

# Department Newsletter



DREXEL UNIVERSITY

Civil, Architectural, and  
Environmental Engineering

College of Engineering

Civil, Architectural, and Environmental Engineering

Fall 2012

## New Faculty



The CAEE Department would like to welcome **Dr. Yared Shifferaw Bayleyegn** to the Department as an Assistant Professor. Dr. Shifferaw obtained his B.Sc. from Addis Ababa University, Ethiopia and Ph.D. from The Johns Hopkins University, in Civil/Structural Engineering. His research interests lie in computational and experimental methods to advance sustainable and resilient solutions to existing and emerging materials in various applications of infrastructural systems.



The CAEE Department would like to welcome **Dr. Kurt Sjoblom** in his new role as Assistant Professor. For the past 3 years Dr. Sjoblom has been an Associate Teaching Professor and has served as the CAEE graduate advisor for two years. Dr. Sjoblom received his Ph.D. from the Massachusetts Institute of Technology. He has worked as a private consultant to a variety of engineering firms including CDM, Parsons, Jacobs and Pennoni Associates prior to coming to Drexel University. His research interests are modeling of soil moisture, laboratory testing of geo-materials and geotechnical issues relating to infrastructure.

## NSF Cyber-Physical Systems Program Grant



**Dr. Jin Wen**, Associate Professor, was recently funded by the [NSF Cyber-Physical Systems](#) program for her proposal “CPS: Synergy: Collaborative Research: SMARTER - Smart Manager for Addaptive and Real-Time decisions in building clustERS”. This is a collaborative proposal among three universities: Arizona State University (Teresa Wu, PI); Drexel University (Jin Wen); and University of Buffalo (Kemper Lewis). The total budget of this grant is \$1,000,000 and the Drexel portion is \$400,000. The objective of this grant is to develop a decision framework to enable real-time autonomous, robust, and optimal building energy system operation decisions for temporally and spatially distributed building clusters.

## Acquisition of a Soot-Particle Aerosol Mass Spectrometer

**Drs. Peter DeCarlo** and **Michael Waring**, both Assistant Professors, recently received a National Science Foundation grant in the amount of \$467,925 entitled “[MRI: Acquisition of a Soot-Particle Aerosol Mass Spectrometer for the Measurement of Submicron Particulate Chemical Composition.](#)” Peter DeCarlo is the Principal Investigator (PI) of this project, and Michael Waring is a Co-PI. Additional Co-PIs on this project are Igor Burstyn, Associate Professor, School of Public Health; David L. Miller, Professor and Interim Department Head, Mechanical Engineering and Mechanics Department; and David J. Velinsky, Department Head, Department of Biodiversity, Earth and Environmental Sciences and Director of the Patrick Center for Environmental Policy at the Academy of Natural Sciences. The acquisition of an Aerodyne Soot-Particle Aerosol Mass Spectrometer (SP-AMS) will allow engineers and scientists at Drexel University to perform cutting edge interdisciplinary research involving the size and chemical composition measurements of aerosols.



## Career Development Award



**Dr. Paul Block** was selected for one of the [Drexel Career Development Awards](#) for 2012-2013. These awards help faculty increase their exposure to colleagues at other institutions who can be collaborators and role models while introducing outside scholars to faculty at Drexel. Dr. Block's proposal is titled:

*Predicting Change: Elucidating near-term climate change information to guide water resources decisions and foster sustainability.*

## Conference on Waterborne Pathogens

**Dr. Charles Haas**, LD Betz Professor of Environmental Engineering and Head, Department of CAEE, gave an invited keynote at the [International Conference on Waterborne Pathogens](#), sponsored by the Canadian Water Network. His address was entitled "Assessing Risk from Waterborne Microorganisms: from Bacillus coli to atgcaagtta". The conference was held in Banff, Alberta from September 23-26, 2012.

## Advancing Women in Transportation



**Dr. Joseph Martin** recently attended the [Advancing Women in Transportation's](#) September lunch series. Dr. Martin's former student and Drexel University alumnus, Elaine Elbich, Portfolio Manager for PennDOT's Philadelphia Metropolitan Regional Engineering District, was the featured speaker. Ms. Elbich provided an overview of the I-95 program along with an update on the current status of the corridor, including details on innovative program aspects being applied, such as the formation of a Sustainable Action Committee (SAC) for the GIR Section (between the Vine Street and Allegheny Avenue interchanges, including the Girard Avenue Interchange).

## First Place Poster

Doctoral student **James Mitchell** won first place in the student poster conference at the [American Center for Life Cycle Assessment LCA XII](#) conference in Tacoma Washington in September 2012. He presented a poster titled “Integrating Geospatial and Hydrologic Analytical Tools into LCA.” Life cycle assessment (LCA) methods have traditionally used time and space independent models to describe midpoint environmental damages. The poster explores using the Soil Water Assessment Tool (SWAT) to consider spatial and temporal factors from different agricultural cropping scenarios and their effect on eutrophication in the Delaware/Maryland/Virginia (DelMarVA) watershed. James is advised by **Dr. Sabrina Spatari**.

## Green Block Build Event

CAEE students under the advisement of **Dr. Franco Montalto** continue to develop working relationships with neighboring community organizations. On September 29th, undergraduate and graduate students (**Kim DiGiovanni**, **Melika Riley**, and **Stephen White**) participated in a community development project in the Mantua area of Philadelphia. The project, known as a [Green Block Build](#) or Green Block Party includes a free community resource fair, home and community improvement activities and installation of storm-water management features. Some of the improvements included development of a local community garden and installation of new roofs on residences. Refreshments, local produce, face-painting and children's activities were also featured. Representatives from the Philadelphia Water Department, Penn Medicine, Bicycle Coalition of Philadelphia, voter registration, Philadelphia Corporation for Aging, and the Neighborhood Advisory Committee were present.