Haifeng Ge

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INTRODUCTION

Dr. Ge is an Energy Analyst at Boston Energy Trading and Marketing (BETM), a leading provider of energy trading and asset management in North American. Dr. Ge manages a portfolio of worth $3-$10 million's capital, and trades multiple electricity products in California and other electricity markets with proven profit record. Besides, Dr. Ge provides trading support of for PPA, hedging and daily operation algorithm for a large battery-based energy storage system in CAISO market.

Before joining BETM, Dr. Ge was a Lead Engineer at ISO New England (ISO-NE), the non-profit Regional Transmission Organization that operate power grid in New England and administers the region's $10+ billion "stock exchange" of wholesale electricity. Dr. Ge lead ISO-NE's economic transmission and generation planning in system planning, and provided market insights for ISO-NE's 32,000 megawatts generation assets from 2012 to 2015.

Dr. Ge is a Senior Member of IEEE since 2015. He is a reviewer for IEEE Transactions on Power Systems, IEEE Transactions on Sustainable Energy and IEEE Transactions on Smart Grid since 2010. Dr. Ge has many years' of experience in wholesale electricity market design and trading. Dr. Ge's research interests include electricity market simulation and renewable energy integration.

Dr. Ge received his PhD from University of Nebraska-Lincoln at 2010, Master and Bachelor of Engineering from Xi'an Jiaotong University at 2006 and 2003. Dr. Ge was VP of Membership in North America Chinese Power Professional Association (NACPPA) from 2010-2012. He is a registered Professional Engineer in North Carolina.

WORKING EXPERIENCE

- Energy Analyst **Boston Energy Trading and Marketing**, Boston, MA 2015- Present
  Independently research and developed proprietary algorithm for wholesale electricity market price forecasting and execute electricity trading.
- Lead Engineer **ISO New England** , Holyoke, MA 2012- 2015
  Lead the development of economic benefit quantification of renewable energy penetration and natural gas pipeline expansion in New England wholesale electricity market. Successfully supported ISO-NE's winter reliability program in the existence of survive polar vortex events.
- Consulting Engineer **ABB Inc.**, Raleigh, NC 2009-2011
- Intern Electric Power Research Institute (EPRI), Palo Alto, CA 2008

EDUCATION

- PhD **University of Nebraska-Lincoln**, Lincoln, NE 2006- 2010
- Visitor **University of California San Diego**, La Jolla, CA July-Sep. 2008
- Master, Bachelor **Xi'an Jiaotong University**, Xi'an, China 2003, 2006

PUBLICATION

Journal

[1] **H. Ge** and S. Asgarpoor, “Maintenance Optimization for Maximum Substations Reliability with Aging Equipment”, *IEEE Transactions on Power Delivery*, Vol 27, pp 1868-1876, Oct. 2012.

[2] **H. Ge** and S. Asgarpoor, “Reliability Evaluation of Equipment and Substations with Fuzzy Markov Processes”, *IEEE Transaction on Power System,* vol.25, no.3, pp.1319-1328, August 2010.

[3] **H. Ge** and S. Asgarpoor, “Parallel Monte-Carlo Simulation for Reliability and Cost Evaluation of Equipment and Systems”, *Electric Power Systems Research*, Vol. 81, Issue 2, pp. 347-356, February 2011.

[4] **H. Ge** and J. Liu, “Identification of gas mixtures by a distributed support vector machine network and wavelet decomposition from temperature modulated semiconductor gas sensor”, *Sensors and Actuators B*, Vol. 117, Issue 2, pp: 408-414, October 2006. (*Special Issue invitation paper*)

[5] **H. Ge**, J. Lin, J. Liu, et al, “Gas Identification Based on Support Vector Machine and Wavelet Decomposition”, *Chinese Journal of Scientific Instrument* (in Chinese), Vol.27, No.6, pp. 573-578, June 2006.

[6] H. Ding, **H. Ge**, J. Liu, “High performance of gas identification by wavelet transform-based fast feature extraction from temperature modulated semiconductor gas sensors”, Sensors & Actuators B, vol 107, Issue:2, pp: 749-755, June 29,2005.

Conference

[1] **H. Ge**, S. Asgarpoor, J. Hou, "Aging Equipment Maintainability Assessment for Management of Critical Utility Assets", IEEE Power and Energy Society General Meeting 2011, Detroit, MI, pp.1-7, July 2011.

[2] **H. Ge** and S. Asgarpoor, “An Analytical Method for Optimum Maintenance of Substation,” IEEE Transmission and Distribution Conference and Exposition 2008, Chicago, IL, pp. 1-6, April 2008.

[3] **H. Ge**, L. Ni and S. Asgarpoor, “Reliability-Based Stand-Alone Photovoltaic System Sizing Design- A Case Study”. The 10th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS), Puerto Rico, pp.280-287, May 2008.

[4] **H. Ge** and S. Asgarpoor, “Markov processes with fuzzy parameters-A case study”. The 10th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS), Puerto Rico, pp.596-601, May 2008.

[5] **H. Ge**, C.L. Tomasevicz, S. Asgarpoor, "Optimum Maintenance Policy with Inspection by Semi-Markov Decision Processes,"39th North American Power Symposium, pp.541-546, September 2007.

[6] **H.Ge**, Hui Ding, Junhua Liu, “Gas identification by wavelet transform-based fast feature extraction and Support Vector Machine from temperature modulated semiconductor gas sensors”, The 13th International Conference on Solid State Sensors, Actuators and Microsystems (IEEE Transducers 2005), Seoul, Korea, pp: 1888-1891, June, 2005.

[7] **H. Ge**, Hui Ding, Junhua Liu, “Identification of CO, H2, C2H2 and their mixtures by wavelet transformation and Support Vector Machine”, The 6th International Symposium on Test and Measurement (ISTM2005), June 1-4, Dalian, China, vol 4, pp: 3764-3767

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