energy." This retreat was organized by CAEE faculty member [Dr. Patricia Gallagher](#). Faculty from the Colleges of Engineering, Arts and Sciences, Public Health, and Media Arts and Design were present as well as representatives from Drexel staff and students. Outside scholars were also in attendance: Patricia Culligan, Professor of civil engineering at Columbia University and affiliate of the Earth Institute; Andrew Biro, Canada Research Chair in political ecology and environmental political theory at Acadia University; Jay Benforado, Director of the National Center for Environmental Innovation, US EPA; John Crittenden, Professor of civil engineering and Director of the Brook Byers Institute for Sustainable Systems, Georgia Tech; and Amy Bentley, Associate Professor of Food Studies in the Department of Nutrition, Food Studies, and Public Health at NYU. The retreat consisted of productive brainstorming sessions discussing Drexel's commitment to urban sustainability.

## Drexel Presentations at the 2011 Low Impact Development Conference

[Dr. Franco Montalto](#) along with the students from Sustainable Water Resource Engineering Lab (Ziwen Yu, Nathan Rostad, Kimberly DiGiovanni, Bitia Alizadehtazi, Katherine Travaline, Alisha Goldstein) presented at the 2011 Low Impact Development Conference, sponsored by the American Society of Civil Engineers, held at the end of September, in Philadelphia, PA. The Drexel University presentations focused on the complexities of retrofitting green infrastructure into complex urban landscapes. These presentations featured both empirical work (infiltration and soil moisture studies, deliberative interactions with urban residents and water utilities) as well as modeling projects.

## Paper Presentation and NSF Grant Award

[Dr. Patricia Gallagher](#) and [Dr. Eugenia Ellis](#) represented the Department at the 2011 Green Energy Economy Conference which took place in July. Drs. Gallagher and Ellis presented a paper titled *Ecological Urban Environments: Networked Adaptable Human-Building Ecosystems*. This presentation discussed the emerging discipline of Indoor Ecology, reconsidering the indoor environment as an evolving human-building ecosystem where the occupant and the environment function together as a whole.

[Dr. Aspasia Zerva](#) (PI) and MEM Professor [Dr. Alan Lau](#) (co-PI) received a \$ 259,932 award from the National Science Foundation for a three year study entitled "Seismic Response of Concrete Gravity Dams Subjected to Spatially Variable Excitations". Based on detailed numerical modeling of a few carefully selected dams from the nation's inventory and the proper characterization of the seismic excitations at their sites, this effort will lead to recommendations for the design and retrofit of these massive structures.

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