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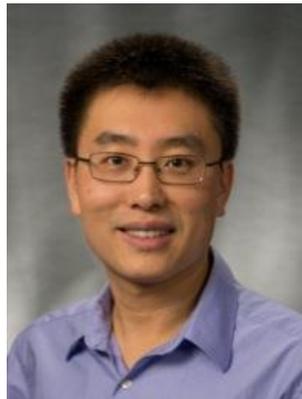
## Stanford SmartGrid Seminar

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# Grid Modernization: Challenges, Opportunities, and Solutions

Jianhui Wang

Argonne National Laboratory



1:15pm-2:15pm, Thursday, Mar 12<sup>th</sup>, Y2E2 270

**Abstract:** Our aging grid infrastructure faces increasing challenges from multiple sources including greater demand variability, stricter environmental regulations and growing cyber security concerns. Advanced smart grid technologies provide possible solutions to tackle these challenges. Meanwhile how to best utilize these new devices and technologies such as PMUs and electric vehicles remains a challenge by itself. In this talk, I will address various topics which span a multitude of areas including demand response, stochastic optimization for renewable integration, microgrids and cyber security. I will present the technical issues in implementing these technologies and corresponding potential solutions.

**Bio:** Dr. Jianhui Wang is the Section Manager for Advanced Power Grid Modeling at Argonne National Laboratory. He is the Secretary of the IEEE Power & Energy Society (PES) Power System Operations Committee. He has authored/co-authored more than 150 journal and conference publications. He is an editor of Journal of Energy Engineering and Applied Energy. He received the IEEE Chicago Section 2012 Outstanding Young Engineer Award and is an Affiliate Professor at Auburn University and an Adjunct Professor at University of Notre Dame. Dr. Wang is the Editor-in-Chief of the IEEE Transactions on Smart Grid and an IEEE PES Distinguished Lecturer.