

Shaorong Zhang

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Education

- **University of California, Riverside**
PhD, Electrical and Computer Engineering, GPA: 3.9/4 Sep 2022 - Present
- **Xi'an Jiaotong University**
Master, Control Science and Engineering, GPA: 3.57/4 Sep 2019 - Jun 2022
- **Xi'an Jiaotong University**
Bachelor, Automation, GPA: 3.5/4 Sep 2015 - Jun 2019

Research Interests

- Fundamental diffusion (bridge) models, guidance, fine tuning, alignment, solving inverse problems with diffusion priors.
- Medical imaging, data-driven control, optimization and decision making, physics-informed machine learning.

Publications

1. Shaorong Zhang, Rob Brekelmans, Greg Ver Steeg, "Local MAP Sampling for Diffusion Models", under review, 2025.
2. Shaorong Zhang, Rob Brekelmans, Yunshu Wu, Greg Ver Steeg, "Measurement-Aligned Flow for Inverse Problems", under review, 2025.
3. Shaorong Zhang, Yuanbin Cheng, and Greg Ver Steeg, "Exploring the Design Space of Diffusion Bridge Models", Advances in Neural Information Processing Systems (NeurIPS), 2025.
4. Shaorong Zhang, Tamoghna Chattopadhyay, Sophia I. Thomopoulos, Jose-Luis Ambite, Paul M. Thompson, Greg Ver Steeg, "Diffusion Bridge Models for 3D Medical Image Translation", 47th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2025.
5. Shaorong Zhang, Yuanbin Cheng, and Nanpeng Yu, "Generating Synthetic Net Load Data with Physics-informed Diffusion Model", IEEE Transactions on Smart Grid, 2025 .
6. Nanpeng Yu, Shaorong Zhang, Jingtao Qin, Patricia Hidalgo-Gonzalez, Roel Dobbe, Yang Liu, Anamika Dubey, Yubo Wang, John Dirkman, Haiwang Zhong, et al., "Data-Driven Control, Optimization, and Decision-Making in Active Power Distribution Networks", Applied Energy, Vol. 397, 126253, 2025 (Elsevier).
7. Shaorong Zhang, Koji Yamashita, and Nanpeng Yu, "Learning Power System Dynamics with Neural Ordinary Differential Equations," IEEE PES General Meeting, 2024.
8. Shaorong Zhang and Nanpeng Yu, " Learning Power System Dynamics with Nearly-Hamiltonian Neural Networks," IEEE PES General Meeting, 2023.

Honors and Awards

- Outstanding Graduate Student (awarded to top 10%) 06-2022
- Special Scholarship for M.S. Candidate(awarded to top 30%) 10-2021
- Outstanding Graduates(awarded to 20%) 10-2021
- The Gold Awards of the 6th China International College Students' " Internet+" Innovation and Entrepreneurship Competition 11-2020
- The Gold Awards of the 6th China International College Students' " Internet+" Innovation and Entrepreneurship Competition(Trails in shaanxi province) 10-2020
- Special Scholarship for M.S. Candidate(awarded to top 30%) 10-2020
- National Encouragement Scholarship 10-2018