Department of
Electrical & Computer
Engineering
Texas A&M University

Smart Grid Center

Michael Chertkov

Los Alamos National Laboratory

Seminar

"Optimization and Control Theory for Smart (Power) Grids"

Abstract: A research project with this title has been started at LANL in October of 2009. In this talk I will report on initial results (specifically related to control) derived under the auspices of the project. In particular, I will discuss local randomized control of Plug-in-Hybrid EV charging, local control of reactive generation in a Photo-Voltaic-rich feeder and control of rare events over medium-to-large (transmission level) grid. More information on this project (and the talk) can be found at http://cnls.lanl.gov/~chertkov/SmarterGrids/.

Monday, November 22, 2010
Zachry Bldg., Room 213C
Reception: 10:30am
Presentation: 11:00am

Dr. Chertkov's areas of interest include statistical and mathematical physics applied to information theory, computer science, hydrodynamics, optics, communication and infrastructure networks. Chertkov received his Ph.D. in physics from the Weizmann Institute of Science in 1996, and his M.Sc. in physics from Novosibirsk State University in 1990. After his Ph.D., Chertkov spent three years at Princeton University as an R.H. Dicke Fellow in the Department of Physics. He joined Los Alamos National Lab in 1999, initially as a J.R. Oppenheimer Fellow in the Theoretical Division. He is now a technical staff member (level 4) in the same division. Chertkov has published more than 100 papers in these research areas and is currently leading "Physics of Algorithms" and "Optimization and Control Theory for Smart Grids" projects at LANL.

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The mission of the smart grid center is to promote collaboration between individuals with diverse professional interest and backgrounds and create multidisciplinary and interdisciplinary teams to study smart grid problems and deliver advanced smart grid solutions.