

Electrical and Computer Engineering Departmental Seminar:

Incorporating Renewable Energy into Smart Grids

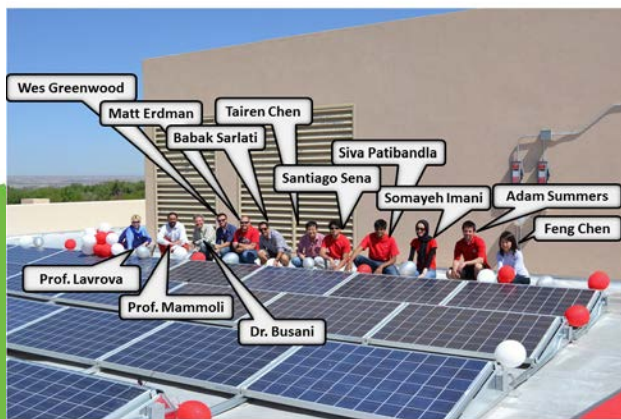
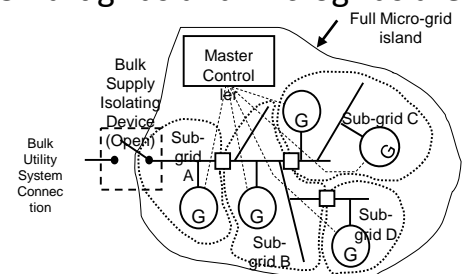
Dr. Olga Lavrova

Principal Member of Technical Staff, Sandia National Laboratories

Friday, February 16, 2017 at 3 PM

Woodward Hall, Room 147

ABSTRACT Existing US Power Grid is an extremely complex man-made network. However, it is based on a number of ageing principles and devices. In this talk, Dr. Lavrova will give an overview of technical advantages and challenges of integrating more of renewable technologies and modernization of electrical grid. Solar and wind power, as well as electrical storage technologies, are becoming more efficient and cost-effective. However, a significant number of upgrades and operational changes may be needed to take full advantage of their utilization. Smart grids and microgrids are two of the directions for improving our electrical grids, making both renewable and traditional energy utilization and delivery more efficient. Part of the talk will describe Dr. Lavrova’s work on modern power electronics and sensors for flexible electric power delivery and utilization, as well as her work on electric grid resiliency and cybersecurity.



Speaker Bio Dr. Olga Lavrova is a Principal Member of Technical Staff at Sandia National Laboratories, Photovoltaics and Distributed Systems Intergration Department. She is a technical lead for several projects concentrated on electric grid modernization and resiliency. Her research interests include photovoltaics and nano-scale semiconductor structures for photovoltaic applications, as well as Smart Grid and emerging energy generation, distribution, and storage technologies.

Previously, she was Assistant Professor at the Electrical and Computer Engineering Department and Area Chair of the Renewable Power and Energy at the University of New Mexico. She also was engineering Faculty advisor for the UNM-ASU Solar Decathlon project, as well as the development and construction of the Solar Car at UNM.

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