Xin Fang

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Mississippi State University, Starkville, MS 39762
EMAIL: xfang@ece.msstate.edu CELL PHONE: (720) 205-8114

EDUCATION

- Ph.D. Electrical Engineering, University of Tennessee-Knoxville, 2016 (Graduate with Chancellor citation award).
- M.S. Electrical Engineering, China Electric Power Research Institute (China EPRI), 2012.
- B.S. Electrical Engineering, Huazhong University of Science and Technology, 2009.

PROFESSIONAL EXPERIENCE

- Assistant Professor, Department of Electrical Engineering, University of South Carolina, August 2025- Present
- Assistant Professor, Department of Electrical and Computer Engineering, Mississippi State University, August 2022- August 2025
- Senior Researcher, National Renewable Energy Laboratory, July 2017- August 2022
- Power System Engineer, GE Grid Solutions, July 2016 – July 2017
- Operator Intern, Dominion Virginia, January 2015 – December 2015
- Visiting Graduate Student, Oak Ridge National Laboratory, October 2012- September 2014

GRANT EXPERIENCES

Current Grant at MSU:

1. PI, NSF CyberTraining project, "Collaborative Research: CyberTraining: Pilot: PowerCyber: Computational Training for Power Engineering Researchers," 01/2024-12/2025, collaborating with Dr. Hantao Cui of Oklahoma State University, **Fang's share: $120,000**. https://www.nsf.gov/awardsearch/showAward?AWD_ID=2319896&HistoricalAwards=false.
2. Co-PI, DOE SETO project, “DIgital Twin Addressing Multi-Scale Operational Needs of IBR-rich GriDs (DIAMOND),” 10/2024-09/2027, collaborating with National Renewable Energy Laboratory, PI: Dr. Jin Tan, **Fang’s share: $330,000.**
3. Co-PI, DOE WETO project, “HVDC-Learn: Modular Education & Workforce Training in High Voltage Direct Current Electric Transmission,” 01/2024-12/2026, collaborating with Iowa State University, PI: Dr. James McCalley, **Fang’s share: $112,500**.
4. Co-PI, DOE SETO project, “SAPPHIRE: Stability-Augmented Optimal Control of Hybrid PV Plants with Very High Penetration of Inverter-based Resources,” 04/2023-03/2025, Collaborating with National Renewable Energy Laboratory, PI: Dr. Jin Tan, **Fang’s share: $50,000**.
5. Co-PI, DOE OE project, "T&D Dynamic Co-Simulation for Power System Stability Analysis with High Inverter-Based Resource Penetration," 10/2023-09/2024, collaborating with National Renewable Energy Laboratory, PI: Dr. Weijia Liu, **Fang’s share: $50,000**.
6. Co-PI, DOE OE project, “Unlocking Dynamic Thermal Rating Benefits for Distribution Systems,” 01/2025-12/2025, collaborating with National Renewable Energy Laboratory, PI: Dr. Wenbo Wang, **Fang’s share: $50,000.**

7. Co-PI, DOE AGM Proposal, "Foundational Work for the North American Grid Digital Twin," 10/2025-09/2027, collaborating with Idaho National Laboratory, PI: Dr. Juan Gallego-Calderon, Fang's share: $50,000.

Pending Grant at MSU:

8. PI, NSF EPCN proposal, "Parallel Alternating Current Optimal Power Flow-based Multiscale Frequency Stability-Constrained Unit Commitment with Inverter-based Resources," 01/2026-12/2028, Fang's share at MSU: $380,000.
9. Co-PI, DOE EPSCOR Proposal, "Application-aware Co-Design of Quantum-Classical Algorithms for High-Performance and Quantum Computing Systems," 10/2025-09/2027, collaborating with University of Delaware, Fang's share at MSU: $500,000.

Selected Previous Projects at NREL:

1. PI, DOE OE project (FY22), "Heterogenous Communication Delay Resilient Secondary Frequency Regulation from Electric Vehicles", April/2022-March/2024, $800,000.
2. PI, DOE OE project, "Cyber Physical Dynamic System for Distributed Energy Storage Frequency Regulation and AGC", October/2020-March/2022, $350,000.
3. PI, NREL LDRD project, "Development of Advanced Controls for Utility Scale Battery Energy Storage and Wind Integration in Alaska", October 2019-September 2020, $90k.
4. Technical Lead, DOE SETO project, "Multi-timescale Integrated Dynamics and Scheduling for Solar (MIDAS-Solar)", October/2018-September/2021, $3,200,000.
5. Technical Lead, DOE CESER project, "Situational Awareness and Grid Anomaly Detection with Machine Learning", October 2019-September 2022, $3,500,000.
6. Technical Lead, DOE SETO project, "Strategic Uncertainty Management and Mitigation for Exceptional Reliability in Grid Operations (SUMMER-GO)", October 2018-September 2021, $1,520,000.
7. Technical Lead, DOE WETO project, "Providing Ramping Service with Wind to Enhance Power System Operational Flexibility", October 2016-September 2019, $1,450,000.

AWARDS AND HONORS

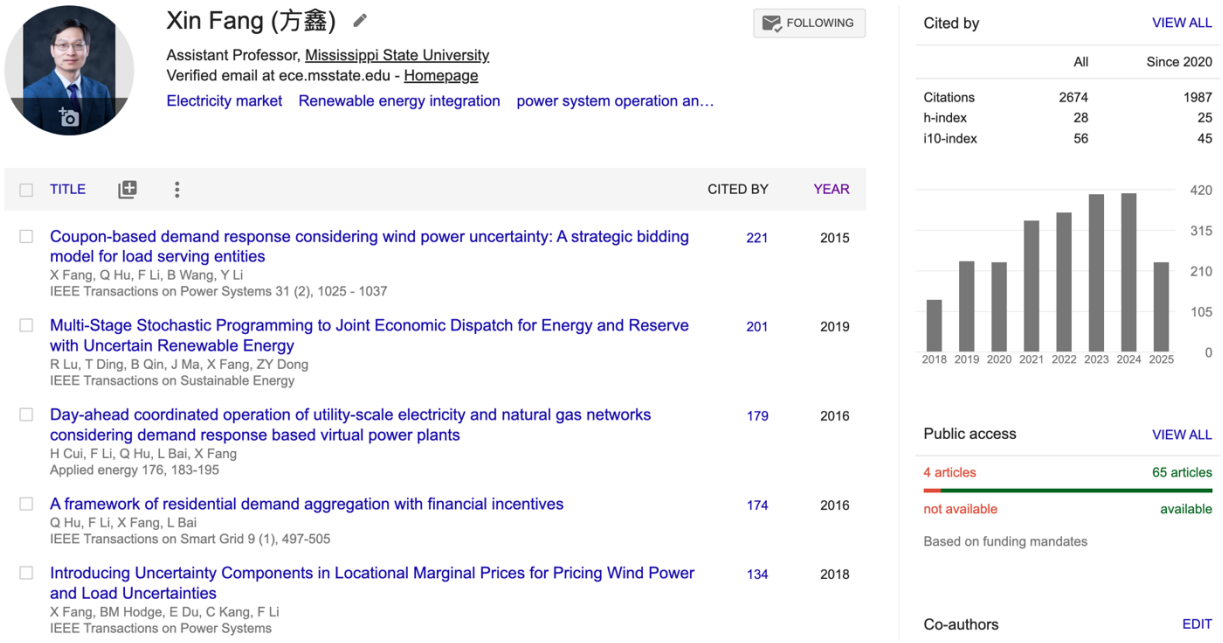
- IEEE PES Power System Operation, Planning and Economics Technical Committee Prize Paper Award, 2024
- Outstanding Associate Editor for IEEE Transactions on Power Systems, 2023
- Outstanding Associate Editor for IEEE Transactions on Sustainable Energy, 2022
- Best Journal Paper Award of Journal of Modern Power Systems and Clean Energy, 2019
- Outstanding Reviewer for IEEE Transactions on Power Systems, 2022, 2023
- Outstanding Reviewer for IEEE Transactions on Sustainable Energy, 2017, 2019, 2021
- Outstanding Reviewer for Applied Energy, 2018
- Outstanding Reviewer for International Journal of Electrical Power and Energy Systems, 2018
- Outstanding Reviewer for Electric Power Systems Research, 2016/2018
- Excellent Reviewer for Journal of Modern Power and Clean Energy, 2016/2017/2018/2019
- University of Tennessee Chancellor's Citation Award for Extraordinary Professional Promise, 2016

- Department Fellowship, EECS Department, University of Tennessee, 2012/2013
- Outstanding Graduate student at China Electric Power Research Institute, 2012
- Excellent undergraduate student of Huazhong University of Science and Technology (HUST), for top 5% undergraduate student, 2009
- Self-improvement scholarship of HUST, 2007
- Freshman scholarship of HUST, 2006

PUBLICATIONS

A snapshot of my Google scholar page is shown below (Nov. 26th, 2024). More detail can be found below as well.

More publication and projects information can be found on my personal IDEAL Lab (Intelligent Decarbonization for Equitable Access to Energy Lab) website.



Xin Fang (方鑫) FOLLOWING

Assistant Professor, Mississippi State University
Verified email at ece.msstate.edu - Homepage
Electricity market Renewable energy integration power system operation an…

TITLE	CITED BY	YEAR
Coupon-based demand response considering wind power uncertainty: A strategic bidding model for load serving entities X Fang, Q Hu, F Li, B Wang, Y Li IEEE Transactions on Power Systems 31 (2), 1025 - 1037	221	2015
Multi-Stage Stochastic Programming to Joint Economic Dispatch for Energy and Reserve with Uncertain Renewable Energy R Lu, T Ding, B Qin, J Ma, X Fang, ZY Dong IEEE Transactions on Sustainable Energy	201	2019
Day-ahead coordinated operation of utility-scale electricity and natural gas networks considering demand response based virtual power plants H Cui, F Li, Q Hu, L Bai, X Fang Applied energy 176, 183-195	179	2016
A framework of residential demand aggregation with financial incentives Q Hu, F Li, X Fang, L Bai IEEE Transactions on Smart Grid 9 (1), 497-505	174	2016
Introducing Uncertainty Components in Locational Marginal Prices for Pricing Wind Power and Load Uncertainties X Fang, BM Hodge, E Du, C Kang, F Li IEEE Transactions on Power Systems	134	2018

Cited by VIEW ALL

	All	Since 2020
Citations	2674	1987
h-index	28	25
i10-index	56	45

Public access VIEW ALL

4 articles not available | 65 articles available

Based on funding mandates

Co-authors EDIT

Selected Journal Publications

1. Y. Deng, X. Fang, N. Gao and J. Tan, "Multi-Timescale Modeling Framework of Hybrid Power Plants Providing Secondary Frequency Regulation," in *IEEE Open Access Journal of Power and Energy*, doi: 10.1109/OAJPE.2024.3504835. (PhD student as first author.)
2. J. Wang, F. Li, Xin Fang, *et al*., "Dynamics-Incorporated Modeling Framework for Stability Constrained Scheduling Under High-Penetration of Renewable Energy," in *IEEE Transactions on Sustainable Energy*, vol. 16, no. 3, pp. 1673-1685, July 2025, doi: 10.1109/TSTE.2025.3528027.
3. X. Fang, "Virtual Inertia Synthesis and Control: Informative and Relevant [Book Review]," in *IEEE Power and Energy Magazine*, vol. 23, no. 1, pp. 116-116, Jan.-Feb. 2025, doi: 10.1109/MPE.2024.3488739.

4. Zishan Guo, Qinran Hu, Tao Qian, Xin Fang, Renjie Hu, Zaijun Wu, “Stable Relay Learning Optimization Approach for Fast Power System Production Cost Minimization Simulation,” IEEE Transactions on Power System, early access.
5. Anping Zhou, Ming Yang, Xin Fang, and Ying Zhang, “Addressing Wind Power Forecast Errors in Day-Ahead Pricing with Energy Storage Systems,” IEEE Transactions on Sustainable Energy, 2025.
6. X. Fang, “Energy Equity-Aware Load Shedding Optimisation Methodology,” Energy Internet, 2025.
7. Hailei He, Yantao Zhang, Xin Fang, Qinyong Zhou, “DC near-area voltage stability constrained renewable energy integration for regional power grids,” IET Generation, Transmission & Distribution, vol. 18, no. 19, pp. 3059-3070.
8. Q. An, G. Li, X. Fang, F. Li and J. Wang, "On the Decomposition of Locational Marginal Hydrogen Pricing–Part II: Solution Approach and Numerical Results," in *IEEE Transactions on Industrial Informatics*, vol. 20, no. 9, pp. 10836-10846, Sept. 2024, doi: 10.1109/TII.2024.3393498.
9. Rushuai Han, Qinran Hu, Xin Fang, “Frequency Security-Constrained Unit Commitment with Fast Frequency Support of DFIG-Based Wind Power Plants,” International Journal of Electric Power and Energy Systems.
10. Xuebo Liu, Xin Fang, Jin Tan, “Data-Driven Frequency Stability Constrained Unit Commitment: An Island System Study,” Open Access Journal of Power and Energy Systems, accepted.
11. Jinning Wang, Fran Li, Xin Fang, “Electric Vehicles Charging Time Constrained Deliverable Secondary Frequency Regulation Provision,” IEEE Transactions on Smart Grid, early access.
12. Mengmeng Cai, Wenbo Wang, Xin Fang, Anthony Florita, “Demonstrating the transient system impact of cyber-physical events through scalable transmission and distribution (T&D) co-simulation,” Journal of Power and Energy Systems, early access.
13. Zhang Q, Li F, Fang X, Zhao J. Implications of electricity and gas price coupling in US New England region. iScience. 2023 Dec 13;27(1):108726. doi: 10.1016/j.isci.2023.108726.
14. Ningchao Gao, Xin Fang, David Gao, “Manage Real Time Power Imbalance with Renewable Energy: Fast Generation Dispatch or Adaptive Frequency Regulation?” IEEE Transactions on Power System, early access.
15. S. Lu, Y. Xu, W. Gu, Xin Fang and Z. Dong, "On Thermal Dynamics Embedded Static Voltage Stability Margin," in IEEE Transactions on Power Systems, vol. 38, no. 3, pp. 2982-2985, May 2023, doi: 10.1109/TPWRS.2023.3246301.
16. Xin Fang, Haoyu Yuan, Jin Tan, “Secondary Frequency Regulation from Variable Generation through Uncertainty Decomposition: An Economic and Reliability Perspective,” IEEE Trans. Sustainable Energy, vol. 12, no. 4, pp. 2019– 2030, April 2021.
17. X Wang, F Li, L Bai, Xin Fang, “DLMP of Competitive Markets in Active Distribution Networks: Models, Solutions, Applications, and Visions,” Proceedings of the IEEE, 2022.
18. M. Xiang, Zhifang Yang, Ershun Du, Xin Fang, “Real-Time Dispatch With Secondary Frequency Regulation: A Pathway to Consider Intra-Interval Fluctuations,” IEEE Systems Journal, 2021.
19. Wenbo Wang, Xin Fang, Hantao Cui, Fran Li, Yijing Liu, T. Overbye, “Transmission and Distribution Frequency Dynamic Co-Simulation Framework for Distributed Energy Resources’ Frequency Response,” IEEE Transactions on Smart Grid, 2021. (Corresponding author)

20. Hantao Cui, Fran Li, Xin Fang, “Effective Parallelism for Equation and Jacobian Evaluation in Power Flow Calculation,” IEEE Trans. Power Systems, vol. 36, no. 5, pp. 4872– 4875, April 2021.
21. S Yin, J Wang, Z Li, Xin Fang, “State-of-the-art short-term electricity market operation with solar generation: a review,” Renewable and Sustainable Energy Reviews, vol. 138, March 2022.
22. Xin Fang, Q. Hu, R. Bo, F. Li, “Redesigning Capacity Market to Include Flexibility via Ramp Constraints in High-Renewable Penetrated System,” International Journal of Electrical Power and Energy Systems, vol. 128, June 2021.
23. C. Chen, M. Cui, Xin Fang, “Load Altering Attack-Tolerant Defense Strategy For Load Frequency Control System,” Applied Energy, vol. 280, 2020.
24. Xin Fang, K. Sedzro, H. Yuan, H. Ye, “Deliverable Flexible Ramping Products considering Spatiotemporal Correlation of Wind Generation and Demand Uncertainties,” IEEE Trans. Power Systems, vol. 35, no. 4, pp. 2561-2574, May 2020.
25. Xin Fang, H. Cui, E. Du, Fangxing Li, C. Kang, “Characteristics of Locational Uncertainty Marginal Price for Correlated Uncertainties of Variable Renewable Generation and Demands,” Applied Energy, vol. 282, 2021.
26. B. Li, K. Sedzro, Xin Fang, BM Hodge, J. Zhang, “A Clustering-Based Scenario Generation Framework for Power Market Simulation with Wind Integration,” Journal of Renewable and Sustainable Energy, vol. 12, 2020.
27. Xin Fang, Bri-Mathias Hodge, E. Du, C. Kang, Fangxing Li, “Introducing Uncertainty Components in Locational Marginal Prices for Pricing Wind Power and Load Uncertainties,” IEEE Trans. Power Systems, vol. 34, no. 3, 2019
28. R. Lu, T. Ding, B. Qin, J. Ma, Xin Fang, ZY Dong, “Multi-Stage Stochastic Programming to Joint Economic Dispatch for Energy and Reserve with Uncertain Renewable Energy,” IEEE Transactions on Sustainable Energy, vol. 11, no. 3, 2020.
29. Xin Fang, Hantao Cui, H. Yuan, J. Tan, T. Jiang, “Distributionally-robust chance constrained and interval optimization for integrated electricity and natural gas systems optimal power flow with wind uncertainties,” Applied Energy, vol. 252, 2019.
30. Xin Fang, Bri-Mathias Hodge, H. Jiang, Y. Zhang, “Decentralized Wind Uncertainty Management: Alternating Direction Method of Multipliers Based Distributionally-Robust Chance Constrained Optimal Power Flow,” Applied Energy, vol. 250, 2019.
31. Xin Fang, Mingjian Cui, “Analytical Model of Day Ahead and Real Time Prices Correlation in Strategic Wind Power Offering,” Journal of Modern Power System and Clean Energy, vol. 8, no. 5, 2020.
32. Xin Fang, Bri-Mathias Hodge, Fangxing Li, E. Du, C. Kang, “Adjustable and Distributionally Robust Chance Constrained Economic Dispatch Considering Wind Power Uncertainty,” Journal of Modern Power System and Clean Energy, vol. 7, no. 3, 2019.
33. Xin Fang, Bri-Mathias Hodge, Fangxing Li, “Mean-Variance Optimization-Based Energy Storage Scheduling Considering Day-Ahead and Real-Time LMP Uncertainties,” IEEE Trans. Power Systems, vol. 33, no. 6, pp. 7292-7295, Nov. 2018.
34. Xin Fang, Bri-Mathias Hodge, E. Du, N. Zhang, Fangxing Li, “Modelling Wind Power Spatial-Temporal Correlation in Multi-Interval Optimal Power Flow: A Sparse Correlation Matrix Approach,” Applied Energy, vol. 230, 2018.

35. Xin Fang, V. Krishnan, Bri-Mathias Hodge, “Strategic Offering for Wind Power Producers Considering Energy and Flexible Ramping Products,” Energies, 11(5), 1239, 2018.
36. Xin Fang, Linquan Bai, Fangxing Li, Bri-Mathias Hodge, “Hybrid Component and Configuration model for Combined-Cycle Units in the Unit Commitment Problem,” Journal of Modern Power System and Clean Energy, vol. 6, no. 6, pp. 1332-1337, Nov. 2018.
37. Xin Fang, Qinran Hu, Fangxing Li, Beibei Wang, Yang Li, “Coupon-Based Demand Response Considering Wind Power Uncertainty: A Strategic Bidding Model for Load Serving Entities,” IEEE Trans. Power Systems, vol. 31, no. 2, pp. 1025-1037, May 2016.
38. Xin Fang, Yanli Wei, Fangxing Li, “Evaluation of LMP Intervals Considering Wind Power Uncertainty,” IEEE Trans. Power Syst., vol. 31, no. 3, pp. 2495-2496, 2016.
39. Xin Fang, Fangxing Li, Qinran Hu, Yanli Wei, “Strategic CBDR Bidding Considering FTR and Wind Power,” IET Gener. Transm. Distrib., vol. 10, no. 10, pp. 2464-2474, 2016.
40. Xin Fang, Fangxing Li, Yanli Wei, Hantao Cui, “Strategic scheduling of energy storage for load serving entities in locational marginal pricing marke,” IET Gener., Transm. Distrib. vol. 10, no. 5, pp. 1258–1267, 2016.
41. Xin Fang, Fangxing Li, Yanli Wei, Riyasat Azim and Yan Xu, “Reactive Power Planning with High Penetration of Wind Energy using Benders Decomposition,” IET Gener. Transm. Distrib., vol. 9, no. 14, pp. 1835-1844, Nov. 2015.
42. H Cui, F Li, Xin Fang, H Chen, H Wang, “Bi-Level Arbitrage Potential Evaluation for Grid-Scale Energy Storage Considering Wind Power and LMP Smoothing Effect,” IEEE Transactions on Sustainable Energy, vol. 9, no. 2, pp. 707-718, April 2018.
43. Hantao Cui, Fangxing Li, Xin Fang, Qinran Hu, Linquan Bai, “Day-ahead Coordinated Operation of Utility-Scale Electricity and Natural Gas Networks Considering Demand Response Based Virtual Power Plants,” Appl. Energy, vol. 176, no. 15, pp. 183–195, 2016.
44. Qinran Hu, Fangxing Li, Xin Fang, Linquan Bai, “A Framework of Residential Demand Aggregation with Financial Incentives,” IEEE Trans. Smart Grid, vol. 9, no. 1, pp. 497-505, Nov. 2017.
45. Houhe Chen, Xin Fang, Rufeng Zhang, Tao Jiang, at el, “Available Transfer Capability Evaluation in a Deregulated Electricity Market Considering Correlated Wind Power,” IET Gener., Transm. Distrib. vol. 12, no. 1, pp. 53-61, April 2017.
46. Beibei Wang, Xin Fang, Xiayang Zhao, Houhe Chen, “Bi-level Optimization for Available Transfer Capability Evaluation in Deregulated Electricity Market,” Energies, 2015, 8(12). 13344-13360.
47. Wang Beibei, Tang Nan, Fang Xin, Yang Shengchun, Ji Wenlu, “A Multi Time Scales Reserve Rolling Revision Model of Power System With Large Scale Wind Power Considering Source-Network-Load Interaction,” Proceedings of the CSEE, June 2017.
48. FANG Xin, GUO Qiang, ZHANG Dongxia, et al, “Capacity Credit Evaluation of Grid-connected Photovoltaic Generation considering Weather Uncertainty,” Automation of Electric Power System, vol. 36, no. 10, pp. 27-32, 2012.
49. FANG Xin, GUO Qiang, ZHANG Dongxia, et al, “Capacity Credit Evaluation of Grid-Connected Photovotaic Generation,” Power System Technology, vol. 36, no. 9, pp. 31-35, 2012.

Selected Peer Reviewed Conference Papers

1. S. Dong, X. Fang, J. Tan, N. Gao, X. Cui and A. Hoke, "A unified analytical method to quantify three types of fast frequency response from inverter-based resources," *22nd Wind and Solar Integration Workshop (WIW 2023)*, Copenhagen, Denmark, 2023, pp. 669-674, doi: 10.1049/icp.2023.2801.
2. N. Gao, S. Dong, X. Fang, A. Hoke, D. W. Gao and J. Tan, "Developing Frequency Stability Constraint for Unit Commitment Problem Considering High Penetration of Renewables," *2023 IEEE 50th Photovoltaic Specialists Conference (PVSC)*, San Juan, PR, USA, 2023, pp. 1-4, doi: 10.1109/PVSC48320.2023.10360076.
3. J. Huang, Xin Fang, X. Zhou, J. Tan, S. Dong and A. Hoke, "Battery Degradation Modeling in Hybrid Power Plants: An Island System Unit Commitment Study," 2023 IEEE Kansas Power and Energy Conference (KPEC), Manhattan, KS, USA, 2023, pp. 1-5, doi: 10.1109/KPEC58008.2023.10215443.
4. Basnet, Xin Fang and N. Panossian, "Impact of Transportation Electrification on the System's Dynamic Frequency Response," 2023 IEEE Kansas Power and Energy Conference (KPEC), Manhattan, KS, USA, 2023, pp. 1-6, doi: 10.1109/KPEC58008.2023.10215428.
5. Xin Fang, W. Wang, F. Ding and N. Gao, "Distributed PV Hosting Capacity Evaluation Considering Equitable PV Accommodation," 2023 IEEE Kansas Power and Energy Conference (KPEC), Manhattan, KS, USA, 2023, pp. 1-5, doi: 10.1109/KPEC58008.2023.10215100.
6. W. Wang, M. Cai, Xin Fang and C. Irwin, "Impact of Open Communication Networks on Load Frequency Control with Plug-In Electric Vehicles By Cyber-Physical Dynamic Co-simulation," 2023 IEEE Power & Energy Society Innovative Smart Grid Technologies Conference (ISGT), Washington, DC, USA, 2023, pp. 1-5, doi: 10.1109/ISGT51731.2023.10066380.
7. Yijing Liu, Wenbo Wang, Xin Fang, Jinning Wang, Hantao Cui, Fran Li, Thomas Overbye, "Transmission-Distribution Dynamic Co-simulation for Electric Vehicles to Grid Frequency Response," IEEE PES General Meeting 2022.
8. Wenbo Wang, Xin Fang, AR Florita, "Impact of DER Communication Delay in AGC: Cyber-Physical Dynamic Simulation," 48th IEEE Photovoltaic Specialists (PVSC).
9. S. Yin, J. Wang, Y. Lin, Xin Fang, J. Tan, H. Yuan, "Practical Operations of Energy Storage Providing Ancillary Services: From Day-Ahead to Real-Time," North America Power System (NAPS) 2020.
10. Xin Fang, J. Tan, H. Yuan, S. Yin, J. Wang, "Providing Ancillary Services with Photovoltaic Generation in Multi-Timescale Grid Operation," North America Power System (NAPS) 2020.
11. Xin Fang, M. T. Craig, Bri-Mathias Hodge, "Linear Approximation Line Pack Model for Integrated Electricity and Natural Gas Systems OPF," IEEE PES General Meeting 2019, Atlanta, GA 3-9, 2019.
12. KS Sedzro, Xin Fang, BMS Hodge, "Analysis of Wind Ramping Product Formulations in a Ramp-constrained Power Grid," Hawaii International Conference on System Sciences (HICSS) 2019.
13. Xin Fang, Bri-Mathias Hodge, Fangxing Li, "Capacity Market Model Considering Flexible Resource Requirement," IEEE PES General Meeting 2018, Portland, OR, Aug 16-20, 2018. (Best Conference Paper Award)

14. Xin Fang, Bri-Mathias Hodge, Fangxing Li, “Potential of Wind Power to Provide Flexible Ramping Products and Operating Reserve,” IEEE PES General Meeting 2018, Portland, OR, Aug 16-20, 2018.
15. Houhe Chen, Fangxing Li, Xin Fang, “Available Transfer Capability Calculations Considering Demand Response,” IEEE PES General Meeting 2017, Chicago, IL, July 26-30, 2017.
16. Xin Fang, Fangxing Li, Hantao Cui, Linquan Bai, Haoyu Yuan, Qinran Hu, “Risk Constrained Scheduling of Energy Storage System for Load Serving Entities Considering Load and LMP Uncertainties,” IFAC- Control of Transmission and Distribution Smart Grids 2016.
17. Xin Fang, Fangxing Li, Qinran Hu, Ningchao Gao, “System Load Margin Evaluation using Mixed-Integer Conic Optimization,” North America Power System (NAPS) 2015, Charlotte, NC, Oct. 3-6, 2015.
18. Xin Fang, Fangxing Li, Qinran Hu, Ningchao Gao, “The Impact of FTR on LSE’s Strategic Bidding considering Coupon based Demand Response,” IEEE PES General Meeting 2015, Denver, CO, July 26-30, 2015.
19. Xin Fang, Fangxing Li, Yan Xu, “Reactive Power Planning Considering High Penetration of Wind Energy,” IEEE PES T&D Conf. and Expo. 2014, Chicago, IL, April 14-17, 2014.
20. Xin Fang, Fangxing Li, Ningchao Gao, and Qiang Guo, “Available Transfer Capability of Photovoltaic Generation Incorporated System,” IEEE PES General Meeting 2014, National Harbor, MD, July 27-31, 2014.
21. Xin Fang, Fangxing Li, Ningchao Gao, “Probabilistic Available Transfer Capability Evaluation with High Penetration of Wind Power,” IEEE PMAPS 2014, Durham, UK, July 07-10, 2014.
22. Qinran Hu, Xin Fang, Fangxing Li, “An Approach to Assess the Responsive Residential Demand to Financial Incentives,” IEEE PES General Meeting 2015, Denver, CO, July 26- 30, 2015.
23. Hantao Cui, Fangxing Li, Xin Fang, “Distribution Network Reconfiguration with Aggregated Electric Vehicle Charging Strategy,” IEEE PES General Meeting 2015, Denver, CO, July 26-30, 2015.
24. Haoyu Yuan, Xue Li, Fangxing Li, Xin Fang, Hantao Cui, Qinran Hu, “Mitigate Overestimation of Voltage Stability Margin by Coupled Single-Port Circuit Models,” IEEE PES General Meeting 2016, Boston, MA, July 21-26, 2016.
25. Linquan Bai, Fangxing Li, Qinran Hu, Hantao Cui, Xin Fang, “Application of Battery-Supercapacitor Energy Storage System for Smoothing Wind Power Output: An Optimal Coordinated Control Strategy,” IEEE PES General Meeting 2016, Boston, MA, July 21-26, 2016.

TEACHING EXPERIENCE

- Fall 2022, ECE 3434: Intermediate Electronic Circuit, MSU.
- Spring 2023, ECE 4633/6633: Power Distribution Systems, MSU.
- Fall 2023, ECE 4613/6613: Power Transmission Systems, MSU.

CURENT PhD Student

- Prasant Basnet, from Fall 2022, is expected to graduate in Spring 2027
- Yuxin Deng, from Spring 2023, is expected to graduate in Fall 2026.

- Jahangir Hossain, from Spring 2024, is expected to graduate in Fall 2027.

SELECTED INVITED TALKS/POSTERS

- Panelist: “Economic, Reliable and Secure Low-Carbon Electricity System Modeling” in 2023 INFORMS Annual Meeting
- Panelist: “Combining physics-based and data-driven modeling and simulation for power systems” in 2022 IEEE Power & Energy Society General Meeting
- Panel Co-Chair: “Ultra-High Penetration of Renewable Energy Integration” at 2019 IEEE Power & Energy Society General Meeting
- 2019 IEEE Power & Energy Society General Meeting, Aug. 6th, 2019, Atlanta (Talk)
- NREL Workshop “Design and Development of Hybrid Power Plants,” Dec. 10th to 11th 2018.
- 2018 IEEE Power & Energy Society General Meeting, July 25th, 2015, Denver, CO (Talk & Poster)
- 2015 IEEE Power & Energy Society General Meeting, July 25th, 2015, Denver, CO (Poster)
- 2015 NSF/DOE Site Visit and Industry Conference, Oct. 8th, 2015, Knoxville, TN (Talk & Poster)
- 2014 IEEE Power & Energy Society General Meeting, July 26th, 2014, Washington, DC (Poster)
- 2014 NSF/DOE Site Visit and Industry Conference, May 12th, 2013, Knoxville, TN (Poster)
- 2014 IEEE PES Transmission & Distribution Conference & Exposition, April 15th, 2014, Chicago, IL(Talk)
- 2013 IEEE Power & Energy Society General Meeting, July 22nd, 2013, Vancouver, Canada (Poster)
- 2013 NSF/DOE Site Visit and Industry Conference, May 7th, 2013, Knoxville, TN (Poster)

PROFESSIONAL ACTIVITIES

- Vice Chair, IEEE PSOPE Bulk Power System Planning Subcommittee
- IEEE PES senior member
- Editor of IEEE Transactions on Power Systems
- Editor of IEEE Transactions on Sustainable Energy
- Editor of IEEE PES Power Engineering Letter
- Associate Editor of Journal of Modern Power and Clean Energy
- Reviewer of IEEE Trans. on Power Systems/Sustainable Energy/Smart Grid
- Reviewer of IET Generation, Transmission and Distribution
- Reviewer of Electric Power System Research
- Reviewer of Applied Energy
- Reviewer of International Journal of Electrical Power and Energy System