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TomKat Center for Sustainable Energy  
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Civil and Environmental Engineering  
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# Stanford SmartGrid Seminar

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## Dynamic Data Attacks on Real-Time Power System Operations

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1pm Friday, Feb 28<sup>th</sup>, Packard 101

**Abstract:** With increasing dependence on modern information and communication technology, a future smart grid is potentially more vulnerable to coordinated cyber-attacks launched by an adversary. In this talks, we consider several possible attack mechanisms aimed at disrupting real-time operations of a power grid. In particular, we are interested in data-driven attack strategies that learn the system parameters and operating conditions. We also present a dynamic "denial of service" attack on the real-time economic dispatch.

This is a joint work with Jinsub Kim and Robert J. Thomas

**Bio:** Lang Tong is the Irwin and Joan Jacobs Chair Professor in Engineering at Cornell University and the site director of the Power Systems Engineering Research Center (PSERC). He received the B.E. degree from Tsinghua University, Beijing, P.R. China, and PhD degree in EE from the University of Notre Dame, Notre Dame. He was a Postdoctoral Research Affiliate at the Information Systems Laboratory, Stanford University. Lang Tong works in the general area of statistical inference, decisions, complex systems and networks. His current research focuses on energy systems. He received the 2004 Best Paper Award from the IEEE Signal Processing Society, the 2004 Leonard G. Abraham Prize Paper Award from the IEEE Communications Society, and the 1993 Outstanding Young Author Award from the IEEE Circuits and Systems Society.