Jusmita Das

Curriculum Vitae

Department of Electronics & Instrumentation Engineering
National Institute of Technology Silchar
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Linkedin

Research Interest

Equivalent circuit models, Battery technology, Energy storage systems, Battery modelling & testing, Electrode fabrication and characterisation.

Teaching Interest

Electrical circuits and networks, Digital electronics, Analog electronics, Electrical and electronic Measurements, Sensors and transducers, Control systems.

Education

2019–2025 : **PhD, Electronics & Instrumentation Engineering**, *National Institute of Technology Silchar*, (Thesis submitted in March 2025).

2016–2018 : **Master of Technology, Electronics & Instrumentation Engineering**, *National Institute of Technology Silchar (Percentage: 74%).*

2011–2015 : **Bachelor of Technology, Electronics & Instrumentation Engineering**, *National Institute of Technology Agartala (Percentage: 71%).*

2011 : **Higher Secondary (+2 stage) Examination**, *Tripura Board of Secondary Education*, .
Physics, Chemistry, Mathematics, Biology, English, Bengali (Percentage: 67%).

2009 : **Madhyamik Examination**, *Tripura Board of Secondary Education*.
Mathematics, Physical Science, Life Science, Geography, History, English, Bengali (Percentage: 71%).

Publications

- **Jusmita Das** et al. "Design and Validation of a Nonlinear Electrical Equivalent Circuit Model of Vanadium Redox Flow Battery Considering Variable Flow Rate." **Journal of Energy Storage (2025)**. **Elsevier** DOI: https://doi.org/10.1016/j.est.2025.116006 **(Q_1)**. **(I.F 8.9)**
- **Jusmita Das** et al. "Electrical Equivalent Circuit Model and RC Parameter Estimation for Vanadium Redox Flow Battery by Considering Self-discharge." **Arabian Journal for Science and Engineering** (2024): 1-12. **Springer Nature.** DOI: https://doi.org/10.1007/s13369-024-08828-7 **(Q_1)**. **(I.F 2.6)**
- **Jusmita Das** and Rajdeep Dasgupta, "A Review and Analysis of Electrical Equivalent Circuit Models of Vanadium Redox Flow Battery" **Emerging Electronics and Automation**: Select Proceedings of E2A 2021, 183-192. Lecture Notes in Electrical Engineering 937. **Springer**. DOI: https://doi.org/10.1007/978-981-19-4300-3-15 **(Scopus Indexed)**

Fellowships & Awards

2024 **Selected** for a leadership program and received ***Travel Support by IIT Delhi, India*** to attend ***2nd Transformative Leadership in STEMM (TLS) Workshop for Ph.D. Scholars.***

2022 Received ***Travel Grant*** for visiting Green Energy Lab at IIEST Shibpur, India.

2019 –2024 ***Doctoral Fellowship*** of Ministry of Education (MOE), Government of India, as a PhD research scholar at National Institute of Technology Silchar.

2016 –2018 ***Fellowship*** of Ministry of Education (MOE), Government of India, as an M.Tech scholar at National Institute of Technology Silchar.

2016 **Qualified GATE** (Graduate Aptitude Test in Engineering) Electronics and Instrumentation Engineering examination.

2011 **Qualified AIEEE** (All India Engineering Entrance Examination.)

2007 **Completed Senior Diploma** in Rabindra Sangeet and Rabindra Nritya.

2007 **Received *Sangeet Prabhakar award*** *by Bangiya Sangeet Parishad Examination Board, West Bengal.*

Skills

Programming Languages: MATLAB/Simulink, LabVIEW, Multisim, PSIM, PLC.

Tools: Origin, Draw.io.

Editors: Microsoft Office, LaTeX.

Hardware: Battery operation and testing, Electrochemical impedance spectroscopy, UV-visible spectroscopy, Cyclic voltammetry, Analog and Digital circuit design.

Languages

English, Bengali, Hindi, Assamese.

Academic Responsibility

2022–present **Volunteered and participated in various national/international Conferences, seminars, and workshops**, NIT Silchar.

2023 January–June **Student representative Departmental Ph.D. Monitoring Committee (DPMC)**, Department of Electronics & Instrumentation Engineering, NIT Silchar.

2023–present **Webmaster**, Instrumentation and Measurement Society, NIT Silchar.

2023–present **Organised workshops, online webinar, Distinguished Lectures and Panel discussion for IEEE IMS-CSS-SPS student branch chapter**, NIT Silchar.

Teaching Assistantship

Spring, 2024 : **Electrical and electronics measurements and instrumentation lab; and tutorial class**, NIT Silchar.

Fall, 2023 : **Preparation of lecture material and tutorial sheets for Electrical and electronics measurements and instrumentation; and Transducers and Sensors**, NIT Silchar.

Spring, 2023 : **Electrical and electronics measurements and instrumentation lab; and tutorial class**, NIT Silchar.

Fall, 2022 : **Industrial process control and automation lab**, NIT Silchar.

Spring, 2022 : **Electrical and electronics measurements and instrumentation lab; and tutorial class**, NIT Silchar.

Fall, 2021 : **Industrial process control and automation lab**, NIT Silchar.

Spring, 2021 : **Sensor and Transducers lab; and tutorial class**, NIT Silchar.

Fall, 2020 : **Industrial process control and automation lab**, NIT Silchar.

Spring, 2018 : **Digital electronics lab**, NIT Silchar.

Fall, 2017 : **Circuits and networks lab**, NIT Silchar.

Strengths

- Confident
- Persistent and loyal
- Social and friendly in nature
- Good listener and quick learner
- Positive-minded.
- Leader and motivator

Declaration

I, therefore, solemnly assure that all the above details are accurate to the best of my knowledge.

Referees

Dr. Rajdeep Dasgupta
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Dr. Jayanta Kumar Rakshit
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