

# Haochi Wu

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## About Me

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I am a junior but passionate researcher working on low-carbon energy system for the future! I am currently a doctoral researcher and research associate at **University of Michigan, Ann Arbor**, working with Prof. Michael Craig. Also I am a PhD candidate at **Zhejiang University**, and my supervisor is Prof. Mingyang Sun at Peking University.

I'm interested in renewable transition of energy system. Also I'm curious about how future energy system mitigate and adapt to climate change. Please feel free to contact me if you are interested in our research!

## EDUCATION

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**Zhejiang University**, College of Control Science and Engineering Sept 2023 – expected 2025  
Hangzhou, China & MI, USA

- Ph.D. Candidate in Control Science and Engineering;

Supervisor: Prof. [Mingyang Sun](#), Professor at Peking University, Honorary Lecturer at Imperial College London

- **University of Michigan**, Center for Sustainable Systems, Visiting Doctoral researcher. Aug 2023 - Dec 2024

- **University of Michigan**, School for Environment and Sustainability, Research Associate. Jan 2025 - Sept 2025

Supervisor: Prof. [Michael Craig](#), Assistant Professor at University of Michigan

**Zhejiang University**, College of Control Science and Engineering Sept 2020 – May 2023  
Hangzhou, China

M.Sc in Control Science and Engineering

recommend as an exam-free student to the graduate school

**North China Electric Power University**, School of Control and Computer Engineering Sept 2016 – May 2020  
Beijing, China

B.Eng. in Automation (Average grade 92.3/100, Rankings 4/123, with National Scholarship of China (top 1%) )

## RESEARCH INTEREST

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Power System Optimization, Energy Conversion, Macro Energy Systems, AI enabled Energy system

## RESEARCH PROJECT

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Contributor: sub research project modeling and manuscript writing Sept 2023 – May 2025  
NSF CAREER: CAS- Climate: PI: Prof. Michael Craig University of Michigan

Making Decarbonization of the Electric Power Sector Robust to Climate Change

Contributor: sub research project modeling and manuscript writing Sept 2020 – May 2023  
NSFC joint program with Netherlands: PI: Prof. Mingyang Sun Zhejiang University

Data-driven Optimization of Energy Systems from the Perspectives of Information, Physics and Society

## Journal & Conference Publications

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- **H. Wu**, D. Qiu, L. Zhang, M. Sun, "Adaptive Multi-Agent Reinforcement Learning for Flexible Resource Management in a Virtual Power Plant with Dynamic Participating Multi-Energy Buildings", *Applied Energy*, 374 (2024): 123998
- **H. Wu**, J. Wang, F. Teng, et al. "Tracking Bitcoin-Induced Carbon Trajectory in China Via Refined Spatiotemporal Assessment". *Engineering* (2025 Accepted).
- **H. Wu**, M. Craig. "Mitigating Thermal Risk in Buildings during Weather Related Resource Adequacy Failures with Grid-Scale Energy Storage", Accepted in International Symposium on Sustainable Systems and Technology (ISSST) 2024, Baltimore, Maryland.
- **H. Wu**, M. Craig. "Climate Change Will Increase Costs of Rooftop Photovoltaics Globally", Accepted as lighting talk in Macro Energy System Workshop (MES) 2024, Princeton University, NJ.
- J. Meng, **H. Wu**, T. Wang, et al. (2021). A novel super-cooling enhancement method for a two-stage thermoelectric cooler using integrated triangular-square current pulses. *Energy*, 217, 119360.
- T. Wang, **H. Wu**, J. Meng, et al. (2020). Optimization of a double-layered microchannel heat sink with semi-porous-ribs by multi-objective genetic algorithm. *International Journal of Heat and Mass Transfer* 149, 119217.
- J. Meng, **H. Wu**, T. Wang, et al. (2020). Thermal management of a flexible controlled thermoelectric energy conversion-utilization system using a multi-objective optimization. *Applied Thermal Engineering*, 179, 115721.

## Working or Submitted Papers:

- **H. Wu**, Q. Kong, M. Huber, et al. "Climate Change Will Increase High Temperature Risks, Degradation, and Costs of Rooftop Photovoltaics Globally", in *Joule*, Under Revision.
- L. Zhang, **H. Wu**, X. Wan, et al. "OMDA: Offline Model-Guided Distribution-Aware Offline-to-Online Reinforcement Learning". in *ICML 2025*, Under Review.
- Y. Quan, **H. Wu**, M. Sun, et al. "PrivLoad: Privacy-preserving Load Profiles Synthesis Based on Diffusion Models". in *IEEE Transactions on Smart Grid*, under Revision.
- **H. Wu**, et al. "Updating Global Green Hydrogen Production Costs and Configurations under Future Climates", Working paper.
- **H. Wu**, et al. "Technological improvements in EV batteries offset climate-induced durability challenges", Working paper.

## HONORS & AWARDS

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Outstanding Graduate Student Award, Zhejiang University 2021  
Outstanding Graduate Award, North China Electric Power University 2020  
National Scholarship, Ministry of Education of China (Rate: top 1%) 2019

## Professional Services

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- **Journal Reviewer:** *IEEE Trans. on Industrial Informatics*, *Journal of Modern Power Systems and Clean Energy*.
- **Research Community:** 2024-2025 MES Fellow at [Macro-Energy-Systems](#)

## TECHNICAL SKILL & CERTIFICATION

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**Related Courses:** Scientific Programming, Energy System Modeling, Power System Economics, Convex Optimization, Machine Learning, Earth and Climate Science

**Programming:** Python, Julia, Matlab/Simulink, Git, Linux, Slurm, Latex, C, C++