



Colloquium Series in Systems & Controls Engineering



Andrew Sparks
United Technologies Research Center

Challenges and Opportunities of System Engineering in Industry

Thursday, December 3, 2015 9:00 a.m. – 10:00 a.m. Storrs Campus, ITEB 336

Abstract: Buildings consume a significant amount of the world's total energy, representing enormous cost to building owners and occupants and contributing to a significant percentage of the world's total carbon emissions. In addition, upcoming regulations in the European Union will require buildings to have significantly more energy efficient operations. All these factors will require innovation in the design and operation of the buildings, and so can benefit from the rigorous application of model-based design and systems engineering. This talk will discuss an optimization-based system level design and operation workflow, system level supervisory control that coordinates system level operation for energy benefits, uncertainty analysis, challenges and open opportunities.

Speaker Bio: Andrew Sparks is the Group Leader in Control Systems at United Technologies Research Center (UTRC) in East Hartford, CT, where he is responsible for the research portfolio in estimation, optimization, and control for building and aerospace applications at UTC. Before joining UTRC, he was with Air Force Research Laboratory at Wright Patterson Air Force Base near Dayton, Ohio, where he performed research in robust multivariable control theory for several aerospace applications. He received his BS and MS in Mechanical Engineering from MIT, his PhD in Aerospace Engineering from The University of Michigan, and his MS in Management as a Sloan Fellow at the Stanford Graduate School of Business.