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Benyamin Moradzadeh

Education

Ph.D.

Jan 2009-Expected 2012

- Department of EECS, University of Tennessee, Knoxville, TN, USA.
- Advisor: Prof. Kevin Tomsovic.
- Thesis: Optimization methodologies applied to power system restoration and diagnostics.

Master of Science

2007

- Electrical Engineering, Amirkabir University of Technology (Iranian Center of Excellence in Power Systems), Tehran, Iran.
- Advisor: Dr. S. H. Hosseinian.
- Thesis: Online voltage stability assessment using artificial neural networks.

Bachelor of Science

2004

- Electrical Engineering, Khaje Nasir Toosi University of Technology, Tehran, Iran.
- Thesis: Design and construction of a thermocouple smart sensor based on IEEE1451 standard with self identification ability.

Research Interests

- Intelligent Systems and Optimization Methodologies Applied to Power System Problems
- Power System Stability and Control
- Renewable Energies

Professional Experiences

- Internship, ABB Corporate Research Center (CRC), Raleigh, NC, USA (Oct. 2010-Dec. 2010): Storage systems for distribution systems.
- Lecturer, Azad University of Ahvaz, February 2008 – May 2009.
- Research Engineer, Iran Grid Management Company (IGMC), Tehran, Iran (May 2006 - Aug 2006).
- Research Engineer, Niroo Research Institute (NRI), Tehran, Iran (October 2005 - March 2006): Design and construction of 84kW IGBT-based inverter for induction motor drive system.

Honors

- President of the Student Leadership Council (SLC) at the Center for Ultra-Wide-Area Resilient Electric Energy Transmission Networks (CURRENT), August 2011-Present.
- Selected as top-ranked student in Power Systems Engineering group, office of honor students, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran, Jun 2007.
- Ranked top 1% among 15000 applicants in nationwide universities entrance exam for Electrical Engineering graduate studies, Iran, May 2004.

Publications

Technical Reports

- [1] **B. Moradzadeh**, M. Zarghami, and Z. Wang, "Peak Shaving-Based CES Benefit Maximization," Under review for patent filing, ABB, Dec. 2010.
- [2] Co-author of PSERC final report: "Development and Evaluation of System Restoration Strategies from a Blackout," Sep. 2009.

Journals

- [1] **B. Moradzadeh**, and K. Tomsovic, "Mixed-Integer Programming for Distribution System Reconfiguration and Restoration," *to be submitted to IEEE Transactions on Power Systems*.
- [2] **B. Moradzadeh**, and K. Tomsovic, "Decentralized Residential Response Management Considering Distribution System Operational Constraints", *to be submitted to IEEE Transactions on Smart Grids*.
- [3] E. Nasr Azadani, S.H. Hosseinian, and **B. Moradzadeh** "Generation and Reserve Dispatch in Multi-Area System using Constrained Particle Swarm Optimization," *International Journal of Electrical Power & Energy Systems*, Vol. 32, Jan. 2010, PP. 79-86.

Conferences and Presentations

- [1] **B. Moradzadeh**, K. Tomsovic, "Optimal Distribution System Reconfiguration and Restoration without Heuristics," *Accepted for publication in 17th Power System Computation Conference (PSCC)*, Stockholm, Sweden, Aug. 2011.
- [2] **B. Moradzadeh**, K. Tomsovic, "Mixed-Integer Programming for Distribution System Reconfiguration and Restoration," *Poster presentation, IEEE PES 2010 General Meeting*, Minneapolis, MN, July 2010.
- [3] E. N.Azadani, S.H. Hosseinian, **B. Moradzadeh**, and P. Hasanpor, "Economic Dispatch in Multi-Area using Particle Swarm Optimization in Electricity Market," *IEEE 12th Middle East Power System Conference (MEPCON)*, Aswan, Egypt, March 2008, pp. 559-564.
- [4] **B. Moradzadeh**, S.H. Hosseinian, M.R. Toosi, and M.B. Menhaj, "Online Voltage Stability Monitoring and Contingency Ranking using RBF Neural Network," *IEEE PES PowerAfrica Conference and Exposition*, Johannesburg, South Africa, July 2007, pp. 1-7.
- [5] A. Saffarian, **B. Moradzadeh**, M. Sanaye-pasand, and S.H. Hosseinian, "On-line Prediction of Closest Loadability Margin using Neural Networks," *IEEE Tencon Conference*, Taiwan, Nov. 2007, pp. 1-4.
- [6] **B. Moradzadeh**, S.H. Hosseinian, and M. Monfared, "Two Comparative Approaches for Online Voltage Stability Monitoring and Contingency Ranking," *2nd International conference on Electrical and Control Technologies (ECT)*, Kaunas, Lithuania, May 2007, pp. 116-119.
- [7] **B. Moradzadeh**, S.H. Hosseinian, M. Ghorat, E. Goodarzi, and M.R. Toosi, "A New Method for Increasing Power System Voltage Stability Margin using Line Outage Contingency Ranking Tables," *2nd International conference on Electrical and Control Technologies (ECT)*, Kaunas, Lithuania, May 2007, pp. 112-115.
- [8] M. Monfared, H. Rastegar, and **B. Moradzadeh**, "A More Accurate Dynamic Wind Energy Conversion System Emulator," *2nd International Conference on Electrical and Control Technologies (ECT)*, Kaunas, Lithuania, May 2007, pp. 151-156.
- [9] M. Ghorat, H. Rastegar, and E. Goodarzi, and **B. Moradzadeh**, "Study of the L and Z Indices in Comparison with Changing Active and Reactive Load," *21st International Power System Conference (PSC 2006)*, Tehran, Iran, 2006. (In Persian)
- [10] E. Goodarzi, G. B. Gharehpatian, M. Ghorat, and **B. Moradzadeh**, "Effect of using Dynamic Model of ZnO Arrester in Reducing TRV," *21st International Power System Conference (PSC 2006)*, Tehran, Iran, 2006. (In Persian)
- [11] P. Jafarian, and **B. Moradzadeh**, "Design and Implementation of a Thermocouple Smart Sensor Compatible with IEEE.1451 Standard," *7th Student Conference on Electrical Engineering (ISCEE 2004)*, Tehran, Iran, 2006. (In Persian)

References

Dr. Kevin Tomsovic: CTI professor and Department head, EECS Dept., University of Tennessee, email: tomsovic@tennessee.edu, Tel: 865-974-3461.

Dr. Yilu Liu: EECS Dept., University of Tennessee, email: liu@utk.edu, Tel: 865-974-4129.

Dr. Fangxing "Fran" Li: EECS Dept., University of Tennessee, email: fli6@utk.edu, Tel: 865-974-8401.