NM SMART Grid Center Webinar Series – Webinar #1

The NM SMART Grid Center Research Overview
Olga Lavrova, David Mitchell, Manel Martinez-Ramon, Ali Bidram, Anne Jakle
Date of Webinar: Friday, September 27
Time: Noon – 1:00 PM MT

Webinar Abstract
We will kick off Year 2 of our project and our first webinar with an overview of the four research focus areas of the NM SMART Grid Center: Research Goal 1: Architecture; Research Goal 2: Networking; Research Goal 3: Decision-Support; and Research Goal 4: Deployment. After a short overview of the NM SMART Grid Center mission and vision, presentations by faculty leading these research efforts will focus on the novelty and importance of the research and integrative research activities across research goals.

Presenter Biographies

Olga Lavrova
Dr. Olga Lavrova is an Associate Professor in the areas of Power Systems and Renewable Energy Integration at the New Mexico State University. Prior to that, Dr. Lavrova was a Principal Member of Technical Staff at Sandia National Labs in the Photovoltaics and Distributed Systems Integration Department. Prior to that, she held position of Assistant Professor at the Electrical and Computer Engineering Department at the University of New Mexico. Dr. Lavrova has performed groundbreaking work in power electronics, sensors, and materials for grid applications, and recently led experiments assessing EMP (Electro-Magnetic Pulse) effects on utility components at Sandia's state of the art EMP testing facilities. Until 2019, Dr. Lavrova lead SNL's efforts in the areas of novel Sensors for power systems, as part of the GMLC (Grid Lab Modernization Consortium). Dr. Lavrova has been a PI on multiple other DOE- and NSF-funded grants concentrating on fundamental PV materials and device operation, as well as their cost-effective, economical and practical deployment in consumer PV applications, as well as grid integration and off-grid operation (such as in remote or isolated locations).

David Mitchell
David G. M. Mitchell received the Ph.D. degree in Electrical Engineering from the University of Edinburgh, United Kingdom, in 2009. He is currently an Assistant Professor in the Klipsch School of Electrical and Computer Engineering at the New Mexico State University. He previously held Visiting Assistant Professor and Post-Doctoral Research Associate positions in the Department of Electrical Engineering at the University of Notre Dame. He is a Senior Member of the IEEE and his research interests are in the area of digital communications, with emphasis on error control coding and information theory. Dr. Mitchell has published over 40 peer-reviewed IEEE journal and conference articles gathering more than 700 international citations. He is the recipient of the 2019 NMSU Early

Career Award for Exceptional Achievements in Creative Scholarly Activity and has received two best paper awards.

Manel Martínez-Ramón

Dr. Martínez-Ramón is the King Felipe VI Endowed Chair and Professor of Electrical & Computer Engineering at the University of New Mexico. He has served as an associate professor at the Universidad de Alcalá, Universidad Politécnica de Cartagena and Universidad Carlos III de Madrid. Dr. Martínez-Ramón has served the Spanish university as associate provost for infra-structures and environment, associate dean of the Politecnic School (school of engineering) of Universidad Carlos III de Madrid, director of teaching management, and director of several degrees in telecommunications engineering. His research interests are in Machine Learning, where he has collaborated in numerous founded research projects in applications to signal processing, multimedia and speech processing, theory of decision and estimation, neuroimaging, and others. His over 70 peer-reviewed communications and journal papers are related to applications of Machine Learning to these areas of engineering. His current research is related to cognitive radio, smart grid, and neuroimaging.

Ali Bidram

Dr. Bidram is currently an Assistant Professor in the Electrical and Computer Engineering Department at the University of New Mexico. He has received his B.Sc. and M.Sc. from Isfahan University of Technology, Iran, in 2008 and 2010, and Ph.D. from the University of Texas at Arlington in 2014. Before joining the University of New Mexico, he worked with Quanta Technology, LLC, and was involved in a wide range of projects in the electric power industry. He is an Associate Editor for the *IEEE Transactions on Industry Applications*. His areas of expertise lie within control and coordination of energy assets in power electronics-intensive energy distribution grids. Such research efforts have culminated in a book, several journal papers in top publication venues and articles in peer-reviewed conference proceedings, and technical reports. He has received the University of Texas at Arlington N. M. Stelmakh outstanding student research award, Quanta Technology Shooting Start award, and cover article of December 2014 in *IEEE Control Systems*.

Anne Jakle

Anne Jakle is the Associate Director of the New Mexico Established Program to Stimulate Competitive Research (NM EPSCoR) and co-PI of the NM SMART Grid Center. She is responsible for program management and fiscal oversight of this $20 million, 5-year National Science Foundation (NSF) grant that funds microgrid research at New Mexico's research universities and primarily undergraduate institutions. Prior to her position with NM EPSCoR, she was a senior policy analyst with the New Mexico Energy, Minerals and Natural Resources Department (EMNRD). She moved to New Mexico from

Wyoming, where she was Assistant Director of the Ruckelshaus Institute of Environment and Natural Resources at the University of Wyoming, which specializes in policy analysis and collaborative decision making. She has held policy and communications positions with the Office of Energy Efficiency and Renewable Energy at the U.S. Department of Energy and at Rocky Mountain Institute. Jakle also spent time as a Fulbright Scholar in New Zealand, where she earned a Masters of Applied Science in Natural Resource Management at Massey University. She holds a BA in Environmental Studies from Dartmouth College.