

ANINDITA DEB

Current Position: Assistant Professor, Department of Electrical Engineering

Techno College of Engineering Agartala (Affiliated to Tripura University, A Central University)

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Career Objective To contribute effectively as a faculty member through quality teaching, impactful research, and active participation in institutional development activities.

Education

- Ph.D. in Electrical Engineering (Pursuing), NIT Agartala, 2021–Present | CGPA: 9.08 (Coursework)(Criteria Completed)Topic: AI ML applications in fault diagnostic network of stand-alone DC microgrid.
- M.Tech in Power Systems, NIT Agartala, 2016 | CPI: 8.49

- Thesis: Online transient stability assessment using a novel transient stability index based on the energy function method

- B. Tech in Electrical Engineering, NIT Agartala, 2012 | 75.8%
- AISSCE, 2008, K.V. ONGC Agartala | 83.6%
- AISSE, 2006, Pranabhananda Vidyamandir, Tripura | 84%

Areas of Specialization

- Power Systems
- Microgrids and Renewable Energy
- Fault Detection and Protection
- Artificial Intelligence Applications in Power Systems

Core Competencies

- MATLAB (including AI applications)
- Microsoft Office Suite
- X-AI applications in Python
- Strong verbal and interpersonal communication
- Leadership, organizational, and problem-solving abilities

Professional experience

Assistant Professor, Department of Electrical Engineering

Techno College of Engineering Agartala — August 2016 to Present

- Teaching core Electrical Engineering courses and mentoring undergraduate projects.
- Active involvement in departmental activities, curriculum development, and

academic administration.

- Guiding B.Tech students in research and innovation activities in energy systems and microgrids.

Institutional Responsibilities

- Event & Sports Head, TCEA (since 2024)
- Member, NGIN, Techno College of Engineering Agartala (TCEA)
- Faculty Advisor, Student Chapter, Department of Electrical Engineering, TCEA
- Member, Institution's Innovation Council, IIC, TCEA
- Departmental IQAC Coordinator (till 2024), Electrical Engineering Department

Professional Memberships

Associate Member (AMIE), The Institution of Engineers (India) (IEI)

Selected Research Publications

1. Anindita Deb, Arvind Kumar Jain, "Design of an LSTMandBi-LSTM-driven intelligent protection scheme for standalone low-voltage DC microgrid", J. Renewable Sustainable Energy 17, 065507 (2025); doi: 10.1063/5.0290701(SCIE)
2. Anindita Deb, Rajdeep Bhattacharjee, Arvind Kumar Jain, "Optimal Site Selection of the PV Plant in North-Eastern Region of India Using AHP-BWM Techniques", 23rd National Power Systems Conference (NPSC), IEEE conference, 2024.
2. Anindita Deb, Arvind Kumar Jain, "An Effective data-driven Machine learning hybrid approach for Fault Detection and Classification in a Standalone Low-voltage DC Microgrid", Electrical Engineering Journal (Springer) (SCIE),2024.
3. Rajdeep Bhattacharjee, Saiful Islam, Anindita Deb, Dr. Nabanita Adhikary, "Exploring the Effectiveness of Different MPPT Algorithms for Thermoelectric Generator Optimization: A Comparative Study", IEEE CSNT 2024 (SCOPUS)
4. Anindita Deb, Arvind Kumar Jain, "Design of a robust and fast fault diagnosis strategy of a stand-alone LVDCMG using Gaussian SVM & Weighted KNN algorithms", 2023 3rd International Conference on Energy, Power and Electrical Engineering, IEEE EPEE, 2023 DOI: 10.1109/EPEE59859.2023.10352007 (SCOPUS)
5. Rajdeep Bhattacharjee, Anindita Deb, Dr. Nabanita Adhikary, "A Comparative Performance Analysis of P&O and ANN Algorithm Based MPPT Energy Harvesting in PV Systems, 2023 7th International Conference on Computation System and Information Technology for Sustainable Solutions, IEEE CSITSS, 2023 10.1109/CSITSS60515.2023.10334115 (SCOPUS)
6. Anindita Deb, Samrat Kar, Rajdeep Bhattacharjee, Astam Saha, Saiful Islam, "An Extensive Study on Indian Power Sector Affected by Covid-19 Global Pandemic", AIP

Conference Proceedings 2520, 030017 (2022); <https://doi.org/10.1063/5.0103084>,
Published Online: 30 August 2022. (SCOPUS)

7. Anindita Deb, Debika Debnath, Joy Saha, "Design & Analysis of a PV-Piezoelectric based Off-grid Energy Harvester in Tripura", Journal of Physics: Conference Series 2286 (2022) 012025, IOP Publishing, doi:10.1088/1742-6596/2286/1/012025. (SCOPUS)

8. Anindita Deb, Abhishek Debnath, Joyanta Yadav, "Design & Analysis of a PV-Fuel Cell-Based Standalone DC Microgrid in Tripura", 2021 International Conference on Applied Electromagnetics, Signal Processing and Communication, IEEE AESPC, doi:10.1109/AESPC52704.2021.9708503(SCOPUS)

Patents Published

1)Anindita Deb 2) Arvind Kumar Jain, Title of the invention: DATA-CENTRIC DEEP LEARNING FRAMEWORK FOR FAULT DETECTION AND RELATED METHODS, Application No.202531106206 A, Publication Date: 02/01/2026

Funded Research Projects

- E-Provider (Completed) – Funded by NGIN, Directorate of IT, Govt. of Tripura
- Hybrid Power Generation (Ongoing) – PV & Piezoelectric, funded by NGIN, Directorate of IT, Govt. of Tripura
- Anti-theft Laser Fencing Unit (Sanctioned) – NGIN, Directorate of IT, Govt. of Tripura

Pedagogical & Technical Skills

- Proficient in MATLAB (including AI applications), Microsoft Office Suite, and Python for ML applications.
- Experienced in outcome-based education, CO-PO mapping, and internal quality assurance processes.
- Strong verbal and interpersonal communication with leadership, organizational, and problem-solving abilities.
- Active involvement in student development, project mentoring, and event coordination.

No. of B. Tech Projects Guided: 15

Relevant Training & FDPs

- Power System Engineering – IIT Kharagpur (NPTEL)
- Smart Grid – IIT Roorkee (NPTEL)
- Machine Learning & Deep Learning – IEEE & CARE College
- Sustainability & Energy Engineering – ATAL Academy

Honors & Awards

- Outstanding Faculty Award – SHIKSHA SANMMAN 2024
- Best Paper Award – ICRTE 2021

- Certificate of Excellence – SHIKSHA SANMMAN 2021
- Vertical Lead – Future-Proof Hackathon 2020