

The Department of Mechanical Engineering  
College of Engineering and Applied Sciences  
Stony Brook University

## Mechanical Engineering Seminar



**Dr. Qianchuan Zhao**  
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### **Lecture Title: Building System Control Research in Tsinghua University- Some Recent Progresses**

Friday, April 17, 2015 at 1:30PM, Room 173 Light Engineering Building

#### **Abstract**

How building control could be done is not an easy problem. There are many uncertainties and complexities involved. My focus will be on how joint work has been done so that a building control problem is studied from a system point of view with constraints/objective functions reflecting comfort, security and energy saving requirements. An overview of some related studies at Tsinghua University will be presented. We also pose challenges in this direction. As an example, we will show how indoor environment could be controlled based on a new human machine interface on smart phones instead of setpoint based control to achieve occupant satisfactory.

#### **Biography**

Dr. Qianchuan Zhao received the B.E. degree in automatic control in July 1992, the B.S. degree in applied mathematics in July 1992, and MS and Ph.D. degrees in control theory and its applications in July 1996, all from Tsinghua University, Beijing, China. He is currently a Professor and Associate Director of the Center for Intelligent and Networked Systems (CFINS) <http://cfins.au.tsinghua.edu.cn>, Department of Automation, Tsinghua University. He was a Visiting Scholar at Carnegie Mellon University (worked with Prof. Bruce Krogh), Pittsburgh, PA, and Harvard University, Cambridge, MA, in 2000 and 2002, respectively. He was a Visiting Professor at Cornell University, Ithaca, NY, in 2006. His current research focuses on the modeling, control and optimization of complex networked systems. He has published more than 80 research papers in peer-reviewed journals and conferences. Dr. Zhao is an associate editor for the Journal of Optimization Theory and Applications, an associate editor for the IEEE Transactions on Control of Network System, an associate editor for the joint conference CDC-ECC'05 and International Program

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