Civil Engineering
at JOHNS HOPKINS UNIVERSITY

JOHNS HOPKINS
MEDICINE

JOHNS HOPKINS EMERGENCY
MEDICAL SERVICES, LLC

Smart Technology-Enabled Building Energy and Peak Load Reduction and Their Effects on Occupants and the Indoor Environment

Building operations consume approximately 72% of electricity in the United States, and are responsible for over 70% of the peak demand on the electric grid, particularly in warm climates. Building are also where we spend 90% of our time. The increasing deployment of technologies such as smart meters, home energy management systems (HEMS), and smart home-connected sensors and devices and their associated data provide an opportunity for data-driven operation and evaluation of the performance of buildings and their systems. This is particularly important as we face challenges in energy price fluctuations, distributed and renewable energy grid integration, and climate variability. This seminar will discuss the use of smart technology energy data-driven methodologies for energy and peak load reduction, and techniques for the evaluation of the effects on occupant comfort and the indoor environment. This research is accomplished through a combination of modeling, field and laboratory data collection and evaluation.

Kristen Cetin

PhD Candidate, P.E.,
LEED AP, IGERT Fellow
University of Texas at Austin

Kristen Cetin is a PhD candidate at the University of Texas at Austin, in the Department of Civil, Architectural and Environmental Engineering, in the Building Energy and Environment Group. She is also a licensed professional engineer and a LEED professional. Her research focuses on the use smart grid-connected technologies to reduce building energy use and peak loads, and assessing their effects on building occupants and the indoor environment.

Wednesday, May 27, 2015, 10:30am- 11:30am
JHU Homewood Campus, Malone Hall room 107

Seminar is <u>FREE and open to the public</u>. For parking please see link for visitors at www.jhu.edu and select information on Homewood Campus.