

# Ying Zhang (she/her/hers), Ph.D.

Jack H. Graham Endowed Fellow of Engineering, Assistant Professor

School of Electrical and Computer Engineering, Oklahoma State University, Stillwater, OK 74078

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## Professional Summary

- Received three NSF-funded grants (over \$1.6 million as PI/Co-PI)
- 5 years of full-time academic experience since Ph.D with **research expertise** in
  - Trustworthy Data-Driven Methods for Power and Energy System Operation, Control, and Decision-Making
  - Energy-Efficient AI for Data-Driven Modeling, Prediction, and Edge Computing of Distributed Energy Resources and Electric Loads, such as Wind, Solar, Data Centers
  - Cybersecurity and Disaster Response for Cyber-Physical Energy Infrastructure Resilience
- Inaugural IEEE Power and Energy Society Outstanding Doctoral Dissertation Award, 2023
- Supervised 1 postdoc, 5 Ph.D., and 4 undergraduate researchers; 1 master graduated with thesis award
- Over 30 peer-reviewed papers, including 12 IEEE Trans. journal papers, one Global 1% ESI Highly Cited paper, and 2 Best Conference Papers; over 1400 Google Scholar citations (h-index:14)
- Associate Editor for IEEE Transactions on Smart Grid, Journal of Modern Power Systems and Clean Energy, and IET Generation, Transmission & Distribution
- IEEE Senior Member, Officers of multiple IEEE Task Forces and Work Groups on Data-Driven Modeling, Monitoring, and Control in Distribution Networks

## PROFESSIONAL EXPERIENCES

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**Jack H. Graham Endowed Fellow of Engineering** 2025 - Present  
*For Recognizing Excellence in Teaching, Research, and Scholarship of Early-Career Faculty at OSU*

**Assistant Professor** 2023 - Present  
*Oklahoma State University, School of Electrical and Computer Engineering Stillwater, OK, U.S.*

**Visiting Scholar** May 2023 - June 2023  
*Cornell University, Department of Electrical and Computer Engineering Ithaca, NY, U.S.*

**Assistant Professor** 2022 - 2023  
*Montana State University, Department of Electrical and Computer Engineering Bozeman, MT, U.S.*

**Postdoctoral Research Associate** 2020 - 2022  
*Brookhaven National Laboratory, Department of Interdisciplinary Science Upton, NY, U.S.*

## AWARDS AND RECOGNITIONS

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- CEAT Excellent Scholar Award (the only junior faculty awardee), Oklahoma State University, 2025
- **[International]** 2024 Top 5 Reviewers of the IEEE Transactions on Smart Grid, 2025
- **[National]** Runner-up of the American-Made Challenges Competition: Data-Driven Distributed Solar Visibility Prize, Team Lead for four CS/EE researchers, U.S. Department of Energy, 2024
- **[International]** Best Paper Award, IEEE Power and Energy Society General Meeting, 2024
- **[International]** Best Paper Award, IEEE PES Innovative Smart Grid Technologies Conference, 2024

- **[International]** 2020-2022 IEEE Power and Energy Society Outstanding Doctoral Dissertation Award
- Appointee of Moody Dissertation Fellowship, Southern Methodist University, 2020
- Frederick E. Terman Award, Southern Methodist University, 2020
- Outstanding Graduate Thesis, Shandong University, 2017
- **[National]** Second Prize, National Mathematical Modeling Contest for Graduates, 2015
- **[National]** National Scholarship for Highest Academic Distinction, Ministry of Education, China, 2013
- **[National]** National Scholarship for Highest Academic Distinction, Ministry of Education, China, 2011

## AWARDS AND HONORS RECEIVED BY ADVISEES

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2025 OSU Graduate Research Excellence Award	Zaid Ibn Mahmood
2025 IEEE Power and Energy Society General Meeting Best Poster Prize	Zaid Ibn Mahmood
2025 OSU ECE Graduate Merit Scholarship	Yuanshuo Zhang
2025 OSU CEAT Dean's Outstanding Graduate Student Award	Sungjoo Chung
2024 Runner-up of the American-Made Challenges Competition, team member	Yuanshuo Zhang
2024 Dr. Ramakumar Family Energy Scholarship	Yuanshuo Zhang
2024 Dr. Ramakumar Family Energy Scholarship	Sungjoo Chung
2024 IEEE Power and Energy Society General Meeting Best Poster Prize	Sungjoo Chung
2024 IEEE Power and Energy Society General Meeting Best Paper Prize	Sungjoo Chung
2024 Best in Group Award in OSU CEAT Graduate Student Research Symposium	Sungjoo Chung
2024 Miller Undergraduate Research Scholarship	Luke Dwayne Cardiel
2023 Best Poster Award in OSU CEAT Graduate Student Research Symposium	Zaid Ibn Mahmood

## EDUCATION

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<b>Ph.D. in Electrical Engineering</b>	2020
<i>Southern Methodist University</i>	<i>Dallas, TX, U.S.</i>
<ul style="list-style-type: none"> <li>• Advisor: Prof. Jianhui Wang</li> <li>• Dissertation: <i>Model-Based and Data-Driven Situational Awareness for Distribution System Monitoring and Control</i></li> <li>• Honor: Frederick E. Terman Award for Graduate Students, 2020-2022 IEEE Power and Energy Society Outstanding Doctoral Dissertation</li> </ul>	
<b>M.S. in Electrical Engineering</b>	2017
<i>Shandong University</i>	<i>Jinan, Shandong, China</i>
<ul style="list-style-type: none"> <li>• Advisor: Prof. Jun Liang</li> <li>• Thesis: <i>Visualized Platform Development for Fault Location in Electric Power Systems</i></li> <li>• Honor: Outstanding Master Thesis in Shandong Province</li> </ul>	
<b>B.E. in Electrical Engineering</b>	2014
<i>Shandong University</i>	<i>Jinan, Shandong, China</i>
<ul style="list-style-type: none"> <li>• Honor: National Scholarship for Highest Academic Distinction</li> </ul>	

## ACADEMIC, PROFESSIONAL, AND COMMUNITY SERVICE

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### ◦ **Journal Editor**

- Associate Editor, IEEE Transactions on Smart Grid (IF: 9.8), March 2025-Present
- Associate Editor, IEEE Power Engineering Letter, March 2025-Present
- Associate Editor, Journal of Modern Power Systems and Clean Energy (IF: 6.1), Jan 2025-Present
- Associate Editor, IET Generation, Transmission & Distribution, 2023-Present
- Guest Editor, Frontiers in Energy Research, Section Sustainable Energy Systems, 2023-2024
- Guest Editor, Applied Sciences, Special Issue “Research Progress on Cyber-Physical Distribution System”, 2023-2024

### ◦ **Conference Chairs/Area Chair**

- Session Chair for Panel “LLMs for IoT-Enabled Power Systems: Toward Autonomous Grid Intelligence,” IEEE Power and Energy Society General Meeting, July 2026, Montreal, Canada
- Session Chair for Panel “AI-Powered Grids: Leveraging LLMs and Cloud to Redefine Intelligence for Power Systems,” IEEE Power and Energy Society General Meeting, July 2025, Austin, U.S.

### ◦ **Panel Reviewer for Research Proposals**

- Panelist for the U.S. National Science Foundation (NSF), Directorate for Computer and Information Science and Engineering Office of Advanced Cyberinfrastructure (CISE/OAC), May 2025
- Evaluated and discussed competitive research proposals about cybersecurity, offering detailed written reviews and participating in consensus-building discussions.

### ◦ **Technical Program Committee**

- Vice Chair, Awards Subcommittee, IEEE PES Power System Operation, Planning and Economics (PSOPE) Committee, 2024-2028
- Co-Chair, IEEE Task Force on Distribution System State Estimation, 2019-Present
- Secretary, IEEE Task Force on Virtual Inertia Control of Inverter-Based Resources, 2025-Present

### ◦ **University, College, and Department Services**

- Dissertation/Thesis Committee Member for eight Ph.D. students at MSU, OSU, and Leigh University, and four master’s students, 2022-Present
- ECE Graduate Committee Member, OSU, 2024-2025
- ECE Organizer, OSU K-12 Outreach Discover Day for 18 high school students, July 2024
- ECE Advisor, OSU Senior Design Project, 24 Spring, 24 Fall, 25 Spring, 25 Fall
- ECE Advisor, MSU Senior Design Project, 2023 Spring
- ECE Graduate Admission Committee Member, MSU, 2022-2023

### ◦ **Journal/Conference Reviewer** (over 200 times, including 100 times for IEEE Trans. manuscripts)

- IEEE Transactions on Smart Grid [Top 5 Best Reviewer in 2024]
- IEEE Transactions on Neural Networks and Learning Systems
- Energy and AI
- International Journal of Pattern Recognition and Artificial Intelligence

- International Joint Conference on Artificial Intelligence (IJCAI)
- IEEE Transactions on Power Systems
- IEEE Transactions on Sustainable Energy
- IEEE Transactions on Dependable and Secure Computing
- IEEE Transactions on Vehicular Technology
- IEEE Open Access Journal of Power and Energy
- IEEE Power Engineering Letters
- Applied Energy
- Modern Power Systems and Clean Energy
- IET Generation, Transmission & Distribution
- IET Smart Grid

## INVITED TALK

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1. “The Future of the Electric Control Center”, The National Academies of Sciences, Engineering, and Medicine, Serial Webinar, Dec. 2025.
2. “Trustworthy AI for Smart Distributed Energy Systems: Linking Physical and Data Intelligence”, Georgia Institute of Technology, Atlanta, GT, Oct. 2025.
3. “Physics-Informed Trustworthy AI Toward Robust Situation-Aware Distribution Systems”, the 2025 INFORMS Annual Meeting, Atlanta, GT, Oct. 2025.
4. “Cyber-Physical Power System Resilience: Situational Awareness, Adaptation, and Restoration, in the 2025 IEEE PES General Meeting, Austin, TX, July 2025.
5. “AI-Driven Digital Twins for Smart Distribution Grid Situational Awareness”, Oklahoma State University, Stillwater, OK, April 2025.
6. “Physics-Informed Trustworthy AI Toward Robust Situation-Aware Distribution Systems”, The University of Tulsa, Tulsa, OK, March 2025.
7. “AI-Driven Digital Twinning for Climate-Energy Ecosystem”, NSF Project Kick-Off Meeting, New Mexico State University, Las Cruces, NM, Nov. 2024.
8. “Physics-Informed Machine Learning to Enhance Distribution Grid Situational Awareness”, the 2024 INFORMS Annual Meeting, Seattle, WA, Oct. 2024.
9. “Taylor-Expansion-Based Robust Power Flow in Unbalanced Distribution Systems: A Hybrid Data-Aided Method”, the 2024 IEEE PES General Meeting, Seattle, WA, July 2024.
10. “Distribution System Situational Awareness: From Model-Based to Data-Driven and Beyond”, the 2023 IEEE PES General Meeting, Orlando, FL, July 2023.
11. “Model-based and Data-driven Situational Awareness for Distribution System Monitoring and Control”, Cornell University, Ithaca, NY, June 2023.
12. “AI Meets Grid: Data-driven Situational Awareness for Distribution System Monitoring and Control”, Women in Data Science 2023, University of Calgary, Calgary, Canada, March 2023.
13. “Interval Distribution System State Estimation with Uncertain Line Parameters and DER Generation”, Series Seminar in IEEE Task Force on Distribution System State Estimation Performance, Sep. 2021.

14. “Model-based and Data-driven Situational Awareness for Distribution System Monitoring and Control”, Brookhaven National Laboratory, Upton, NY, Apr. 2020.
15. “Model-based and Data-driven Situational Awareness for Distribution System Monitoring and Control”, University of Texas San Antonio, San Antonio, TX, Jan. 2020.

## PUBLICATIONS ([GOOGLE SCHOLAR](#): 1430, H-INDEX: 14)

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### Highlight of Paper Impacts:

- 1 IEEE TNNLS (a journal ranked 1st in the AI domain according to Google Scholar)
- 6 IEEE TSG (a journal ranked 1st in the power and energy domain)
- 2 IEEE TPWRS (a journal ranked 3rd in the power and energy domain)
- 3 IEEE TSST/IEEE TPWRD/IEEE TIA (All are top 10 journals in the power and energy domain)
- 2 Best Papers in the flagship IEEE Power and Energy Society conferences
- 1 Global Essential Science Indicators (ESI) Top 1% Highly Cited Paper

\* represents the corresponding author, and *o* represents the advisee/mentee.

### Journal Papers

[J22] **Y. Zhang\***, M. Yue, J. Wang, and S. Yoo. “Multi-Agent Graph-Attention Deep Reinforcement Learning for Post-Contingency Grid Emergency Voltage Control,” *IEEE Trans. Neural Networks and Learning Systems*, vol. 35, no. 3, pp. 3340-3350, March 2024. [[AI Track](#)]

[J21] L. Wang<sup>o</sup>, **Y. Zhang\***. Physics-Aware Large Language Model-Based Scenario Generation of Wind Power Against Extreme Icing Disasters. *IEEE Trans. Sustainable Energy*, under review. [[AI Track](#)]

[J20] P. Verma, D. Shi, **Y. Zhang**. Multi-Prompt Bi-Functional Large Language Model for Coordinated Solar-Load Forecasting. *IEEE Trans. Smart Grid*, under review. [[AI Track](#)]

[J19] S. Chung<sup>o</sup>, **Y. Zhang\***. “Physics-Informed Power System Dynamic Trajectory Prediction Utilizing Black-Box Modeling of Inverter-Based Resources,” *IEEE Trans. Power Systems*, under review. [[AI Track](#)]

[J18] Z. Ibn Mahmood<sup>o</sup>, H. Cui, **Y. Zhang**. “Grid-Forming Inverter Controls: A Comprehensive Review of Architecture, Current-Limiting, and Challenges,” *Renewable Energy*, under 2nd-round review.

[J17] L. Wang<sup>o</sup>, **Y. Zhang\***, D. Shi, F. Wang, F. Sui, L. Lin. “Topology Evolution-Aware Multi-Agent Reinforcement Learning with Soft Communication for Post-Disaster Distribution Grid Restoration,” *IEEE Trans. Smart Grid*, under review. [[AI Track](#)]

[J16] Y. Zhang<sup>o</sup>, **Y. Zhang\***, L. Wang. “Meteorological-Data-Aided Distribution System Operation with Weather-Dependent Line Parameter Calibration and DER Generation Forecasting,” *IEEE Trans. Industrial Applications*, under 2nd-round review. [[AI Track](#)]

[J15] P. Verma, D. Shi, Y. Ye, F. Wang, **Y. Zhang**. “Real-Time Deep Reinforcement Learning-Based Corrective Dispatch for Load Redistribution Attacks in DC Optimal Power Flow,” *IEEE Trans. Industrial Informatics*, under review. [[AI Track](#)]

[J14] S. Chung<sup>o</sup>, **Y. Zhang\***, Y. Zhang<sup>o</sup>. “Knowledge-Inspired Data-Aided Robust Power Flow in Distribution Networks with ZIP Loads and High DER Penetration,” *IEEE Trans. Industrial Applications*, vol. 61, no. 1, pp. 1523-1532, Jan.-Feb. 2025. [[AI Track](#)]

[J13] A. Zhou, M. Yang, X. Fang, and **Y. Zhang**. “Addressing Wind Power Forecast Errors in Day-Ahead Pricing With Energy Storage Systems: A Distributionally Robust Joint Chance-Constrained Approach,” *IEEE Trans. Sustainable Energy*, vol. 15, no. 3, pp. 1754-1767, July 2024.

- [J12] S. Chung<sup>o</sup> and **Y. Zhang\***. “Artificial Intelligence Applications in Electric Distribution Systems: Post-Pandemic Progress and Prospect,” *Applied Sciences*, vol. 13, no. 12, 2023. [[AI Track](#)]
- [J11] **Y. Zhang**, M. Yue, and J. Wang. “Off-policy deep reinforcement learning with automatic entropy adjustment for adaptive grid emergency control,” *Electric Power Systems Research*, vol. 217, 2022. [[AI Track](#)]
- [J10] Y. Chen, Y. Y., and **Y. Zhang**. “A Robust State Estimation Method Based on SOCP for Integrated Electricity-Heat System,” *IEEE Trans. Smart Grid*, vol. 12, no. 1, pp. 810-820, Jan. 2021. [[Global 1% ESI Highly Cited Paper](#)]
- [J9] **Y. Zhang**, X. Wang, J. Wang, and Y. Zhang. “Deep reinforcement learning-based volt-VAR optimization in smart distribution systems,” *IEEE Trans. Smart Grid*, vol. 12, no. 1, pp. 361-371, Jan. 2021. [[AI Track](#)]
- [J8] **Y. Zhang**, J. Wang, and B. Chen. “Detecting false data injection attacks in smart grids: a semi-supervised deep learning approach,” *IEEE Trans. Smart Grid*, vol. 12, no. 1, pp. 623-634, Jan. 2021. [[AI Track](#)]
- [J7] **Y. Zhang** and J. Wang. “Towards highly efficient state estimation with nonlinear measurements in distribution systems,” *IEEE Trans. Power Systems*, vol. 35, no. 3, pp. 2471-2474, May 2020.
- [J6] **Y. Zhang**, J. Wang, and M. Khodayar. “Graph-based faulted line identification using micro-PMU data in distribution systems,” *IEEE Trans. Smart Grid*, vol. 11, no. 5, pp. 3982-3992, Sept. 2020.
- [J5] **Y. Zhang**, J. Wang, and Z. Li. “Interval state estimation with uncertainty of distributed generation and line parameters in unbalanced distribution systems,” *IEEE Trans. Power Systems*, vol. 35, no. 1, pp. 762-772, Jan. 2020.
- [J4] **Y. Zhang**, J. Wang, and J. Liu. “Attack identification and correction for PMU GPS spoofing in unbalanced distribution systems,” *IEEE Trans. Smart Grid*, vol. 11, no. 1, pp. 762-773, Jan. 2020.
- [J3] M. Cui, M. Khodayar, C. Chen, X. Wang, and **Y. Zhang**. “Deep learning based time-varying parameter identification for system-wide load modeling,” *IEEE Trans. Smart Grid*, vol. 10, no. 6, pp. 6102-6114, Nov. 2019. [[AI Track](#)]
- [J2] **Y. Zhang**, J. Wang, and Z. Li. “Uncertainty modeling of distributed energy resources: techniques and challenges,” *Current Sustainable/Renewable Energy Report*, vol. 6, no. 2, pp. 42-51, Jun. 2019.
- [J1] **Y. Zhang**, J. Liang, Z. Yun, and X. Dong. “A new fault-location algorithm for series-compensated double-circuit transmission lines based on the distributed parameter model,” *IEEE Trans. Power Delivery*, vol. 32, no. 6, pp. 2398-2407, Dec. 2017.

## Conference Papers

- [C14] Y. Wang, Z. Wu, **Y. Zhang**, E. Larson. “Causal Representation Learning on Degraded Multi-Sensor Streams,” in *2026 International Conference on Learning Representation (ICLR)*, under rebuttal. [[AI Track](#)]
- [C13] **Y. Zhang\*** and M. Yue. “Cooperative Multi-Agent Deep Reinforcement Learning for Adaptive Decentralized Emergency Voltage Control,” in *2024 IEEE Power and Energy Society Innovative Smart Grid Technologies Conference*, D.C. Washington. [[Best Paper Award](#)] [[AI Track](#)]
- [C12] S. Chung<sup>o</sup>, **Y. Zhang\***, Z. Wang, F. Ding. “Taylor-Expansion-Based Robust Power Flow in Unbalanced Distribution Systems: A Hybrid Data-Aided Method,” in *2024 IEEE Power and Energy Society General Meeting*, Seattle, WA. [[Best Paper Award](#)] [[AI Track](#)]
- [C11] Z. Ibn Mahmood<sup>o</sup>, **Y. Zhang\***, H. Cui, A. Ali. “Adaptive Frequency Control for Inverter-Based Resources via Equivalent Inertia-based Deep Reinforcement Learning,” in *2026 IEEE Electrical Energy Storage Applications and Technologies (EESAT) conference*, Tucson, AZ, accepted. [[AI Track](#)]

- [C10] Z. Ibn Mahmood<sup>o</sup>, H. Cui, **Y. Zhang**. “A Virtual Admittance-Based Fault Current Limiting Method for Grid-Forming Inverters,” in *2025 IEEE Power and Energy Society General Meeting*, Austin, TX, pp. 1-5.
- [C9] P. Verma, D. Shi, Y. Ye, F. Wang, **Y. Zhang**. “Impact of Solar Integration on Grid Security: Unveiling Vulnerabilities in Load Redistribution Attacks,” in *the IEEE PowerTech 2025 Conference*, Kiel, Germany, pp. 1-5.
- [C8] Y. Zhang<sup>o</sup>, **Y. Zhang\***, L. Wang, and M. Shahidehpour. “Weather-Dependent Power Flow in Distribution Systems under Extreme Weather: Case Study and Risk Assessment in Wildfire Scenarios,” in *2025 IEEE Power and Energy Society General Meeting*, Austin, TX, pp. 1-5.
- [C7] **Y. Zhang\***, Y. Wang, Y. Zhang<sup>o</sup>, E. Larson, F. Sui, and D. Shi. “On the Potential of Digital Twins for Distribution System State Estimation with Randomly Missing Data in Heterogeneous Measurements,” in *2025 IEEE Power and Energy Society General Meeting*, Austin, TX, pp. 1-5. [[AI Track](#)]
- [C6] Y. Zhang<sup>o</sup>, **Y. Zhang\***, L. Wang, A. Zhou. “Weather-Dependent Fast Power Flow in Distribution Systems: A Meteorological-Data-Aided Method,” in *2025 IEEE Texas Power Energy Conference*, College Station, TX, pp. 1-6. [[AI Track](#)]
- [C5] **Y. Zhang\***, J. Zhao, D. Shi, and S. Chung<sup>o</sup>. “Deep Reinforcement Learning-Enabled Adaptive Forecasting-Aided State Estimation in Distribution Systems with Multi-Source Multi-Rate Data,” in *2024 IEEE PES Innovative Smart Grid Technologies Conference*, D.C. Washington. [[AI Track](#)]
- [C4] T. Zhao, **Y. Zhang**, and M. Yue. “Scalable Deep Reinforcement Learning-based Volt-VAR Optimization in Distribution Systems: A Mean-field Approach,” in *2022 IEEE Power and Energy Society General Meeting*, Denver, CO, pp. 1-5. [[AI Track](#)]
- [C3] **Y. Zhang**, Y. Chen, J. Wang, and M. Yue. “Decentralized Coordinated State Estimation in Integrated Transmission and Distribution Systems,” in *2022 IEEE Power and Energy Society Innovative Smart Grid Technologies Conference*, New Orleans, LA, pp. 1-5.
- [C2] **Y. Zhang**, M. Yue, and J. Wang. “Adaptive Load Shedding for Grid Emergency Control via Deep Reinforcement Learning,” in *2021 IEEE Power and Energy Society General Meeting*, Washington, D.C., pp. 1-5. [[AI Track](#)]
- [C1] **Y. Zhang**, J. Wang, and Z. Li. “Interval state estimation with measurement and network parameter uncertainty in unbalanced distribution systems,” in *2019 IEEE Power and Energy Society General Meeting*, Atlanta, GA, pp. 1-5.

## STUDENT AND EARLY-CAREER RESEARCHER MENTORING

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### Highlight

- a. Three Ph.D. students and one undergraduate, as the first cohort of students joining the lab, have received **10** international/national/university-level awards, including three competitive IEEE awards, placing them in the top 2%; one Master’s student graduated with the OSU thesis award.
- b. Currently advise five Ph.D. students (including two female students), one postdoc, one master’s student, and four undergraduates who are selected from the Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) Program.

### • Group Members

Ziying Wang (Fall 2025-Present)	Ph.D. Student
Jiahao Chen (Spring 2025-Present)	Ph.D. Student
Yuanshuo Zhang (Spring 2024-Present)	Ph.D. Student
Sungjoo Chung (Spring 2023-Present)	Ph.D. Student



Zaid Ibn Mahmood (Spring 2022-Present)	Ph.D. Student
Xiao Huang (Summer 2025-Present)	Master Student
Brayden Galbreat (Fall 2025-Present, from OK-LSAMP)	Undergraduate Researcher
Joel Nnaji (Spring 2025-Present, from OK-LSAMP)	Undergraduate Researcher
Luke Dwayne Cardiel (Fall 2024-Present, from OK-LSAMP)	Undergraduate Researcher
Dominick Aron Choate (Summer 2025, from OK-LSAMP)	Undergraduate Researcher
Lei Wang (Spring 2025-Present)	Postdoctoral Fellow

### • Alumni

Zaid Ibn Mahmood	'24 MS
Thesis: Estimation of the Equivalent Inertia of Grid-Forming and Grid-Following Inverter-Based Resources	
Jackson Blum	'24 BS

### • Senior Design/Capstone Projects

LabScale Grid [ECE Advisor for 3 senior students]	25 Fall
Formula SAE Electric Car [ECE Advisor for 6 senior students]	25 Spring
Tiny Renewable House [ECE Advisor for 7 senior students]	24 Fall
Tiny Renewable House [ECE Advisor for 9 senior students]	24 Spring
Solar-Powered Mobile Library [ECE Advisor for 5 senior students]	23 Spring

## TEACHING EXPERIENCE

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Redesigned 2 courses; Introduced 2 new courses (denoted by \*).

### • Graduate Courses

ECEN 6123 AI for Engineering Systems: Grid-Oriented Applications*	25 Spring
ECEN 5123 Engineering System Reliability Evaluation	24 Spring
EELE 452/552 Power System Operation and Control*	23 Fall

### • Undergraduate Courses

ECEN 4173 Power System Operation and Intelligence*	26 Spring
ECEN 4153 Power System Analysis and Design	23 Spring, 25 Fall
ECEN 3714 Network Analysis	24 Fall
EELE 455/555 Alternative Energy Distributed Generation Systems	22 Fall
EE 2350 Circuit Analysis I (Teaching Assistant)	19 Spring

## MEDIA COVERAGE

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- “Excellence of Computer and Electrical Engineering highlighted in Fellowships,” OSU Headlines, September 2025. [\[Link\]](#)
- “Zhang awarded \$1.1M NSF grant for AI-driven energy system transition against climate change,” OSU Headlines, August 2024. [\[Link\]](#)
- “From vision to voltage: ECE researcher leads trustworthy AI-driven energy revolution,” OSU Headlines, August 2025. [\[Link\]](#)
- “Zhang’s AI for power team won runner-up at DOE’s American-Made Challenges Competition,” OSU College of Engineering Announcement, December 2024. [\[Link\]](#)
- “Ying Zhang and team won the Best Paper award at the 2024 IEEE Power and Energy Society General Meeting,” OSU College of Engineering Announcement, May 2024. [\[Link\]](#)



## PROFESSIONAL AFFILIATIONS

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- Institute of Electrical and Electronics Engineers (IEEE), Senior Member
- Institute for Operations Research and the Management Sciences (INFORMS), Member
- IEEE Power and Energy Society (IEEE PES), Senior Member
- IEEE Industrial Applications Society (IEEE IAS), Senior Member