Department of Electrical & Computer Engineering
371 Fairfield Way; U-4157
University of Connecticut
Storrs, CT 06268, USA
zongjie. wang@uconn.edu

Zongjie Wang

Research Interests power system non-linear optimization and simulation
AC optimal power flow applications
grid resilience
electricity market
coordinated transmission and distribution systems
dispatch control hierarchy
data analytics
engineering management
active distribution systems
microgrid

Appointments **Associate Director,** Eversource Energy Center, University of Connecticut, Feb. 2024–present
Assistant Professor, Department of Electrical & Computer Engineering, University of Connecticut, Aug. 2021–present
Eversource Energy Center, Power System and Renewable Energy Integration Team, University of Connecticut, Aug. 2021–present
Academic Technician, University of Connecticut, Jul. 2021–Jan. 2022
Research Assistant Professor, Department of Electrical & Computer Engineering, University of Connecticut, Jul. 2021–Aug. 2021
Postdoctoral Research Associate, Systems Engineering, Cornell University, Oct. 2018–Aug. 2021
Lecturer, Department of Civil and Environmental Engineering, Cornell University, 2019-2020

Education **Joint Ph.D. Training Program**, Department of Electrical & Computer Engineering: Power Systems, Cornell University, 2014-2017
Ph.D., Department of Electrical & Computer Engineering: Power Systems, Harbin Institute of Technology, 2014-2018
M.S., Department of Electrical & Computer Engineering: Power Systems, Harbin Institute of Technology, 2012-2014
B.S., Department of Electrical & Computer Engineering: Power Systems, Harbin Institute of Technology, 2008-2012

Publications *Journals*

Abdollah Younesi, **Zongjie Wang*[1],** Pierluigi Siano. Enhancing the Resilience of Zero-Carbon Energy Communities: Leveraging Network Reconfiguration and Effective Load Carrying Capability Quantification [J]. *Journal of Cleaner Production*, 2023. *(Accepted) Impact Factor:* <u>**11.07**</u>

Pooja Aslami, Tara Aryyal, Astha Rai, Niranjan Bhujel, Hossein Moradi Rekabdarkolaee, Kaiqun Fu, Reinaldo Tonkoski, **Zongjie Wang**, Timothy M. Hansen. Power System Frequency Dynamics Modeling, State Estimation, and Control using Neural Ordinary Differential Equations (NODEs)

[1] * represents corresponding author.

and Soft Actor-Critic (SAC) Machine Learning Approaches [J]. *Applied Computing Review*, 2024. (*Accepted*)

Zongjie Wang*, Abdollah Younesi, Vivienne Liu, Ge Claire Guo, C. Lindsay Anderson. AC Optimal Power Flow in Power Systems with Renewable Energy Integration: A Review of Formulations and Case Studies [J]. *IEEE Access*, vol. 11, pp. 102681-102712, 2023. *Impact Factor: **3.467***

Abdollah Younesi, Hossein Shayeghi, **Zongjie Wang***, Pierluigi Siano, Ali Mehrizi-Sani, Amin Safari. Trends in Modern Power Systems Resilience: Smart Grids Challenges and Opportunities [J]. *Renewable and Sustainable Energy Reviews*, 2022, (162), 112397. *Impact Factor*: ***16.8***

Vivienne Liu, Bo Yuan, **Zongjie Wang**, Jeffrey A. Sward, K. Max Zhang, and C. Lindsay Anderson. An Open-Source Representation for the NYS Electric Grid to Support Power Grid and Market Transition Studies [J]. *IEEE Transactions on Power Systems*, 2022. *Impact Factor*: ***7.326***

Zongjie Wang*, C. Lindsay Anderson. Progressive Optimal Power Flow in Power Systems with High Penetration of Variable Renewable Energy [J]. *Energies*, 2021, 14(10): 2815. (*Special Issue: Electrical Engineering for Sustainable and Renewable Energy*) *Impact Factor*: ***3.25***

Claire Guo, Luckny Zephyr, Jose Morillo, **Zongjie Wang**, C. Lindsay Anderson. Chance Constrained Unit Commitment Approximation under Stochastic Wind Energy [J]. *Computers & Operations Research*, 2021, pp. 105398. *Impact Factor*: ***5.159***

Jintao Zhang, Wei Zhang, **Zongjie Wang**, Jin Zhu, Baikun Li. Fragility-based Interdependent Power-Water System Performance Assessment [J]. *Reliability Engineering & System Safety*, 2023. (*Submitted*)

Sergio A. Dorado-Rojas, Felipe Halarza-Jimenez, Rajarshi Roychowdhury, Balaji Guddanti, **Zongjie Wang***. Angular Domain Control Design for Single-Phase Inverter to Enhance Distribution Grid Power Quality [J]. *IEEE Transactions on Energy Conversion*, 2024. (Under *Revision*)

Sergio A. Dorado-Rojas, John Cortés-Romero, **Zongjie Wang***. From Robustness to Resilience: ADRC for Single-Phase Distribution-level Inverter Applications in Extreme Conditions [J]. *IEEE Transactions on Industry Applications*, 2023. (*Preparing to be submitted*)

Abdollah Younesi, **Zongjie Wang***, Pierluigi Siano. Leveraging Network Reconfiguration and ELCC Quantification to Enhance the Resilience of Zero-Carbon Energy Communities [J]. *Energy*, 2023. (*Submitted*)

Liguo Wang, Mingliang Feng, Zhenteng Tian, Bai Yang, Jianxin Xu, **Zongjie Wang**. An approach for On-line Identifying Stator Winding Short-Circuit of a Submersible Motor Based on Monitoring Faulty Currents [J]. *Journal of Power Electronics*, pp.1-13, 2022.

Zongjie Wang*, Zhizhong Guo. On Critical Timescale of Real-time Power Balancing in Power Systems with Intermittent Power Sources [J]. *Electrical Power Systems Research*, 2018, 155:246-253.

Zongjie Wang*, Zhizhong Guo. Quantitative Characterization of Uncertainty Levels of Intermittent Power Sources [J]. *Journal of Renewable and Sustainable Energy*, 2018, 10(4): 043304. (*Awarded Editors' Choice*)

Zongjie Wang*, Zhizhong Guo. Statistical Forecast Functions of Intermittent Power Sources [J]. *Proceedings of CSEE*, 2018, 38(16): 4738-4746.

Zongjie Wang*, Zhizhong Guo. Uncertainty Model of Renewable Energy Sources [J]. *Journal of Engineering*, 2017(13): 849-853.

Zongjie Wang*, Zhizhong Guo. Real-time Dispatch with Power Networks Under Renewable Energy Sources [J]. *Proceedings of CSEE*, 2017, 37(17): 1-8.

Zongjie Wang*, Zhizhong Guo. Sensitivity Factor Analysis for Bus Type Extended Load Flow [J]. *Journal of Harbin Institute of Technology*, 2017, 49(3): 35-39.

Zongjie Wang*, Zhizhong Guo. A Characteristic Optimal Power Flow Model for Time Period [J]. *Automation of Electric Power Systems*, 2014, 38(22): 50-56.

Liguo Wang, Liuhao Fang, **Zongjie Wang**. Research on Suppressing the Sub-synchronous Resonance of a DFIG Wind Farm Based on Digital Twin Modeling [J]. *IEEE Transactions on Industrial Electronics*, 2022. (*Submitted*)

Zongjie Wang*, C. Lindsay Anderson. Linear Time Algorithm for Time-varying Power Flow [J]. *IEEE Transactions on Power Systems*, 2021. (*Under revision*)

Zongjie Wang*, Hsiao-Dong Chiang. Feasible Power Flow Solutions in Electrical Power Systems: Conjecture and Theorem [J]. *IEEE Transactions on Power Systems*, 2021. (*Under revision*)

Zongjie Wang*, C. Lindsay Anderson. Power Flow Feasibility and Monotonic Voltage Properties in Three-phase Unbalanced Distribution Networks with Distributed Energy Resources [J]. *IEEE Transactions on Control of Network Systems*, 2021. (*Under Revision*)

Luckny Zephyr, **Zongjie Wang**, Jialin Liu, Amandeep Gupta and C. Lindsay Anderson. Comparison of Wind Scenario Generation Methods for Power Systems Operation [J]. Renewable and Sustainable Energy Reviews, 2022. (*In Preparation*)

Shriya Nagpal, **Zongjie Wang**, C. Lindsay Anderson. Real Time Identification of Important Components in the Power Grid [J]. *IEEE Transactions on Power Systems*, 2021. (*Under Review*)

Conference Proceedings

Niranjan Raghunathan, **Zongjie Wang*,** Bing Yan, et al. Reduced-order Decomposition and Coordination approach for Markov-based Stochastic UC with Distributed Wind Farms and BESS [C]. *2024 IEEE PES GM*, 2024. (*Accepted*)

Umar Taiwo Salman, **Zongjie Wang***, Timothy M. Hansen. Optimizing Grid Resilience: A Capacity Reserve Market for High Impact Low Probability Events [C]. *2024 IEEE PES GM*, 2024. (*Accepted*)

Abdollah Younesi, **Zongjie Wang***, Timothy M. Hansen. DER Analysis with Effective Load Carrying Capability for Enhanced Carbon-Aware Active Distribution System Resilience [C]. *2024 IEEE PES GM*, 2024. (*Accepted*)

Zongjie Wang*. Quantitative Analysis on Time-series Nodal Voltages in Linear-time Intervals [C]. *56th Hawaii International Conference on System Sciences* (*HICSS 2023*), Maui, Hawaii, 2023. (*Accepted*)

Anthony Karwaski, Vincenzo Zanfardino, Riley Beckham, **Zongjie Wang***. Shiftable Load Investigations on Enhancing Grid Resilience under Extreme Weather Events [C]. *55th North American Power Symposium (NAPS 2023),* Asheville, North Carolina, 2023*. (Accepted)*

Sherif Salem, **Zongjie Wang***. Enabling Quantitative Analysis on Modeling Distribution Network Reliability through Synergi Electric [C]. *55th North American Power Symposium (NAPS 2023),* Asheville, North Carolina, 2023*. (Accepted)*

Md Arifin Arif, Fengyu Wang, Di Shi, Liang Sun and Zongjie Wang. Analysis of the Impacts of Reserve Requirements on Marginal Emission Rates [C]. *2024 IEEE ISGT North America,* Washington DC, 2023*. (Preparing to be submitted)*

Abdollah Younesi, **Zongjie Wang***, Pierluigi Siano, Fengyu Wang. A Pathway to Mitigate Climate Change Impacts on Energy Communities: Decarbonization-Based Cost-Effective Grid Resilience Enhancement [C]. *2023 IEEE PES GM*, 2023. (*Accepted*)

Abdollah Younesi, **Zongjie Wang***, Sergio A. Dorado-Rojas, Paras Mandal. Quantification of DERs Penetration Level in Microgrids: A Quest for Enhancing Short-Term Power Grid Resilience [C]. *2023 IEEE PES GM*, 2023. (*Accepted*)

Altan Unlu, Malaquias Pena, **Zongjie Wang**. Comparison of the Hybrid Deep Learning Methods for Load Forecasting [C]. *2023 IEEE ISGT North America*, pp. 1-5, Washington DC, 2023.

Abdollah Younesi, **Zongjie Wang***, Liguo Wang. Investigating the Impacts of Climate Change and Natural Disasters on the Feasibility of Power System Resilience [C]. pp. 1-5,

2022 IEEE PES GM, 2022.

Abdollah Younesi, **Zongjie Wang***, Thi Ha Nguye, Paras Mandal. A Pathway to Enhance the Modern Distribution Systems Resilience: Flexible Behavior Investigations on Electric Vehicles [C]. pp. 1-5, *2022 IEEE PES GM*, 2022.

Orlando Quezada Simental, Paras Mandal, Eric Galvan, **Zongjie Wang**. Leveraging Distributed EVs and PVs to Assess Networked Microgrids Resilience Against Extreme Weather Event [C]. pp. 1-5, *2022 IEEE PES GM*, 2022.

Kenneth Foss, **Zongjie Wang***. Towards a Turbine Selection Method with Uncertainty Reduction and Efficiency Optimization [C]. *2022 Power and Energy Conference, Illinois*, pp.1-7, 2022.

Liguo Wang, Zhenteng Tian, Yuanting Hu, Chunlai Yu, **Zongjie Wang**. Research on High-Power Rapid Charge Approach for EV Based on Clustered Multi-node Learning Gaussian Process [C]. *International Power Electronics Conference (IPEC 2022)*, pp. 1924-1929, Himeji, Japan, 2022.

Sergio A. Dorado-Rojas, Felipe Halarza-Jimenez, Rajarshi Roychowdhury, Balaji Guddanti, **Zongjie Wang***. Angular Domain Control Design for Single-Phase Inverter to Enhance Distribution Grid Power Quality [C]. *2022 IEEE Industry Applications Annual Meeting* (*IAS 2022*), pp. 1-8, 2022.

Kalinath Katuri, Ha Thi Nguyen, **Zongjie Wang**. Evaluation of DER Integration Impact on Distribution Protection Using Hardware in The Loop [C]. *Conference on Renewable Energies and Smart Technologies (REST 2022),* vol. 1, pp. 1-5, 2022.

Leila Chebbo, Ha Thi Nguyen, **Zongjie Wang**. Optimal Size and Location of Batteries for São Vicente Island's Renewable-Based Power System [C]. *Conference on Renewable Energies and Smart Technologies (REST 2022)*, vol. 1, pp. 1-5, 2022.

Peter Chardavoyne, Allan Feygin, Uiliam Kutrolli, **Zongjie Wang***. Feasibility of Shiftable Loads: An Expansion of Deferrable Loads in Distribution Systems [C]. *54th North American Power Symposium (NAPS 2022)*, Salt Lake City, Utah, pp. 1-6, 2022.

Altan Unlu, Malaquias Pena, **Zongjie Wang**. Deep Learning Architectures for Solar PV Forecasting [C]. *54th North American Power Symposium (NAPS 2022)*, Salt Lake City, Utah, pp. 1-6, 2022.

Zongjie Wang*, C. Lindsay Anderson. Simulation Case Studies on An Advanced Sensitivity Analysis For New Extended Bus Types In The Modern Power Systems [C]. *2021 Winter Simulation Conference (WSC)*, JW Marriott Desert Ridge, Phoenix, AZ, USA, pp. 1-12, 2021.

Yang Li, **Zongjie Wang***. Statistical Uncertainty Modelling and Dispatch Control Systems in Power Systems with High Penetrations of Intermittent Power Sources [C]. *5th IEEE ICGEA Conference, Singapore*, pp. 1-8, 2021.

Zongjie Wang*, Ge Guo and C. Lindsay Anderson. Simulation Case Studies on Period Optimal Power Flow [C]. *2019 Winter Simulation Conference (WSC)*, National Harbor, MD, USA, 2019, pp. 3669-3680.

Luckny Zephyr, Ge Guo, **Zongjie Wang**, Jose Morillo. Approximate Chance-Constrained Unit Commitment under Wind Energy Penetration [C]. *55th Hawaii International Conference on System Sciences (HICSS 2022)*, Maui, Hawaii, 2022.

Liguo Wang, Hanyu Liu, Jianhua Chen, Chunlai Yu, **Zongjie Wang**. Research on Identifying Parameter of DFIG-Based Wind Farm Based on Mathematical Mechanization Analysis [C]. *IOP Conference Series: Earth and Environmental Science*. vol. 983, no. 1, pp. 012009. *IOP Publishing*, 2022.

Zongjie Wang*, Zhizhong Guo. Toward a Characteristic Optimal Power Flow Model for Temporal Constraints [C]. *2017 ITEC-AP*, 2017: 1-6.

Zongjie Wang*, Hsiao-Dong Chiang and Zhizhong Guo. On the Phase Voltage Monotonic Property in Unbalanced Distribution Networks [C]. *2017 IEEE PES Power Africa*, 2017:

366-370.

Selected Conference Presentations

Zongjie Wang, 2019. "Period Optimal Power Flow in Power Systems with Variable Renewable Energy." *Energy and Water Resources Systems Seminar*, Department of Civil and Environmental Engineering, Cornell University, Ithaca, NY.

Zongjie Wang, 2019. "Optimal Power Flow in Power Systems with High Penetration of Variable Renewable Energy." *BEE Research Seminar*, Department of Biological and Environmental Engineering, Cornell University, Ithaca, NY.

Zongjie Wang, 2017. "Critical Timescale of Real-time Power Balancing in Power Systems with Intermittent Power Sources." *Center for Automotive Research*, Columbus, Ohio.

Zongjie Wang, 2017. "Uncertainty Models of Renewable Energy Sources." *IET Renewable Power Generation Conference*, Wuhan, China.

Zongjie Wang, 2017. "Toward a Characteristic Optimal Power Flow Model for Temporal Constraints." *2017 IEEE Transportation Electrification Conference and EXPO Asia-Pacific*, 2017.

Zongjie Wang, 2017. "On the Phase Voltage Monotonic Property in Unbalanced Distribution Networks." *2017 IEEE Power Africa*, Accra, Ghana.

Selected Conference Posters

Zongjie Wang, 2019. "Period Optimal Power Flow in Power Systems with Renewable Energy Integration." *2019 PSERC IAB Meeting*, Madison, Wisconsin.

Zongjie Wang, 2019. "Critical Real-time Dispatch Timescale in Power Systems with High Penetration of Renewable Energies." *Cornell Energy Systems Conference*, Ithaca, NY, Apr. 2019.

Zongjie Wang, 2019. "Generic Optimal Power Flow Formulations in Power Systems with Renewable Energy Integration." *11th Annual BEE Research Symposium*, Ithaca, NY.

Zongjie Wang, 2017. "Uncertainty Models of Renewable Energy Sources." *IET Renewable Power Generation Conference*, Wuhan, China.

Zongjie Wang, 2017. "Toward a Characteristic Optimal Power Flow Model for Temporal Constraints." *2017 IEEE Transportation Electrification Conference and EXPO Asia-Pacific*, 2017.

Book **Zongjie Wang**, Energy Storage Applications in Power Systems, 2023, IntechOpen. (Book Editor)

Invited Talks "Reduced-order Decomposition and Coordination Approach for Markov-based Stochastic UC with High Penetration Level of Wind and BESS." *FERC's Technical Meeting*, Headquarter of Federal Energy Regulatory Commission, Washington DC. 2023.

"Synergistic Integration of Machine Learning and Mathematical Optimization for Sub-hourly Unit Commitment." *FERC's Technical Meeting*, Headquarter of Federal Energy Regulatory Commission, Washington DC. 2023.

"IEEE PES GM Student Industry Faculty (SIF) Luncheon Panel", IEEE PES General Meeting, Orlando, FL, 2023. (*Around 300 Participants from Academia and Industry*)

"Enabling Sustainable Energy Sources With Innovative Tools Through System Optimal Dispatch." *Seminar*, University of Houston. 2022. (Virtually)

"Co-optimization and Co-simulation T & D framework in Electricity Market Under High Penetration of Variable Renewable Energy Resources." Adaptable transportation and/or power systems Workshop, University of Washington. 2021. (Virtually)

"Coordinated Transmission and Distribution Optimization Framework." *Public Utilities Regulatory Authority (PURA) Symposium*, Eversource Energy Center at UConn, Storrs, CT. 2021.

"Enabling Sustainable Power Systems Through Innovations in Optimal System Dispatch." *Center for Automotive Research*, The Ohio State University, Columbus, OH. 2021.

"Getting a Faculty Position: Lessons Learned During the Academic Job Search." Panelist, Cornell, Ithaca, NY. 2021.

"Period Optimal Power Flow Model in Power Systems with High Penetrations of Intermittent Power Sources." *FERC's Technical Meeting*, Headquarter of Federal Energy Regulatory Commission, Washington DC. 2019.

"Critical Timescale of Real-time Power Balancing in Power Systems with Intermittent Power Sources." *Center for Automotive Research*, Columbus, Ohio. 2017.

"The Existence and Uniqueness of Feasible Power Flow Solutions in Weakly Meshed Distribution Networks." Department of Electrical and Computer Engineering, *Tianjin University*, Tianjin, China. 2017.

"Toward a Characteristic Optimal Power Flow Model for Temporal Constraints." *2017 IEEE Transportation Electrification Conference and EXPO Asia-Pacific.* Harbin, China. 2017.

"Sensitivity Factor Analysis for Bus Type Extended Load Flow." Department of Electrical and Computer Engineering, *Tsinghua University*, Beijing, China. 2017.

Grants Lead Principal Investigator, "***TRANSFORMATIVE***: Transmission and Distribution Systems with Flexible and Optimal Coordination: Resilience, Modeling, and Technologies for a VRE and DER-Integrated Adaptive Energy Grid", **$4.5 million**, OPTIMA, EERE SETO, DOE, 2024-2027.

Single Principal Investigator, "A Pathway to Enhance Grid Resilience: Zero-Carbon Energy Communities with DER-based ELCC Quantification". ***Eversource Energy*** (*Industrial Grant*), **$275,000**. 2023– 2026.

Single Principal Investigator, "Enabling Sustainable Coordination of Transmission and Distribution Systems Through Innovation Tools in Optimal System Dispatch", ***ISO-New England***, **$140,000**, 2023-2025.

Single Principal Investigator (UConn), "Solar PLUS: Solar Integration through Physics-Aware Learning Based Ultra-Scalable Modeling and Analytics", ***DOE SETO***, **$99,440**, 2023.

Co-Principal Investigator, "Optigrid: Planning & Optimizing the Power Grid During the Low Carbon Transition in Connecticut", ***Eversource Energy*** (*Industrial Grant*), **$88,000**. 2023–2025.

Co-Principal Investigator, "Multi-Time Scale Forecasting in Dispatch Hierarchy Frameworks for Renewable Energy Integration". Research Excellence Program, ***UConn OVPR*** (*Internal Grant*), **$50,000**. 2022-2023.

Principal Investigator, "Progressive Period Optimal Power Flow Model in Active Distribution Systems with Distributed Energy Resources". ***Eversource Energy*** (*Industrial Grant*), **$50,000**. 2021– 2023.

Principal Investigator, "A Revolutionary Way to Tackle Challenging MILP Problems in Power Systems through Accelerated Convergence, Formulation Tightening and Asynchronous Optimization". **National Science Foundation ECCS**, Award Number: 1810108, **$359,998**. 2018– 2023.

Program Cornell's Leadership Certificate Program. Cornell University, Ithaca, NY. 2020-2021.
SET Teaching Training Program. Cornell University, Ithaca, NY. 2016.

Industry   Research Assistant, Bigwood Systems Inc., Ithaca, NY. 2014.

Teaching   *University of Connecticut (Instructor)*
ECE 3231: Introduction of Modern Power Systems (3 credits). Fall 2021.
ECE 5552: Communication Systems in Smart Grids (4 credits). Spring 2022.
ECE 4099: Independent Study in Electrical and Computer Engineering (3 credits). 2011-2022.
ENGR 1000: Orientation to Engineering (1 credit). Fall 2022.
ECE 5550: Microgrids (3 credits). Spring 2023.

Cornell University (Instructor)
CEE 5930: Engineering Management Methods (4 credits). Fall 2019.

Harbin Institute of Technology (Teaching Assistant)
EE 643: Power System Analysis and Design (3 credits.) Fall 2013.
EE 640: Modeling and Optimization of Renewable Energy Systems (3 credits.) Fall 2013.

Advising   *University of Connecticut*
Kallol Biswas, Ph.D., Electrical and Computer Engineering. Advisor. 2022–present.
Abdollah Younesi, Ph.D., Electrical and Computer Engineering. Advisor. 2022–present.
Sergio A. Dorado-Rojas, Ph.D., Electrical and Computer Engineering. Advisor. 2022–present.
Amin Sedgh, Ph.D., Electrical and Computer Engineering. Advisor. 2022–present.
Leila Chebbo, Ph.D., Electrical and Computer Engineering. Co-Advisor. 2021–present.
Kenneth Foss, Undergraduate, Electrical and Computer Engineering. Independent Study Advisor. 2021–present.
Peter Chardavoyne, Undergraduate, Electrical and Computer Engineering. Independent Study Advisor. 2021–present.
Uiliam Kutrolli, Undergraduate, Electrical and Computer Engineering. Independent Study Advisor. 2021–present.
Allan Feygin, Undergraduate, Electrical and Computer Engineering. Independent Study Advisor. 2021–present.

Cornell University
Served as major mentor to all the undergraduates (4), masters (4), and Ph.D. students (4) in Anderson's Lab. 2018-2021.
Served as undergraduate research assistant mentor under Dr. Hsiao-dong Chiang's power system research group. 2014-2017.
Teaching assistant in the Department of Electrical and Computer Engineering. 2014-2016.
Administrative Assistant in the Department of Electrical and Computer Engineering. 2016-2017.

Harbin Institute of Technology
Served as teaching assistant & lab instructor. Fall 2013.

Viax Online Workshop

Served as teaching and research mentors to 5 undergraduates with courses and academic publications. 2017-2020.

Embark Education
Served as teaching and research mentors to 4 undergraduates with courses and academic publications. 2018-2020.

Awards   ***H2O Prize Award***, Phase 4 of the Water Power Technologies Office's Hydropower Optimization Prize, Department of Energy, 2023.
Career Champion Spotlight, UConn, 2022. ([Career Champion Spotlight: Zongjie Wang – UConn Center for Career Development](#))
Scholarship Facilitation Fund Award, UConn, 2022.
2nd Best Paper Award, 54th North America Power Symposium. Salt Lake City, 2022.
Project Award, A Pathway to Enable Sustainable Modern Power Systems: Optimal System Dispatch, Eversource, 2021.
Editor's best choice award, Journal of Renewable and Sustainable Energy. 2018.
Best Paper Award, IEEE Transportation Electrification Conference and Expo Asia Pacific. 2018.
Graduate Assistant Outstanding Teaching Award, Cornell University Graduate School. 2016.
Outstanding Student Honor (granted to top 2%), Harbin Institute of Technology, 2018, 2013, 2012, 2010.
National Scholarship (granted to top 0.2%). 2017, 2011.
Great Contribution Award (granted to top 1%), Harbin Institute of Technology, 2017, 2011.
Graduate Assistant Outstanding Teaching Award, Harbin Institute of Technology, Graduate School. 2016.
Outstanding Undergraduate Scholarship, Harbin Institute of Technology, 2013, 2011.
Social Activists Award, Harbin Institute of Technology, 2009.

Outreach   Taught classes on renewable energy modeling and simulation, Viax and Embark Summer School, 2017-2020.

Professional   **General Chair**, 57th North American Power Symposium (NAPS 2025), UConn, Storrs, Connecticut, 2025.
UConn-level COE-VII DEI Committee, Uconn, 2024-present
IEEE PES PEEC Outstanding Dissertation Steering Committee, IEEE, 2024-present
Panel Chair, 55th North American Power Symposium (NAPS 2023), Ashville, North Carolina, 2023.
Guest Editor, *Energies*, 2023-present. (Topic: Advances in Resilient Operation, Optimization, and Control of Smart Grids and Microgrids)
Editorial Board, Scientific Reports (Under Nature Portfolio). 2023-present.
Editorial Board, Energy Security and Global Warming (ESGW) (journal). 2023-present.
Panel Session Chairs, "State-of-the-art Review on TSO-DSO Coordination Models and Solution Techniques", IEEE PES General Meeting, Orlando, FL, 2023.
Panelist, "IEEE PES GM Student Industry Faculty (SIF) Luncheon Panel", IEEE PES General Meeting, Orlando, FL, 2023. (Around 300 Participants from Academia and Industry)
IEEE Mentor, IEEE Power and Energy Society Mentoring Program, 2023-present.
UConn Mentor, Clean Energy and Sustainability Innovation Program, Eversource Energy

Center, 2023.

Poster Competition Faculty Judge, 9th Annual Engineering Graduate Poster Competition & Presentation, UConn, 2023.

NSF Panelist, NSF EPCN, NSF CSSI, 2022-present

Review Committee for ECE Department Head Evaluation, UConn, 2022

Secretary Elect-Elect, PEEC Awards Subcommittee, IEEE Power & Energy Education Committee, 2022-present

UConn Mentor, Work-study research assistant program (WSRAP), 2022-present

Project Advisor, CE Corps Volunteer Project, 2022-present

Committee member, CIGRE Working Group C6.45: The Impact of Distributed Energy Resources (DER) on the Resilience of Distribution Network. 2022-present

Technical Program Committee, 2022 North American Power Symposium, Salt Lake City, Utah, 2022.

Panel Session Chairs, Power System Resilience Panel, Deep Learning Applications in Power Systems, 2022 North American Power Symposium, Salt Lake City, Utah, 2022.

Young Professional Member, U.S. National Committee of CIGRE, 2022-present

Academic Editor, IntechOpen, 2022-present

Guest Editor, Applied Energy (APEN) & Advances in Applied Energy (ADAPEN), ASCE-ASME Journal of Risk and Uncertainty Engineering Systems: Part A: Civil Engineering, 2022-present (Topic: *Special Collection on Resilience of Power Infrastructure System*)

Reviewer, 2023 North American Power Symposium.

Senior Project Design Faculty Judge, UConn, 2022.

Poster Competition Faculty Judge, 8th Annual Engineering Graduate Poster Competition & Presentation, UConn, 2022.

Guest Associate Editor, Frontiers in Energy Research, 2022-present

Mentor, Women in STEM Frontiers in Research Expo (WiSFiRE) at UConn

Advisor, IEEE PES Connecticut Chapter, 2022-present

Reviewer, Applied Mathematical Modelling, 2022-present

McNair Faculty Mentor, 2021-present

Center for Career Development Member at UConn, 2021-present

Committee, Faculty Resilience—a collaborative community for female, tenure-track faculty at colleges and universities in the United States, 2021-present

Early Career Researcher Board of Oxford Open Energy Committee, 2021-present

Panel Reviewer, NSF Energy, Power, Control, Network (EPCN) Program. 2021-present

Panel Reviewer, NSF Graduate Research Fellowship Program. 2021-present

Reviewer, IEEE ISGT. 2021-present

Reviewer, IEEE Canadian Journal of Electrical and Computer Engineering. 2021-present

Reviewer, Applied Energy. 2021-present

Reviewer, Advances in Applied Energy. 2021-present

Reviewer, Journal of Modern Power Systems and Clean Energy. 2021-present

Reviewer, UConn IDEA Grant Program. 2021-present

UConn ECE Systems Group in Power and Energy Committee. 2021-present

IEEE PES Subcommittee, Smart Buildings and Customer Systems. 2021-present

IEEE Bulk Power System Operations Subcommittee. 2021-present

IEEE Transmission Subcommittee (Switching Working Group). 2021-present

IEEE PES Renewable Systems Integration Coordinating Committee. 2021-present

IEEE PES Power & Energy Education Committee (PEEC). 2021-present

Member, IEEE PES Women in Power, 2021-present

Member, NSF Industry-University Cooperative Research Centers Program -- Weather Innovation and Smart Energy and Resilience -- IUCRC WISER. 2021-present

Reviewer, Frontiers in Energy Research. 2021-present
Reviewer, IEEE Transactions on Control of Network Systems, 2021-present
Reviewer, IEEE Transactions on Power Systems. 2018-present
Reviewer, Electrical Power Systems Research. 2018-present
Reviewer, Energies. 2018-present
Reviewer, Journal of Renewable and Sustainable Energy. 2018-present
Track Programme Committee, Association for Information Systems. 2018-present
Reviewer, IEEE PES General Meeting. 2012-present
Reviewer, Journal of Engineering, 2016-present
Reviewer, International Conference on Electronics, Communications and Networks, 2016-present
Reviewer, Proceedings of CSEE. 2014-present
Reviewer, Automation of Electric Power Systems. 2014-present
Reviewer, IEEE Transportation Electrification Conference and EXPO Asian-Pacific. 2014-present
Reviewer, Journal of Harbin Institute of Technology. 2014-present
Special Issue Reviewer, IEEE Industrial Electronics Society. 2014-present
Guest Editor, Special Issue-International Journal of Energy Optimization and Engineering. 2014-2015.
Research Assistant, Power System Research Group, Cornell University. 2014-2017.
Research Assistant, Renewable Energy System Lab, Harbin Institute of Technology, 2012-2014.
Member, CIGRE, 2010-present
Member, IEEE, 2010-present

Leadership Active Member, Cornell Club of Boston, Cornell Club of Greater Hartford. 2022-present
Worship Leader & Sunday School Teacher. Ithaca First Assembly of God. 2014-2020.
President of Cornell Eastern Music Ensemble (CEME). Cornell University. 2014-2017.
Vice President of Dance Club. Harbin Institute of Technology. 2010-2012.
President of HIT Musical Assemble. Harbin Institute of Technology. 2010-2012.
President of Student Union. Harbin Institute of Technology. 2009-2011.