Curriculum Vitae

Updated: 08/08/2022

1. BIOGRAPHICAL DATA

Name: Qun Zhou Sun

[redacted]

2. EDUCATION

Ph.D.	EE (Minor in Statistics)	Iowa State University Ames, IA, 2011
B.S.	EE	Huazhong University of Science and Technology Wuhan, China, 2007

3. PROFESSIONAL POSITIONS

08/2016 – Present	Assistant Professor, UCF, Orlando, FL (maternity leave in 2018)
08/2015 – 08/2016	Visiting Assistant Professor, UCF, Orlando, FL
08/2011 – 12/2012	Power Systems Engineer, GE Grid Solutions, Seattle, WA
05/2009 – 08/2009	Development Intern, Genscape, Boston, MA

4. TEACHING

- **Courses**

Course Number	Course Title	Credits	Class	Semester	# of Students	Mean score on question 9 of Overall effectiveness of the instructor
EEL6257	Data Analytics in Energy Systems	3	Graduate	Spring 2022	10	4.25
EEL4298	Power System Economics	3	Undergrad	Fall 2021	75	4.19
EEL4298	Power System Economics	3	Undergrad	Fall 2020	38	4.11

EEL6257	Data Analytics in Power Systems	3	Graduate	Spring 2020	7	4.6
EEL6938	Grid-Connected PV Systems with Storage	3	Graduate	Spring 2020	9	3.33
EEL4932	Power System Economics	3	Undergrad	Fall 2019	31	4.16
EEL6257	Data Analytics in Power Systems	3	Graduate	Spring 2019	8	5
EEL4932	Power System Economics	3	Undergrad	Fall 2018	12	4.67
EEL6938	Data Analytics in Power Systems	3	Graduate	Fall 2017	18	3.71
EEL4932	Global Energy Issues	3	Undergrad	Spring 2017	55	4.58
EEL4216	Fundamentals of Electric Power Systems	3	Undergrad	Fall 2016	59	3.27

- **MS Thesis and PhD Dissertation students (as the major advisor and mentor)**

Postdoc Researchers

1. Yiyuan Qiao, 09/2020 – present, PhD obtained from University of Maryland.
2. Wenyi Wang, 02/2020 – 03/2021. Next stop: Associate Professor at Chongqing University, China.
3. Samy Faddel, 06/2019 – 10/2021. Next stop: Scientist at ABB Research Center.

PhD Students

1. Guanyu Tian, graduated in Summer 2022. Dissertation: “Grid-Interactive Buildings: Modeling, Operations, and Security”.
2. Hossein Panamtash, 08/2017 – present. Dissertation: “Probabilistic solar power forecasting and optimal grid operations”.
3. Xipeng Jin, 08/2019 – present. Dissertation: “Modeling and optimizing smart buildings with probabilistic graphical models”.
4. Michal Cash, 08/2019 – present. Dissertation: “Cyber security in smart buildings”.
5. Aquib Ahmed, 01/2022 – present. Dissertation: “Enhancing smart building cyber security using probabilistic graphical models”.
6. Zahra Bagheri, incoming PhD student in Fall 2022.

MS students

1. Sarah Schiefelbein, incoming master student in Fall 2022.
2. Matthew Wright, incoming master student in Fall 2022.

3. Lei Wang, graduated in Fall 2019. Thesis: “Physics-Guided Deep Learning for Power System Sate Estimation”. Next stop: PhD student at Florida State University.
4. Rahul Birari, graduated in Fall 2017. Thesis: “Online Neuro-Adaptive Learning for Power System Dynamic State Estimation”. Next stop: System Engineer at Alpha Technologies.

Undergraduate students

1. Anthony Bishop-Gylys, 2022 Summer REU student
2. Paco Balthazar, 2022 Summer REU student
3. Matthew Wright, Fall 2021 – present
4. Arsene Landry Tatke, Spring 2021 – Present
5. Sarah Schiefelbein, Fall 2021 – present
6. Raj Doshi, Fall 2019 – Fall 2021
7. Lynn Komarek, 2020 Spring and Fall
8. Francis Olearczyk, 2020 Spring and Fall
9. Eric Elliott, 2019 Summer REU student
10. Nicholas Shanklin, 2019 Summer REU student
11. Isaias Velez, 2017 Fall

5. RESEARCH

- **Key Words**

Primary Areas

Smart Energy Infrastructure Systems, Energy Data Analytics, Energy System Efficiency, Security, Sustainability, and Resiliency.

Secondary Areas

Bayesian Methods, Optimization under Uncertainties.

- **Grants and Contracts**

1. **Qun Zhou Sun** (PI), “Solar Power Forecasting and NanoGrid Management Systems,” Orlando Utilities Commission, $150,000, 2020-2023. Project share: 100%.
2. **Qun Zhou Sun** (PI), George Atia (Co-PI), Zhihua Qu (Co-PI), Wei Sun (Co-PI), Dane Christensen (NREL Co-PI), Ioannis Akrotirianakis (Siemens Co-PI), and Xinwen Fu (UMass Co-PI), “Building Intelligence with Layered Defense using Security-Constrained Optimization and Security Risk Detection (BUILD-SOS): A Probabilistic Approach,” Department of Energy, $3,750,000, 2020 – 2023. Project share: 55%.
3. **Qun Zhou** (PI) and Zhihua Qu (Co-PI), “Smart Infrastructure Data Analytics and Autonomous Buildings,” Siemens, $700,000, 2019-2024. Project share: 50%.

4. **Qun Zhou** (PI), "Leveraging Data to Secure Smart Infrastructure under Cyber-Physical Attacks: Anomaly Detection and Robust Operations", Cyber Florida Collaborative Seed Award Program, $75,000, 2019-2020. Project share: 100%.
5. Zhihua Qu (PI) and **Qun Zhou (co-PI)**, "Unifying Optimization and Control: Data-Driven Adaptive Learning and Real-Time Decision Making," Florida High Tech Corridor, $282,000, 2019-2023. Project share: 50%.
6. Issa Batarseh (PI), **Qun Zhou** (Co-PI), Said Al-Hallaj (Co-PI), and Paul Brooker (Co-PI) "GOALI: Highly Integrated Grid-Tied Multi-Port Power Module for PV and Storage," NSF, $484,072, 2019-2022. Project share: 25%.
7. Damla Turgut (PI), Ladislau Boloni (Co-PI), **Qun Zhou (**Co-PI**)**, Hyoung Cho (Co-PI), Lisa Massi (Co-PI), Greg Welch (Co-PI), Andrew Dickerson (Co-PI), Samiul Hasan (Co-PI), and Gerd Bruder (Co-PI), "REU Site: Research Experiences for Undergraduates Site on Internet of Things (IoT)," NSF, $323,945.00, 2019-2022. Project share: 5%.
8. **Qun Zhou** (PI), "Deep Learning in Sensor-Enabled Energy Systems (DeepSEES): Distribution System State Estimation," SCEEE, $25,500, 2017-2018. Project share: 100%.
9. **Qun Zhou** (PI), "Big Data Analytics in Utility Systems," Leidos, $25,000, 2016-2017.
10. Zhihua Qu (PI), Wei Sun (co-PI), **Qun Zhou** (co-PI), and Aleksandar Dimitrovski (co-PI), "Scalable/Secure Cooperative Algorithms and Framework for Extremely-high Penetration Solar Integration (SolarExPert)," Department of Energy, $2,000,000, 2017-2020. Project share: 15%.
11. Zhihua Qu (PI), Wei Sun (co-PI), Damla Turgut (co-PI), **Qun Zhou** (co-PI), and Robert Reedy (co-PI), "FEEDER: Strategic Expansion to Achieve GEARED Goals," Department of Energy, $1,250,000, 2016-2019. Project share: 10%.

- **Publications (*** indicates advised students or postdocs)

Refereed Journal Papers

1. G. Tian*, Q. Z. Sun, and W. Wang*, "Real-time Flexibility Quantification of a Building HVAC System for Peak Demand Reduction," *IEEE Transactions on Power Systems*, early access, 2022.
2. W. Wang*, G. Tian*, Q. Z. Sun, and H. Liu, "A Control Framework to Enable a Commercial Building HVAC System for Energy and Regulation Market Signal Tracking," *IEEE Transactions on Power Systems*, early access, 2022.
3. S. Faddel*, Q. Zhou, and G. Tian*, "Modeling and Coordination of Commercial Buildings in Distribution Systems," *IEEE Transactions on Industry Applications,* early access 2022.
4. W. Wang*, Z. Zhao, Q. Zhou, Y. Qiao*, and F. Cao, "Model Predictive Control for the Operation of a Transcritical CO2 Air Source Heat Pump Water Heater," *Applied Energy*, vol 300, Oct. 2021.

5. W. Wang*, Q. Zhou, C. Pan, and F. Cao, “Energy-Efficient Operation of a Complete Chiller-Air Handing Unit System via Model Predictive Control,” *Applied Thermal Engineering*, vol. 201, Jan. 2022.
6. S. Mahdavi, H. Panamtash*, A. Dimitrovski, Q. Zhou, “Predictive Coordinated and Cooperative Voltage Control for Systems with High Penetration of PV,” *IEEE Transactions on Industry Applications*, vol. 57., no. 3, pp. 2212-2222, May 2021
7. S. Faddel*, G. Tian*, and Q. Zhou, “Decentralized Management of Commercial HVAC Systems,” *Energies*, vol 14, May 2021.
8. W. Wang*, Q. Zhou, G. Tian*, Y. Wang, Z. Zhao, F. Cao, “A Novel Defrosting Initiation Strategy based on Convolutional Neural Network for Air-Source Heat Pump,” *International Journal of Refrigeration*, vol. 128, pp. 95-103, Aug. 2021.
9. W. Wang*, Q. Zhou, G. Tian, B. Hu, Y. Li, and F. Cao, “The Intermediate Temperature Optimization for Cascade Refrigeration System and Air Source Heat Pump via Extreme Seeking Control,” *International Journal of Refrigeration*, vol. 117, pp. 150-162, Sep. 2020.
10. H. Panamtash*, Q. Zhou, T. Hong, Z. Qu, and K.O. Davis, “A Copula-based Bayesian Method for Probabilistic Solar Power Forecasting,” *Solar Energy*, vol. 196, pp. 336-345, Jan. 2020.
11. G. Tian*, Y. Gu, Y. Zhe, D. Shi, Q. Zhou, “Enhanced Denoising Autoencoder Aided Bad Data Filtering for Synchrophasor-based State Estimation,” *CSEE Journal of Power and Energy Systems*, Sep. 2021.
12. G. Tian*, Q. Zhou, R. Birari*, J. Qi and Z. Qu, "A Hybrid-Learning Algorithm for Online Dynamic State Estimation in Multimachine Power Systems," *IEEE Transactions on Neural Networks and Learning Systems*, Feb. 2020.
13. G. Tian*, Y. Gu, D. Shi, J. Fu, Z. Yu, and Q. Zhou, “Neural Network-based Power System State Estimation with Extended Observability,” *Journal of Modern Power System and Clean Energy*, vol. 9, no. 5, pp. 1043-1053, Sep. 2021.
14. L. Wang*, Q. Zhou and S. Jin, "Physics-guided Deep Learning for Power System State Estimation," *Journal of Modern Power Systems and Clean Energy*, vol. 8, no. 4, pp. 607-615, July 2020.
15. A. Golshani, W. Sun, Q. Zhou, Q. P. Zheng, and Y. Hou, “Incorporating wind energy in power system restoration planning,” *IEEE Transactions on Smart Grid*, vol.10, no.1, pp. 16-28, Jan. 2019.
16. A. Golshani, W. Sun, Q. Zhou, Q. P. Zheng, J. Wang, and F. Qiu, “Coordination of wind farm and pumped-storage hydro for a self-healing power grid,” *IEEE Transactions on Sustainable Energy*, vol. 9, no. 4, pp. 1910-1920, Oct. 2018.
17. A. Golshani, W. Sun, Q. Zhou, Q. P. Zheng, and J. Tong, "Two-stage adaptive restoration decision support system for a self-healing power grid," *IEEE Transactions on Industrial Informatics*, vol. 13, no. 6, pp. 2802-2812, Dec. 2017.
18. Q. Zhou, L. Tesfatsion, C. C. Liu, R. F. Chu, and W. Sun, "A Nash approach to planning merchant transmission for renewable resource integration," *IEEE Transactions on Power Systems*, vol. 28, no. 3, pp. 2086-2100, Aug. 2013.

19. Q. Zhou, L. Tesfatsion, and C.C. Liu, "Short-term congestion forecasting in wholesale power market," *IEEE Transactions on Power Systems*, vol. 26, no. 4, pp. 2185-2196, Nov. 2011.
20. Q. Zhou, C. Mao, J. Lu, H. Liu, and H. Wang, "Digital simulation of power system load," *Proceedings of the CSU-EPSA*, vol. 20, no.3, Jun. 2008 [in Chinese].

Refereed Conference Papers

1. G. Tian* and Q. Z. Sun, "Optimal HVAC Scheduling under Temperature Uncertainty using the Wasserstein Metric," *2022 IEEE PES General Meeting*, Denver, CO, July 2022.
2. H. Panamtash*, Q. Z. Sun, Y. Rubin, P. Brooker, and J. Kramer, "Solar Power Smoothing in a Nanogrid Testbed," *2022 IEEE PES Transmission & Distribution Conference & Exposition (T&D)*, New Orleans, LA. USA, Apr. 2022.
3. S. Faddel* and Q. Z. Sun, "Scheduling of the HVAC System in a Real Commercial Building Considering Equipment Cycling and Rebound Effects," *2022 IEEE PES Innovative Smart Grid Technologies (ISGT)*, Washington DC, Feb 2022.
4. G. Tian* and Q. Z. Sun, "Chance Constrained Distributionally Robust Optimal HVAC Scheduling for Commercial Building Demand Response," *2022 IEEE PES Innovative Smart Grid Technologies (ISGT)*, Washington DC, Feb. 2022.
5. S. Ghosh, Q. Zhou, and I. Batarseh, " Grid -Tied Three-Port Integrated PV+Battery System with ANFIS based Model Predictive Control, " *2022 IEEE 13th International Symposium on Power Electronics for Distributed Generation Systems*, Kiel, Germany, Jun. 2022.
6. S. Faddel*, G. Tian, Q. Zhou, "Privacy-Based Coordination of Commercial Buildings in Distribution Systems," *2021 IEEE Industry Applications Society Annual Meeting (IAS)*, Vancouver, BC, Canada, Oct. 2021.
7. M. Safayatullah, Q. Zhou, and I. Batarseh, "Smoothing of PV Output Power in Grid-Tied Energy Storage System with Model Predictive Control and Battery Lifetime Consideration," *IEEE Energy Conversion Congress & Expo (ECCE)*, Vancouver, Canada, Oct. 2021.
8. M. Cash*, S. Wang, B. Pearson, Q. Zhou, and X. Fu, "On Automating BACnet Device Discovery and Property Identification," *IEEE 2021 IEEE International Conference on Communications (ICC): Communication and Information Systems Security Symposium*, Virtual/Montreal, Canada, 14-23 June 2021.
9. J. Phelps, and Q. Zhou, "Identifying the Optimal Storage to Solar Panel Ratio for a Grid-Tied PV System," *IEEE 52nd North American Power Symposium (NAPS)*, Apr. 2021.
10. H. Panamtash*, S. Mahdavi, and Q. Zhou, "Probabilistic Solar Power Forecasting: A Review and Comparison," *IEEE 52nd North American Power Symposium (NAPS)*, Apr. 2021.
11. H. Panamtash*, S. Mahdavi, A. Dimitrovski, and Q. Zhou, "Comparison of Probabilistic Forecasts for Predictive Voltage Control," *IEEE 52nd North American Power Symposium (NAPS)*, Apr. 2021.

12. S. Faddel*, G. Tian*, and Q. Zhou, "On the Performance of Data-Driven Reinforcement Learning for Commercial HVAC Control," *IEEE Industry Applications Society Annual Meeting*, Oct. 2020.
13. S. Mahdavi, H. Panamtash*, A. Dimitrovski, and Q. Zhou, "Predictive and Cooperative Voltage Control with Probabilistic Load and Solar Generation Forecasting", *the 16th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS 2020)*, Liege, Belgium, Aug. 2020. (**Finalist for the Roy Billinton Paper Award**)
14. G. Tian*, S. Faddel*, X. Jin*, and Q. Zhou, "Probabilistic Power Consumption Modeling for Commercial Buildings Using Logistic Regression Markov Chain," *IEEE PES General Meeting 2020*, Montreal, Canada, Aug. 2020. **(Best Conference Paper Award)**
15. D. Grover, Y. Fallah, Q. Zhou, and I. LaHiff, "Data-Driven Modeling and Optimization of Building Energy Consumption: A Case Study," *IEEE PES General Meeting 2020, Montreal, Canada*, Aug. 2020.
16. G. Tian*, Y. Gu, X. Lu, D. Shi, Q. Zhou, Z. Wang, and J. Li, "Estimation Matrix Calibration of PMU Data-Driven State Estimation Using Neural Network," *IEEE PES General Meeting 2020*, Montreal, Canada, Aug. 2020.
17. S. Faddel*, G. Tian*, Q. Zhou, and H. Aburub, "Data Driven Q-Learning for Commercial HVAC Control," *IEEE SoutheastCon 2020*, Raleigh, NC, Mar. 2020.
18. E. Elliot*, N. Shanklin*, S. Zehtabian, Q. Zhou, and D. Turgut, "Peer-to-Peer Energy Trading and Grid Impact Studies in Smart Communities", *2020 International Conference on Computing, Networking and Communications (ICNC)*, Big Island, HI, Feb. 2020.
19. G. Tian*, S. Faddel*, Q. Zhou, Z. Qu, and A. Parlato, "Optimal Coordination of HVAC Scheduling for Commercial Buildings", *2020 Texas Power and Energy Conference (TPEC)*, College Station, TX, Feb. 2020.
20. L. Wang*, and Q. Zhou, "Physics-Guided Deep Learning for Time-Series State Estimation Against False Data Injection Attacks", *51st North American Power Symposium*, Wichita, KS, Oct. 2019.
21. S. Wang, L. Du, and Q. Zhou, "A Semi-Supervised Deep Transfer Learning Architecture for Energy Disaggregation," *2019 IEEE PES General Meeting*, Atlanta, GA, 2019
22. R. Widjaja*, H. Panamtash*, Q. Zhou, and D. Li, "Solar power forecasting with model selection analysis," *2018 Power Systems Conference*, Charleston, SC, September 4-7, 2018
23. H. Panamtash* and Q. Zhou, "Coherent probabilistic solar power forecasting," *15th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS 2018)*, Boise, ID, June 24-28, 2018.
24. G. Tian*, Q. Zhou, and L. Du, "Deep convolutional neural networks for distribution system fault classification," *2018 IEEE PES General Meeting*, Portland, OR, August 5-10, 2018.
25. A. Golshani, W. Sun, and Q. Zhou, "PHEVs' contribution to self-healing process of distribution systems," *2016 IEEE Power & Energy Society General Meeting*, Boston, MA, Jul. 2016.

26. D. Chaudhary, W. Sun, Q. Zhou, and A. Golshani, “Chance-constrained real-time volt/var optimization using simulated annealing,” *2015 IEEE Power & Energy Society General Meeting*, Denver, CO, Jul. 2015.
27. A. Golshani, W. Sun, and Q. Zhou, “Optimal PMU placement for power system restoration,” *2015 Power Systems Conference*, Clemson University, 2015.
28. N. Kadel, W. Sun, and Q. Zhou, "On battery storage system for load pickup in power system restoration," *2014 IEEE Power & Energy Society General Meeting*, National Harbor, MD, 27-31 Jul. 2014.
29. W. Sun and Q. Zhou, “Maintenance strategies for a generation company in a CO_2 allowance market environment,” *2012 IEEE Power & Energy Society General Meeting*, San Diego, CA, Jul. 2012.
30. Q. Zhou, W. Guan and W. Sun, “Impact of demand response contracts on load forecasting in a smart grid environment,” Invited paper, *2012 IEEE Power & Energy Society General Meeting*, San Diego, CA, Jul. 2012.
31. W. Sun, P. Zhang and Q. Zhou, “Optimization-based strategies towards a self-healing smart grid,” *IEEE Power & Energy Society Innovative Smart Grid Technologies Asia 2012*, Tianjin, China, May 2012.
32. Q. Zhou, L. Tesfatsion, and C. C. Liu, “Global sensitivity analysis for the short-term prediction of system variables,” *2010 IEEE Power & Energy Society General Meeting*, Minneapolis, MN, Jul. 2010.
33. Q. Zhou, L. Tesfatsion, and C. C. Liu, “Scenario generation for price forecasting in restructured wholesale power markets,” *IEEE Power Systems Conference & Exposition 2009*, Seattle, WA, Mar. 2009.

- **Invited Presentations**

1. “Cyber Security of Smart Buildings and Grid Reliability: Hypothesized Attacks and Impact Assessment,” *2022 IEEE PES General Meeting*, Denver, CO, Jul. 2022.
2. “Building Optimization under Uncertainties,” *2020 IEEE PES General Meeting* [Online], Aug. 2020.
3. “Probabilistic Modeling of Building Power Consumption,” *2020 IEEE Innovative Smart Grid Technologies (ISGT) North America*, Washington D.C, Feb. 2020.
4. “Probabilistic Inference in Distribution Systems,” *2019 IEEE PES General Meeting*, Atlanta, GA, Aug. 2019.
5. “Application of Adaptive Hybrid Deep Learning for Power System State Estimation,” *IEEE Smart Grid Webinar*, Nov. 2018.
6. “Hybrid-Learning for Dynamic State Estimation,” *2018 IEEE PES General Meeting*, Portland, OR, Aug. 2018.

7. "Hierarchical solar power forecasting," *UCF Department of Statistics*, Orlando, FL, Dec. 2017.
8. "Short-term probabilistic forecasting of transmission network congestion," *UCF FEEDER Seminar*, Orlando, FL, Sep. 2015.
9. "Impact of demand response contracts on load forecasting in a smart grid environment," *IEEE Power and Energy Society General Meeting*, San Diego, CA, Jul. 2012
10. "Economic analysis for transmission operation and planning," *Alstom Grid*, Redmond, WA, Jul. 2011.
11. "Short-term congestion forecasting in wholesale power market," *IEEE Power and Energy Society General Meeting*, Detroit, MI, Jul. 2011
12. "Global sensitivity analysis for the short-term prediction of system variables," *IEEE Power and Energy Society General Meeting*, Minneapolis, MN, Jul. 2010
13. "Forecasting grid congestion for transmission grid operation and investment," poster presentation, *IEEE Power and Energy Society General Meeting*, Calgary, Alberta, Canada, Jul. 2009
14. "Scenario generation for price forecasting in restructured wholesale power markets," *IEEE Power Systems Conference & Exposition*, Seattle, WA, Mar. 2009
15. "Forecasting grid congestion for transmission grid operation and investment," *EPRC seminar*, Iowa State University, Ames, IA, Mar. 2008.

- **Patents**

1. Amir Golshani, Wei Sun, and Qun Zhou, Self-healing Power Grid, Provisional Patent Application #33609, March 3, 2017.

6. PROFESSIONAL ACTIVITIES

- **Service to the Profession**

Professional Memberships

1. Member of Institute of Electrical and Electronics Engineers (IEEE)
2. Member of IEEE Power & Energy Society (PES)
3. Member of American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

Professional Society Service

1. Secretary (2021-present), Technical Council Program Chair (2019-2021), IEEE Power and Energy Society (PES) Smart Buildings, Loads, and Customer Systems (SBLC) Committee

2. Vice Chair (2020-present), Secretary (2018-2020), Career Promotion and Workforce Development Subcommittee in IEEE PES Power and Energy Education Committee
3. Committee Member (2017-present), IEEE PES Big Data and Analytics (BDA) Subcommittee.
4. Committee Member (2018-2020), Emerging Technology Technical Committee (ETTC), IEEE Computational Intelligence Society.

Editorial Service

1. Associate Editor, IEEE Transactions on Smart Grid, 2018 – Present

Conference Organizing and Panels

1. Panel Chair, "Cyber Secure Grid-Interactive Efficient Buildings to Enhance Power System Flexibility and Resilience," 2022 IEEE PES General Meeting, Denver, Colorado, July 2022.
2. Technical Program Chair, IEEE workshop on "Advancing Energy Infrastructure Resiliency using Data Analytics and Artificial Intelligence", 2021 IEEE ISGT, Washington D.C., USA, Feb. 2021.
3. Panel Chair, "Building Modeling Techniques in a Smart Grid Environment", 2020 IEEE ISGT, Washington D.C., USA, Feb. 2020.
4. Panel Chair, "Providing Grid Flexibility from Buildings: Overview, Analytics, and Optimization", 2020 IEEE PES General Meeting, Montreal, Canada, Aug. 2020.
5. Panelist, "Frontiers in Data Analytics in Distribution Systems", 2019 IEEE PES General Meeting, Atlanta, GA, USA, Aug. 2019.
6. Panel Chair, "Deep Learning and Smart Grid Applications", 2018 IEEE PES General Meeting, Portland, OR, USA, Aug. 2018.

Grant Review Services

1. DOE ARPA-E OpenFOA reviewer, May 2021.
2. Merit reviewer for DOE SETO FY 2020 Funding Program, June 2020.
3. Grant reviewer for NSF SBIR, May 2020.
4. Grant reviewer for NSF ECCS EPCN proposal review panel, Feb. 2018.
5. Grant reviewer for Research Growth Initiative at the University of Wisconsin-Milwaukee, Jan. 2017.

Paper Referee Service

1. *Journal Referee*

   • IEEE Transactions on Power Systems, IEEE Transactions on Smart Grid, IEEE Transactions on Sustainable Energy, IEEE Power & Energy Society Letters, Applied Energy

2. *Conference Referee*

    • Power and Energy Society General Meeting, Power Tech, North American Power Symposium, International Conference on Probabilistic Methods Applied to Power Systems

- **Service to the Department, College, and University**

1. Image and Dive Mentor, CECS office of diversity and inclusion, 2021-2022
2. Member of ECE Strategic planning committee, 2022
3. Member of ECE faculty search committee, 2021-present
4. Member of RISES Cluster Search Committee, 2016-2018
5. Reviewer for Undergraduate Research Excellence, 2017

7. RECOGNITION AND AWARDS

- Best Conference Paper Award, IEEE Power and Energy Society General Meeting, 2020.