

CURRICULUM VITAE



TUSHAR KANTI DAS

Address: - Paschim Pilak, Santir Bazar, South Tripura, 799141

Contact: - 09366470097

E mail: - das.tusharkanti@tiaedu.org / tushardas551@gmail.com

LinkedIn: - www.linkedin.com/in/tushar-das-8ba78b141/

Profile Summary: Assistant Professor in Electrical Engineering department with teaching, research, and technical experience in electrical power systems, energy storage, lithium-ion battery diagnostics, IoT-based data acquisition, and battery thermal management. Currently pursuing PhD at NIT Silchar with research focus on physics-informed AI-based material selection and thermal management of lithium-ion batteries. Experienced in academic supervision, laboratory activities, embedded system-based monitoring, and applied engineering projects.

Career Objective: To contribute as an academican and researcher in Electrical Engineering by strengthening teaching, laboratory development, student projects, and applied research in power electronics, energy storage, electric vehicle systems, IoT-enabled monitoring, and intelligent battery management

Areas of Interest.

- Smart Electric Vehicle Systems
- Power Electronics for EV Applications
- Battery Management System with IoT-Based Battery and Vehicle Monitoring
- Lithium-ion Battery Testing and Diagnostics
- Electro-Thermal Modelling of Batteries
- Embedded Data Acquisition Systems
- Renewable Energy and Distributed Power Generation
- Energy Storage and Smart Grid Applications

Educational Qualification:

CLASS /DEGREE	INSTITUTE	STREAM	PERCENTAGE/CGPA
PhD (Pursuing) (Part time)	National Institute of Technology Silchar	Electronics and Instrumentation Area- "Development of a Physics-informed AI based MCDM Framework for Optimal Material Selection and Thermal Management of Lithium-Ion Battery"	9.2 (Course Work Sem.)
Master of Technology	Tripura University	Electrical Engineering	9.08 (CGPA)
Bachelor of Engineering	Tripura Institute of Technology	Electrical Engineering	72.2%
Higher Secondary	Jolaibari H.S. School	Science Stream	62.6%
Madhyamik Examination	Paschim Pilak H.S. School	General	69.14%

Professional Experience: - 8 years 10 months

- Worked as Infrastructure Support Engineer at Tripura State Data Centre under Third Party Talent Maximus India Pvt Ltd on behalf of SIFY Technologies Ltd. Agartala, Indranagar, DIT Building, 1st floor, (From 24th August '2017 to 31 December 2018).
- Working as Assistant Professor in the Department of Electrical Engineering, Techno College of Engineering Agartala from 2nd January '2019 to till date).

Teaching and Administrative Responsibilities

- Teaching undergraduate courses in Electrical Engineering.
- Guiding and supervising student projects, laboratory work, and academic assignments.
- Involved in curriculum support, departmental academic activities, and laboratory development.
- Associated with electrical infrastructure supervision and maintenance-related institutional responsibilities.

Research Interest:

My research interests include electric vehicle battery diagnostics, lithium-ion battery thermal management, battery safety, and intelligent Battery Management Systems. I work on physics-informed and data-driven approaches for battery temperature prediction, electro-thermal behaviour analysis, health assessment, and real-world battery monitoring.

Hardware Development:

Developed embedded data acquisition systems for electric cycles and electric three-wheelers using ESP32-based hardware to collect real-time battery, BMS, and vehicle operating data. The platforms support electro-thermal analysis, battery temperature prediction, IoT-enabled battery monitoring, and validation of intelligent battery management algorithms under real-world operating conditions.

Journal/Conference Papers

- P Debnath, S Das, T. K. Das, R. Debnath, S. Das Biswas “**Modelling, Simulation and Analysis of DC and AC Outputs using Hybrid PV and Wind power System for Remote and Hilly areas**”, published in **International Journal for Research in Applied Science & Engineering Technology (IJRASET), Volume 6, Issue VI, June 2018.**
- T. K. Das, R. Debnath, S. Das Biswas “**Modeling and Implementation of Advanced Electronic Circuit Breaker Technique for Protection**” Publication date 2020/2 Conference International Conference on Computer Communication and Internet of Things 2020 (ICCCIOT 2020) Publisher Tripura University (A Central University) & North Eastern Council, Government of India.
- Das, T.K., Sharma, A.K., Khanra, M. et al. **Multi-Criteria Decision-Making for LIB Cathode Selection: An OPA-IF-GRA Approach with Simulation Validation.** Journal of Materials Engineering and Performance (2026). <https://doi.org/10.1007/s11665-026-14191-5>

NPTEL Approved FDP Course.

- 12 days AICTE Training and Learning (ATAL) Academy Online Elementary FDP on “**Power Quality Disturbances in Smart Distribution Grid: Theories, Concepts and Solutions**” from 2023-05-13 to 2023-05-24 at NIT Agartala.
- 5 days AICTE Training and Learning (ATAL) Academy Online Elementary FDP on “**Artificial Intelligent in the Renewable Power Generation**” from 2021-10-18 to 2021-10-22 at University of Lucknow.
- 5 days AICTE Training and Learning (ATAL) Academy Online Elementary FDP on “**Smart cities**” from 2021-08-02 to 2021-08-06 at National Power Training Institute- Power Systems Training Institute.
- 5 days AICTE Training and Learning (ATAL) Academy Online Elementary FDP on “**Electrical Distribution System Analysis with Renewable Energy Sources** ” from 2021-07-22 to 2021-07-16 at National Institute of Technology, Kurukshetra.
- 5 days AICTE Training and Learning (ATAL) Academy Online Elementary FDP on “**AI Solution for Optimum Utilization of Power and Energy**” from 2021-07-05 to 2021-07-09 at National Institute of Technology, Srinagar.
- 5 days AICTE Training and Learning (ATAL) Academy Online Elementary FDP on “**Fuel Cell Technology**” from 2021-06-21 to 2021-06-25 at National Institute of Technology, Rourkela.
- 5 days online Faculty Development program on “**Statistical Learning-Based internet of Things (IoT)**”

conducted by Rajasthan Technical University Kota, Sponsored by TEQIP-III, 10th march 2021-14th march 2021.

- 5 days AICTE Training and Learning (ATAL) Academy Online FDP on "**Energy Storage**" from 2021-2-22 to 2021-2-26 at Malaviya National Institute of Technology Jaipur.
- One Week Online Faculty Development Programme on **LaTeX**, from 29th June, 2020 to 3rd July, 2020, conducted by the Department of Information Technology, Mizoram University in association with Spoken Tutorial Project, IIT Bombay.
- 5 days AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "**Energy, Sustainability & Climate Change**" from 2025-01-16 to 2025-01-22 at Tripura Institute of Technology.
- 5 days AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "**Emerging Power Converter Topologies and Control Methods for Electric Vehicles and Renewable Energy Systems**" from 2025-11-17 to 2025-11-22 at Tripura Institute of Technology.
- FDP 12 weeks NPTEL online certification course "**Introduction of internet of Things**" July-oct 2019.
- FDP 12 weeks NPTEL online certification course "**OBE and Accreditation**" July-oct 2019.

Short term course/Conference/seminar/workshop attended:

- Workshop on "**Home Automation System**", November 2016 at Tripura University.
- Short term course on "**Power Electronics and its Scopes of Application in North East India**", 23rd-25th August, 2017 at NIT Agartala.
- Workshop on "**Energy Production and Management**", 19th -23rd March, 2018 at NIT Agartala.
- Online Training Program on Electronic System Design Flow - **Architecture & Schematic Design Capture using OrCAD PSpice** conducted on 04 June 2020 organized by IEEE Bangalore section.
- one-week Short-term Staff Training Program on "**Recent Trends in Energy Conversion Technologies**" from July 13-20, 2020 with 25 CPD hours approved by Board of Engineers Malaysia (Ref. no: IEM20/MIRI/082/T), organized by Curtin University Malaysia in collaboration with The Institute of Engineers Malaysia.
- Two Days International Workshop on "**Recent Trends in Energy Harvesting and Storage Technologies**" held from 19th to 20th January 2023, at KL university, Andhra Pradesh.

Relevant Technical Skills:

- Electric Vehicle Battery Systems
- Battery Management System
- Lithium-ion Battery Testing: CCCV, HPPC, EIS, SOC-OCV
- Electro-Thermal Battery Modelling
- Battery Temperature Prediction
- IoT-Based Data Acquisition
- ESP32-Based Embedded Systems
- MATLAB/Simulink
- Machine Learning and Physics-Informed Neural Networks

Personal Data:

Date of Birth : - 16 April 1994.
Marital Status : - Married.
Nationality : - Indian.
Language known: - English, Bengali, Hindi.
Hobbies : - Reading newspaper, Watching and playing cricket, Travelling.

Declaration:

I hereby declare that all the above information given by me is completely true at the best extent of my knowledge.

Date: - 02/07/2026

Place: - Agartala.



TUSHAR KANTI DAS