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Dr. Miao worked with the relay department in Nanjing Automation Research Institute from 1992-1999 and with the planning department in Midwest Independent Transmission System Operator from 2002-2009.

Research Interests

His research interests include smart grid automation, electric power system modeling and simulation, microgrid technologies to integrate renewable energy and energy storage, and power market.

Recent Publications

- Z. Miao, A. Domijan, and L. Fan, "Investigation of Microgrids with Both Inverter Interfaced and Direct AC Connected Distributed Energy Resources," IEEE Trans. Power Delivery, vol. 26, no. 3, pp. 1634-1642, July 2011.
- Z. Miao, A. Domijan, and L. Fan, "Negative Sequence Compensation for Unbalance in Distributed Energy Resources Interfacing Inverters," International Journal of Power and Energy Systems (accepted).
- Z. Miao, and L. Fan, "The Art of Modeling High-Order Induction Generator in Wind Generation Applications," Simulation Modelling Practice and Theory, vol. 16, no. 9, Oct. 2008.
- Z. Miao, L. Fan, D. Osborn, and S. Yuvarajan, "Control of DFIG based Wind Generation to Improve Inter-Area Oscillation Damping," IEEE Transactions on Energy Conversion, vol. 24, no. 2, pp. 415-422, June 2009.
- Z. Miao, L. Fan, D. Osborn, and S. Yuvarajan, "Wind Farms with HVDC Delivery Inertial Response and Load Frequency Control," IEEE Trans. on Energy Conversion, vol. 25, no. 4, pp. 1171-1178, Dec. 2010.