

AMIT JENA

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OBJECTIVE

Pursuing Full-time Opportunities Starting Summer/Fall 2026

INTEREST AREAS

Generative AI (In-context Learning), Meta-Learning, Stability Analysis, Power Systems Control

EDUCATION

- 2020 - present **Ph.D., Electrical Engineering**,
Texas A&M University, Advisor: Dr. Le Xie, **GPA: 3.80/4.00**
- 2017 - 2020 **M.S., Electrical Engineering**,
Iowa State University, **GPA: 3.88/4.00**
- 2011 - 2016 **Integrated Bachelors and Masters in Science, Mathematics**,
National Institute of Technology (NIT), Rourkela, **GPA: 8.09/10**

HONORS AND RECOGNITIONS

- Awarded 1000\$ of compute credits through Lambda's Research Grant Program.
- Recipient of Powell Fellowship at Texas A&M University for 2023-24.
- Recipient of Electrical and Computer Engineering Ph.D. Merit Fellowship at Texas A&M University for 2020-21.
- Recipient of Principal Financial Group Scholarship for 2019 at Iowa State University.
- Class rank 1 in Integrated Msc. in mathematics at NIT Rourkela in 2013-14 and 2014-15.

EMPLOYMENT

Graduate Intern at National Renewable Energy Laboratory, Golden, CO Summer and Fall 2024
Mentor: Dr. Fei Ding and Dr. Yiyun Yao

- *LLM-based adaptive voltage regulation*: Developed an end-to-end adaptive voltage control solution [3] for distribution systems with frequent topological reconfigurations, integrating an LSTM-based load forecaster, an LLM-based adaptive power flow surrogate model, and a model predictive control (MPC) scheme.

PUBLICATIONS

Submitted/Pre-prints/Working Papers

1. **A. Jena**, LLM-Powered Adaptive Digital Twins for Next-Generation Datacenters, (working paper).
2. **A. Jena**, T. Huang, S. Sivaranjani, D. Kalathil, Le Xie, Distributed Learning of Neural Lyapunov Functions for Large-Scale Networked Dissipative Systems, under review. Available on Arxiv [here](#).

Published/Accepted

1. **A. Jena**, Na Li, Le Xie, LILAD: Learning In-context Lyapunov-stable Adaptive Dynamics Models, accepted for AAAI-26 **Oral** (*The 40th Annual AAAI Conference on Artificial Intelligence*).
2. S. Chausalkar*, **A. Jena**, Fairness-Aware Modeling for Bias Mitigation in K-12 Adaptive Learning Systems, *IEEE MIT URTC-25*.
* First author mentored by A. Jena.
3. **A. Jena**, F. Ding, J. Wang, Y. Yao, Le Xie, LLM-Based Adaptive Distribution Voltage Regulation Under Frequent Topology Changes: An In-Context MPC Framework, *IEEE Transactions on Smart Grid*, 2025. Available [here](#).
4. **A. Jena**, D. Kalathil, Le Xie, Meta-learning-based Adaptive Stability Certificates for Dynamical Systems, accepted for AAAI-24 (*The 38th Annual AAAI Conference on Artificial Intelligence*). Available [here](#).

5. R. Kumar, R. R. Hossain, S. Talukder, **A. Jena**, A. Ghazo, Recursive Histogram Tracking-Based Rapid Online Anomaly Detection in Cyber-Physical Systems, *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2022. Available [here](#).
6. **A. Jena**, T. Huang, S. Sivaranjani, D. Kalathil, Le Xie, Distributed Learning-based Stability Assessment for Large Scale Networks of Dissipative Systems, *IEEE Conference on Decision and Control (CDC)*, 2021. Available [here](#).
7. S. R. Sahoo, S. P. Sahoo, **A. Jena**, K. C. Pati, Optimal control on Schrödinger Lie group and the behavior of the dynamics, *IMA Journal of Mathematical Control and Information*, 2018. Available [here](#).
8. S. Rana, B. Mishra, **A. Jena**, Numerical investigation of steady-state heat conduction in arbitrary shaped heat exchanger tubes with multiply connected cross sections, *International Journal of Applied and Computational Mathematics*, 2018. Available [here](#).
9. S. P. Sahoo, **A. Jena**, S. R. Sahoo, K.C. Pati, Optimal control, stability and numerical integration on SU(3), *International Journal of Applied and Computational Mathematics*, 2017. Available [here](#).
10. S. Rana, **A. Jena**, A BEM formulation of two dimensional steady state heat conduction in exchanger tubes of arbitrary cross sections, *International Journal of Heat and Mass Transfer*, 2017. Available [here](#).
11. **A. Jena**, P. Sahu, S. Bharat, B. B. Biswal, Optimal trajectory planning of a 3R SCARA manipulator using geodesic, *ICPEICES IEEE conference held at Delhi Technological University (ICPEICES 2016)*, 2016. Available [here](#).

RELEVANT GRADUATE COURSE HIGHLIGHTS

COM S 578X	Optimization for Machine Learning	ECEN 689	Reinforcement Learning
CSCE 636	Deep Learning	ECEN 713	Data Sciences and Applications in Modern Power systems

SKILLS

Programming Language	C, C++, Python
Deep Learning packages	PyTorch, TensorFlow, Keras, Scikit-Learn, Numpy, Pandas, OpenDSSDirect
Software	MATLAB, CVX
Typesetting	Excel, Word, Powerpoint, L ^A T _E X

TEACHING AND SERVICE

Teaching Assistant

- Teaching Assistant for **EE 442 (Introduction to Circuits and Instruments)** at ECpE Department, ISU, Fall'17.
- Teaching Assistant for **EE 324 (Signals & Systems II)** at ECpE Department, ISU, Spring & Fall'18.
- Teaching Assistant for **EE 224 (Signals & Systems I)** at ECpE Department, ISU, Spring & Fall'19.

Reviewer

- Association for the Advancement of Artificial Intelligence (AAAI) '26
- IEEE Control Systems Letters
- IEEE Open Access Journal of Power and Energy

RESEARCH MENTORSHIP

- Mentored Soham Chausalkar, a high school student at Bridgewater-Raritan Regional High School, USA, on original research in "Fairness in Adaptive Learning Systems", which led to a paper [2] accepted at MIT URTC 2025.