

## *Curriculum Vitae*

Chen Chen, Ph.D.

Professor  
School of Electrical Engineering,  
Xi'an Jiaotong University  
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### Education

- **Lehigh University**, Bethlehem, PA, USA

Ph.D. in Electrical Engineering

May 2013

Dissertation: Topics of Demand Response for Energy Management in Smart Grid

Advisor: Prof. Shalinee Kishore

- **Xi'an Jiaotong University**, Xi'an, China

M.S. in Communication and Information Engineering

June 2009

B.Eng. in Information Engineering

July 2006

### Professional Experience

- **Xi'an Jiaotong University**, Xi'an, Shaanxi, China

Professor, School of Electrical Engineering

2019 - present

- **Argonne National Laboratory**, Argonne, Illinois USA

Energy Systems Scientist, Energy Systems Division

2016 - 2019

Postdoctoral Appointee, Energy Systems Division

2014 - 2016

Postdoctoral Appointee, Decision and Information Sciences Division

2013 - 2014

Research Aide, Decision and Information Sciences Division

2012

- **The University of Chicago**, Chicago, Illinois, USA

Joint appointment staff, Computation Institute

2017 - present

- **Lehigh University**, Bethlehem, Pennsylvania, USA

Research Assistant, Department of ECE

2009 - 2013

- **Xi'an Jiaotong University**, Xi'an, Shaanxi, China

Research Assistant, Department of Information and Communication Eng.

2007 - 2009

## Research Interest

- Power Distribution System Resilience and Restoration
- Demand Response in Smart Grids
- Cyber-Physical System Modeling with Applications in Smart Grids
- Cybersecurity in Smart Grids
- Privacy in Consumer-Premise Energy Management Systems
- Game-theoretic Analysis with Applications in Power Grids and Communication Systems
- Phasor Measurement Unit (PMU) Data Management
- Smart Grid Communications

## Publications

### Book Chapters

1. C. Chen, "Demand Response: an Enabling Technology to Achieve Energy Efficiency in Smart Grid," *Application of Smart Grid Technologies - Case Studies in Saving Electricity in Different Parts of the World*, edited by Lisa Lamont and Ali Sayigh, Elsevier, 2018.

### Journal Articles (published and in press)

1. A. Arif, Z. Wang, **C. Chen**, B. Chen, "A Stochastic Multi-Commodity Logistic Model for Disaster Preparation in Distribution Systems," *IEEE Transactions on Smart Grid*, in press.
2. S. Lei, **C. Chen**, Y. Li, Y. Hou, "Resilient Disaster Recovery Logistics of Distribution Systems: Co-Optimize Service Restoration with Repair Crew and Mobile Power Source Dispatch," *IEEE Transactions on Smart Grid*, in press.
3. M. Cui, M. Khodayar, **C. Chen**, X. Wang, Y. Zhang, M. E. Khodayar, "Deep Learning Based Time-Varying Parameter Identification for System-Wide Load Modeling," *IEEE Transactions on Smart Grid*, in press.
4. F. Hafiz, B. Chen, **C. Chen**, A. R. de Queiroz, I. Husain, "Utilising demand response for distribution service restoration to achieve grid resiliency against natural disasters," *IET Generation, Transmission & Distribution*, vol. 13, no. 14, pp. 2942-2950, 2019.
5. S. Lei, **C. Chen**, H. Zhou, Y. Hou, "Routing and Scheduling of Mobile Power Sources for Distribution System Resilience Enhancement," *IEEE Transactions on Smart Grid*, vol. 10, no. 5, pp. 5650-5662, 2019.
6. G. Huang, J. Wang, **C. Chen**, C. Guo, "Cyber-Constrained Optimal Power Flow Model for Smart Grid Resilience Enhancement," *IEEE Transactions on Smart Grid*, vol. 10, no. 5, pp. 5547-5555, 2019.
7. B. Chen, Z. Ye, **C. Chen**\*(corresponding author), J. Wang, "Toward a MILP Modeling Framework for Distribution System Restoration," *IEEE Transactions on Power Systems*, vol. 34, no. 3, pp. 1749-1760, 2019.
8. B. Chen, Z. Ye, **C. Chen**\*(corresponding author), J. Wang, T. Ding, Z. Bie, "Toward a Synthetic Model for Distribution System Restoration and Crew Dispatch," *IEEE Transactions on Power Systems*, vol. 34, no. 3, pp. 2228-2239, 2019.
9. J. Mei, **C. Chen**, J. Wang, J. L. Kirley, "Coalitional Game Theory based Local Power Exchange Algorithm for Networked Microgrids," *Applied Energy*, vol. 239, pp. 133-141, 2019.
10. H. Seok, **C. Chen**, "An Intelligent Wind Power Plant Coalition Formation Model Achieving Balanced Market Penetration Growth and Profit Increase," *Renewable Energy*, vol. 138, pp. 1134-1142, 2019.

11. T. Ding, C. Li, **C. Chen**, B. Chen, Y. Yang, "Risk Assessment-based Long-term Transmission System Hardening under Prior Probabilistic Information," *IET Generation, Transmission & Distribution*, vol. 13, no. 1, pp. 108-115, 2019.
12. B. Chen, **C. Chen**\*(corresponding author), J. Wang, K. Butler-Purry, "Multi-Time Step Service Restoration for Advanced Distribution Systems and Microgrids," *IEEE Transactions on Smart Grid*, vol. 9, no. 6, pp. 6793-6805, 2018.
13. Y. Li, Z. Yang, G. Li, Y. Mu, D. Zhao, **C. Chen**, B. Shen, "Optimal scheduling of isolated microgrid with an electric vehicle battery swapping station in multi-stakeholder scenarios: A bi-level programming approach via real-time pricing," *Applied Energy*, vol. 232, pp. 54-68, December 2018.
14. Y. Li, J. Wang, D. Zhao, G. Li, **C. Chen**, "A two-stage approach for combined heat and power economic emission dispatch: Combining multi-objective optimization with integrated decision making," *Energy*, vol. 162, pp. 237-254, November 2018.
15. A. Arif, S. Ma, Z. Wang, J. Wang, S. Ryan, and **C. Chen**, "Optimizing Service Restoration in Distribution Systems with Uncertain Repair Time and Demand," *IEEE Transactions on Power Systems*, vol. 33, no. 6, pp. 6828-6838, 2018.
16. S. Xin, Q. Guo, J. Wang, **C. Chen**, H. Sun, B. Zhang, "Information Masking Theory for Data Protection in Future Cloud-based Energy Management," *IEEE Transactions on Smart Grid*, vol. 9, no. 6, pp. 5664-5676, 2018.
17. C. Hannon, J. Yan, D. Jin, **C. Chen**, J. Wang, "Combining Simulation and Emulation Systems for Smart Grid Planning and Evaluation," *ACM Transactions on Modeling and Computer Simulation*, vol. 28, no. 4, 2018.
18. A. Arif, Z. Wang, J. Wang, **C. Chen**, "Power Distribution System Outage Management with Co-Optimization of Repairs, Reconfiguration, and DG Dispatch," *IEEE Transactions on Smart Grid*, vol. 9, no. 5, pp. 4109-4118, 2018.
19. X. Lu, B. Chen, **C. Chen**, J. Wang, "Coupled Cyber and Physical Systems: Embracing Smart Cities with Multistream Data Flow," *IEEE Electrification Magazine*, vol. 6, no. 2, pp. 73-83, 2018.
20. L. Bai, J. Wang, C. Wang, **C. Chen**, F. Li, "Distribution Locational Marginal Pricing (DLMP) for Congestion Management and Voltage Support," *IEEE Transactions on Power Systems*, vol. 33, no. 4, pp. 4061-4073, 2018.
21. Z. Wang, J. Wang, **C. Chen**, "A Three-Phase Microgrid Restoration Model Considering Unbalanced Operation of Distributed Generation," *IEEE Transactions on Smart Grid*, vol. 9, no. 4, pp. 3594-3604, 2018.
22. H. Lin, **C. Chen**\*(corresponding author), J. Wang, J. Qi, D. Jin, Z. Kalbarczyk, R. K. Iyer, "Self-Healing Attack-Resilient PMU Network for Power System Operation," *IEEE Transactions on Smart Grid*, vol. 9, no. 3, pp. 1551-1565, 2018.
23. W. Ma, J. Wang, V. Gupta, **C. Chen**, "Distributed Energy Management for Networked Microgrids Using Online ADMM with Regret," *IEEE Transactions on Smart Grid*, vol. 9, no. 2, pp. 847-856, 2018.
24. B. Chen, **C. Chen**\*(corresponding author), J. Wang, K. Butler-Purry, "Sequential Service Restoration for Unbalanced Distribution Systems and Microgrids," *IEEE Transactions on Power Systems*, vol. 33, no. 2, pp. 1507-1520, 2018.
25. Y. Li, Y. Li, G. Li, D. Zhao, **C. Chen**, "Two-stage Multi-objective OPF for AC/DC grids with VSC-HVDC: Incorporating Decisions Analysis into Optimization Process," *Energy*, vol. 147, pp. 286-296, March 2018.
26. S. Lei, J. Wang, **C. Chen**, Y. Hou, "Mobile Emergency Generator Pre-positioning and Real-time Allocation for Resilient Response to Natural Disasters," *IEEE Transactions on Smart Grid*, vol. 9, no. 3, pp. 2030-2041, 2018.

27. G. Huang, J. Wang, **C. Chen**, C. Guo, B. Zhu, "System Resilience Enhancement: Smart Grid and Beyond," *Frontiers of Engineering Management*, vol.4, no.3, pp. 271-282, 2017.
28. T. Ding, Y. Lin, Z. Bie, **C. Chen**, "A Resilient Microgrid Formation Strategy for Load Restoration Considering Master-Slave Distributed Generators and Topology Reconfiguration," *Applied Energy*, vol. 199, pp. 205-216, 2017.
29. D. Jin, Z. Li, C. Hannon, **C. Chen**, J. Wang, M. Shahidehpour, C. W. Lee, J. C. Moon, "Towards a Cyber Resilient and Secure Microgrid Using Software-Defined Networking," *IEEE Transactions on Smart Grid*, vol. 8, no. 5, pp. 2494-2504, 2017.
30. S. Xin, Q. Guo, H. Sun, J. Wang, **C. Chen**, B. Zhang, "Information-Energy Flow Computation and Cyber-Physical Sensitivity Analysis for Power Systems," *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, vol. 7, no. 2, pp. 329-341, 2017.
31. J. Zhao, J. Wang, Z. Xu, C. Wang, C. Wan, **C. Chen**, "Distribution Network Electric Vehicle Hosting Capacity Maximization: A Chargeable Region Optimization Model," *IEEE Transactions on Power Systems*, vol. 32, no. 5, pp. 4119-4130, 2017.
32. **C. Chen**, J. Wang, D. Ton, "Modernizing Distribution System Restoration to Achieve Grid Resiliency against Extreme Weather Events: An Integrated Solution," *Proceedings of the IEEE*, vol. 105, no. 7, pp. 1267-1288, 2017.
33. G. Huang, J. Wang, **C. Chen**, J. Qi, C. Guo, "Integration of Preventive and Emergency Response for Power Grid Resilience Enhancement," *IEEE Transactions on Power Systems*, vol. 32, no. 6, pp. 4451-4463, 2017.
34. J. Zhao, G. Zhang, M. La Scala, Z. Dong, **C. Chen**, J. Wang, "Short-Term State Forecasting-Aided Method for Detection of Smart Grid General False Data Injection Attacks," *IEEE Transactions on Smart Grid*, vol. 8, no. 4, pp. 1580-1590, 2017.
35. J. Qi, Y. Kim, **C. Chen**, X. Lu, J. Wang, "Demand Response and Smart Buildings: A Survey of Control, Communication, and Cyber-Physical Security," *ACM Transactions on Cyber-Physical Systems, Special Issue on Smart Homes, Buildings, and Infrastructures*, vol. 1, no. 4, October 2017.
36. J. Zhao, Z. Wang, **C. Chen**, G. Zhang, "Robust Voltage Instability Predictor," *IEEE Transactions on Power Systems*, vol. 32, no. 2, pp. 1578-1579, 2017.
37. W. Yuan, J. Wang, F. Qiu, **C. Chen**, C. Kang, B. Zeng, "Robust Optimization-Based Resilient Distribution Network Planning Against Natural Disasters," *IEEE Transactions on Smart Grid*, vol. 7, no. 6, pp. 2817-2826, 2016.
38. **C. Chen**, J. Wang, F. Qiu, D. Zhao, "Resilient Distribution System by Microgrids Formation After Natural Disasters," *IEEE Transactions on Smart Grid*, vol. 7, no. 2, pp. 958-966, 2016.
39. (Guest Editorial) T. Hong, **C. Chen**, J. Huang, N. Lu, L. Xie, H. Zareipour, "Big Data Analytics for Grid Modernization," *IEEE Transactions on Smart Grid*, vol. 7, no. 5, pp. 2395-2396, 2016.
40. (Guest Editorial) Y. Wang, J. Wang, X. Dong, P. Du, M. Ni, C. Wang, L. Yao, B. Zhang, **C. Chen**, "Smart Grid Technologies and Development in China," *IEEE Transactions on Smart Grid*, vol. 7, no. 1, pp. 379-380, 2016.
41. Z. Wang, B. Chen, J. Wang, **C. Chen**, "Networked Microgrids for Self-healing Power Systems," *IEEE Transactions on Smart Grid*, vol. 7, no. 1, pp. 310-319, 2016.
42. Y. Wang, **C. Chen**, J. Wang, R. Baldick, "Research on Resilience of Power Systems under Natural Disasters - A Review," *IEEE Transactions on Power Systems*, vol. 31, no. 2, pp. 1604-1613, 2016.
43. F. Qiu, J. Wang, **C. Chen**, J. Tong, "Optimal Black Start Resource Allocation," *IEEE Transactions on Power Systems*, vol. 31, no. 3, pp. 2493-2494, 2016.

44. X. Lu, S. Bahramirad, J. Wang, **C. Chen**, “Bronzeville Community Microgrids: A Reliable, Resilient and Sustainable Solution for Integrated Energy Management with Distribution System,” *The Electricity Journal*, vol. 8, no. 10, pp. 29-42, 2015.
45. B. Zhou, C. Cao, C. Li, Y. Cao, **C. Chen**, Y. Li, L. Zeng, “Hybrid Islanding Detection Method Based on Decision Tree and Positive Feedback for Distributed Generations,” *IET Generation, Transmission & Distribution*, vol. 9, no. 14, pp. 1819-1825, 2015.
46. S. Xin, Q. Guo, H. Sun, B. Zhang, J. Wang, **C. Chen**, “Cyber-Physical Modeling and Cyber-Contingency Assessment of Hierarchical Control Systems,” *IEEE Transactions on Smart Grid*, vol. 6, no. 5, pp. 2375-2385, 2015.
47. **C. Chen**, J. Wang, Z. Li, H. Sun, Z. Wang, “PMU Uncertainty Quantification in Voltage Stability Analysis,” *IEEE Transactions on Power Systems*, vol. 30, no. 4, pp. 2196-2197, 2015.
48. **C. Chen**, L. He, P. Venkitasubramaniam, S. Kishore, L.V. Snyder, “Achievable Privacy in Aggregate Residential Energy Management Systems,” *Journal of Energy Engineering, Special Issue on Smart Grid and Emerging Technology Integration*, vol. 141, no. 1, 2015.
49. Z. Wang, B. Chen, J. Wang, M. Begovic, **C. Chen**, “Coordinated Energy Management of Networked Microgrids in Distribution Systems,” *IEEE Transactions on Smart Grid*, vol. 6, no. 1, pp. 45-53, 2015.
50. **C. Chen**, J. Wang, H. Zhu, “Effects of Phasor Measurement Uncertainty on Power Line Outage Detection,” *IEEE Journal of Selected Topics in Signal Processing*, vol. 8, no. 6, pp. 1127-1139, 2014.
51. **C. Chen**, J. Wang, S. Kishore, “A Distributed Direct Load Control Approach for Large-Scale Residential Demand Response,” *IEEE Transactions on Power Systems*, vol. 29, no. 5, pp. 2219-2228, 2014.
52. **C. Chen**, J. Wang, Y. Heo, S. Kishore, “MPC-based Appliance Scheduling for Residential Building Energy Management Controller,” *IEEE Transactions on Smart Grid*, vol. 4, no. 3, pp. 1401-1410, 2013. (This paper is selected in the IEEE Communication Society Best Readings Topics on Smart Grid Communications: Demand, Response and Dynamic Pricing)
53. **C. Chen**, K.G. Nagananda, G. Xiong, S. Kishore, L.V. Snyder, “A Communication-based Appliance Scheduling Scheme for Consumer-Premise Energy Management Systems,” *IEEE Transactions on Smart Grid*, vol. 4, no. 1, pp. 56-65, 2013.
54. **C. Chen**, L. Sun, T. Zhang, “Design of an Adaptive-OFDM System and its implementation on DSP,” *Microelectronics and Computer* (Chinese Journal), vol. 26, no. 5, pp. 1-5, 2009.
55. **C. Chen**, T. Zhang, “Design and Application of Viterbi Decoder in DSP based on VCP,” *Microcomputer Information* (Chinese Journal), no. 4, pp. 202-203, 2009.

#### Conference Proceedings

1. Z. Tang, J. Jiao, P. Zhang, M. Yue, **C. Chen**, J. Yan, “Enabling Cyber-attack-resilient Load Forecasting through Adversarial Machine Learning,” in *2019 IEEE Power and Energy Society General Meeting (PESGM)*, accepted, 2019.
2. J. Jiao, Z. Tang, P. Zhang, M. Yue, **C. Chen**, J. Yan, “Ensuring Cyber-attack-resilient Load Forecasting with a Robust Statistical Method,” in *2019 IEEE Power and Energy Society General Meeting (PESGM)*, accepted, 2019.
3. Y. Qu, X. Liu, D. Jin, Y. Hong, **C. Chen**, “Enabling a Resilient and Self-healing PMU Infrastructure Using Centralized Network Control,” in *Proc. of 2018 ACM International Workshop on Security in Software Defined Networks & Network Function Virtualization*, Tempe, AZ, pp. 13-18, March 2018.
4. C. Hannon, D. Jin, **C. Chen**, J. Wang, “Ultimate Forwarding Resilience in OpenFlow Networks,” in *Proc. of the ACM International Workshop on Security in Software Defined Networks & Network Function Virtualization*, Scottsdale, Arizona, pp. 59-64, March 2017.

5. S. Xin, Q. Guo, H. Sun, J. Wang, **C. Chen**, "Cyber-physical assessment and comparison between centralized and distributed control mode in coordinated substation voltage control," in *Proc. of 2016 IEEE Power and Energy Society General Meeting*, Boston, MA, July, 2016.
6. F. Lin, **C. Chen**, "An ADMM Algorithm for Load Shedding in Electric Power Grids," in *Proc. of 2016 American Control Conference (ACC)*, Boston, MA, pp. 5002-5007, July 2016.
7. **C. Chen**, S. Kishore, Z. Wang, M. Alizadeh, A. Scaglione, "A Cournot Game Analysis on Markets Effects of Queuing Energy Request as Demand Response," in *Proc. of IEEE PES Annual General Meeting*, pp. 1-8, San Diego, CA, July 2012.
8. M. Alizadeh, Z. Wang, A. Scaglione, **C. Chen**, S. Kishore "On the Market Effects of Queueing Energy Requests as an Alternative to Storing Electricity," in *Proc. of IEEE PES Annual General Meeting*, pp. 1-8, San Diego, CA, July 2012.
9. **C. Chen**, K.G. Nagananda, G. Xiong, S. Kishore, L.V. Snyder, "Analysis of a Joint Access and Scheduling Scheme for Residential Energy Management Controller," in *Proc. of 7th IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM): Special Session on Smart Grids*, invited paper, pp. 21-24, Hoboken, NJ, June 2012.
10. **C. Chen**, S. Kishore, Z. Wang, M. Alizadeh, and A. Scaglione, "How will Demand Response Aggregators Affect Electricity Markets? - A Cournot Game Analysis," in *Proc. of 5th International Symposium on Communications, Control, and Signal Processing (ISCCSP)*, invited paper, pp. 1-6, Rome, Italy, May 2012.
11. M. Alizadeh, T.H. Chang, A. Scaglione, **C. Chen**, S. Kishore, "The Emergence of Deferrable Energy Requests and a Greener Future: What Stands in the Way?" *5th International Symposium on Communications, Control, and Signal Processing (ISCCSP)*, invited paper, pp. 1-6, Rome, Italy, May 2012.
12. **C. Chen**, S. Kishore, L.V. Snyder, "An Innovative RTP-Based Residential Power Scheduling Scheme for Smart Grids," in *Proc. of 2011 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP): Special Session on Application of Signal Processing and Communications in Tomorrow's Smart Grids*, pp. 5956-5959, Prague, Czech Republic, May 2011.
13. **C. Chen**, S. Kishore, "Making Cooperation Valuable: A Delay-Centric, Pricing-based User Cooperation Strategy," in *Proc. of 45th Annual Conference on Information Sciences and Systems (CISS)*, pp. 1-6, Baltimore, MD, March 2011.
14. G. Xiong, **C. Chen**, S. Kishore, A. Yener, "Smart (In-Home) Power Scheduling for Demand Response on the Smart Grid," in *Proc. of IEEE PES Innovative Smart Grid Technologies Conference (ISGT)*, pp. 1-7, Anaheim, CA, January 2011.

## Professional Activities

- Professional Membership
  - Senior Member of IEEE
  - Member of INFORMS
- Journal Editorship
  - Editor, IEEE Transactions on Smart Grid, 2015-
  - Editorial Board Member, Protection and Control of Modern Power Systems, 2016 –
  - Guest Editor, IEEE Transactions on Smart Grid, Special Issue on "Big Data Analytics for Grid Modernization", 2015
  - Guest Editor, IEEE Transactions on Smart Grid Special Issue on "Smart Grid Technologies and Development in China", 2014

- IEEE Services
  - Member, IEEE PES Task Force on Definitions and Quantification of Power System Resilience
  - Chair, Special Interest Group of Cyber Security, Privacy, and Resilience for the Smart Grid in IEEE Communications Society Smart Grid Communications Technical Committee
- Conference Activities
  - Symposium Co-chair, IEEE International Conference on Smart Grid Communications (SmartGridComm), Symposium on Data Management, Grid Analytics, and Dynamic Pricing, 2015
  - Technical program committee (TPC) member, IEEE International Conference on Smart Grid Communications (SmartGridComm), 2014, 2016, 2017
  - Technical program committee (TPC) member: International Conference on Smart Grids for Smart Cities, 2015
  - Technical program committee (TPC) member: IEEE Global Conference on Signal & Information Processing (GlobalSIP), Symposium on Signal and Information Processing for Optimizing Future Energy Systems, 2015, 2018
  - Technical program committee (TPC) member, IEEE GLOBECOM, Smart Grid Communication Symposium, 2015
  - Session chair for INFORMS Annual Meeting, 2014
- Technical Review for Regional and International Proposals
  - Maryland Industrial Partnerships Program, 2016
  - Israel Science Foundation (ISF) of China-Israel Research Program (CIRP), 2015
  - National Fund for Scientific and Technological Development (FONDECYT) of the Chilean National Science and Technology Commission (CONICYT), 2014
  - Kentucky Science and Engineering Foundation (KSEF), 2014
- Reviewer for Peer-reviewed Journals
  - Proceedings of the IEEE
  - IEEE Journal on Selected Areas in Communications
  - IEEE Journal of Selected Topics in Signal Processing
  - IEEE Power Engineering Letters
  - IEEE Transactions on Power Systems
  - IEEE Transactions on Smart Grid
  - IEEE Transactions on Sustainable Energy
  - IEEE Signal Processing Letters
  - IEEE Transactions on Industrial Informatics
  - IEEE Transaction on Industrial Electronics
  - IEEE Journal on Emerging and Selected Topics in Circuits and Systems
  - IEEE Transactions on Signal and Information Processing over Networks
  - IET Generation, Transmission & Distribution
  - Applied Energy
  - Journal of Energy Engineering
  - IEEE System Journal
  - The Energy Journal

– Energy Policy

- Presentations & Posters

- “Modernizing Distribution System Restoration to Achieve Grid Resiliency Against Extreme Weather Events”, Panel Session at IEEE PES T&D Conference and Exposition, Denver, CO, April 19th, 2018.
- “Self-Healing Attack-Resilient PMU Network for Power System Operation”, INFORMS Annual Meeting, Nashville, TN, November 13th, 2016.
- “Applying DER-CAM to IIT’s Microgrid Planning Studies”, 2016 IEEE Region 4 Workshop on Smart Grid and Microgrid Technologies, Illinois Institute of Technology, Chicago, IL, August 18, 2016.
- “A Closed-Loop Distribution System Restoration Tool for Natural Disaster Recovery”, U. S. Department of Energy Smart Grid Program Peer Review Meeting, Chicago, IL, August 16-17, 2016.
- “Research on Electric Power Grid Modernization and Smart Grid”, Silk Road International Symposium for Distinguished Yong Scholars, Xi’an Jiaotong University, Xi’an, China, Dec. 22, 2015.
- “Resilient Distribution System by Microgrids Formation after Disastrous Events,” INFORMS Annual Meeting, San Francisco, CA, November 12th, 2014.
- “Effects of PMU Data Uncertainty on Power Line Outage Detection,” DOE Advanced Grid Modeling Program Peer Review, Alexandria, VA, June 17th, 2014.
- “Decentralized Control of Appliance Operations via Multi-Agent Coordination for Residential Demand Response,” INFORMS Annual Meeting, Minneapolis, MN, October 9th, 2013.
- “Design and Analysis of a Joint Access and Scheduling Scheme for In-home EMC,” Integrated Networks for Electricity Workshop: Toward the Smart Grid, Lehigh University, January 20th, 2012.
- “Market Effects Analysis of Queuing Energy Request as Demand Response,” Integrated Networks for Electricity Workshop: Toward the Smart Grid, Lehigh University, January 20th, 2012.
- “Communications-Based Control of Smart Grids,” Research Session of Graduate Student in Board of Trustee Meeting, Lehigh University, March 2nd, 2011.
- “Making Cooperation Valuable: a Delay-Centric, Pricing-Based User Cooperation Strategy,” 45th Annual Conference on Information Sciences and Systems (CISS), Johns Hopkins University, Baltimore, MD, March 23rd, 2011.
- “Smart (In-home) Power Scheduling for Demand Response on the Smart Grid,” IEEE PES Innovative Smart Grid Technologies Conference (ISGT), Anaheim, CA, January 19th, 2011.

## Honors and Awards

- IEEE PES Chicago Chapter Outstanding Engineer Award, 2018
- Argonne National Laboratory Five Years Service Award, 2018
- Best Poster Award in Workshop on Science of Security through Software-Defined Networking (SoSSDN), “Towards a Secure and Resilient Industrial Control System with Software-Defined Networking”, Illinois Institute of Technology, Chicago, IL, 2016
- Best Conference Paper Award in IEEE PES General Meeting, “Cyber-Physical Assessment and Comparison between Centralized and Distributed Control Mode in Coordinated Substation Voltage Control”, Boston, MA, 2016
- Best Reviewer Award for IEEE Transactions on Smart Grid, 2015
- Outstanding Reviewer for ASCE Journal of Energy Engineering, 2014
- RCEAS Emeritus Faculty Fellowship, Lehigh University, 2009.
- ECS/Uniwill Computer Scholarship, Xi’an Jiaotong University, 2008.



- Infineon Technologies Scholarship, Xi'an Jiaotong University, 2007.
- The first class of "Innovation Grant for Graduate Student", Xi'an Jiaotong University, 2007, 2008.
- Si Yuan Scholarship, Xi'an Jiaotong University, 2003-2005.
- The second place for 2nd Texas Instruments (TI) Mainland-Taiwan DSP Contest, Shenzhen, China, Nov. 2008.
- The second place for National Texas Instruments (TI) DSP Contest, Chengdu, China, April 2008.
- The second place for National Undergraduate Electronic Design Contest, China, 2005.
- The second place for National Undergraduate Mathematics Modeling Contest, China, 2004.

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