

CURRICULUM VITAE



Name, Designation, and Organization

Dr. Nirmalya Mallick

Assistant Professor and Head

Department of Electrical Engineering

Sanaka Educational Trust's Group of Institutions

West Bengal, India

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Google Scholar: <https://scholar.google.co.in/citations?user=zxLb3IUAAAAJ&hl=en>

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Web of Science Researcher Id: AAA-8622-2021

Vidwan Profile: <https://vidwan.inflibnet.ac.in/profile/291249>

Career Objective:

It is my aim to strengthen my academic career with a leading University/Institute as a person of dedication and fully committed to hard work. I always desire to explore myself & aspire to play an influential role in teaching, learning, and research. I am a firm believer in adaptability and advocate for a practical way of teaching. My goal is to use my abilities to train the students to realize their aspirations.

Academic Records:

Class/Course	College/Institute	Board/University	Year	% Marks/OGPA
Ph.D. in Full-time (Electrical Engg.)	Indian Institute of Technology (Indian School of Mines), Dhanbad	IIT (ISM), Jharkhand, India	2016- 2021	Degree Awarded
M.Tech. (Power System Engg.)	Indian Institute of Technology (Indian School of Mines), Dhanbad	IIT (ISM), Jharkhand, India	2014- 2016	9.36
GATE			2014	Rank: 1786 & 98.74 percentile
B.Tech (Electrical Engg.)	Techno India, Salt Lake	WBUT	2009- 2013	8.53
Higher Secondary	Ballygunge Govt. High School	WBCHSE	2009	82.2%

Madhyamik (Secondary)	Behala Aryya Vidyamandir	WBBSE	2007	88.25%
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Professional Experience:**(a) Work Experience:**

Organization	Designation	Year
Sanaka Educational Trust's Group of Institutions	Head of the Department	October 2022-present
Sanaka Educational Trust's Group of Institutions	Assistant Professor	August 2022-present
Dumka Engineering College (NBA Accredited and NAAC Affiliated) (Estd. by Govt. of Jharkhand & run by Techno India under PPP)	Assistant Professor	October 2021-August 2022

(b) Research Experience:

Organization	Designation	Year
Indian Institute of Technology (Indian School of Mines), Dhanbad	Senior Research Fellow	2016-2021

(c) Laboratories Handled (Online/Offline mode):

Course Name	Level (UG/PG)
✓ Basic Electrical Technology Lab	UG
✓ Electrical Machine Lab	UG & PG
✓ Power System Lab	UG
✓ Control System Lab	PG
✓ MATLAB basics	PG

(d) Worked as: 1) Head of the Department at Sanaka Educational Trust's Group of Institutions
2) Lab in charge of "Power System Lab" in Dumka Engineering College.

3) **Worked for NBA** in Dumka Engineering College and Sanaka Educational Trust's Group of Institutions

3) Departmental committee member for 'NAAC' affiliation in Dumka Engineering College (NAAC Affiliated)

(e) Reviewer of:

- ✓ IET Power Electronics
- ✓ ISA Transactions
- ✓ MEIE2021: The 4th International Conference on Mechanical, Electric and Industrial Engineering, China
- ✓ IEEE International Conference on Electrical, Computer, Communications, and Mechatronics Engineering (ICECCME 2021)
- ✓ The 6th International Conference on New Energy and Future Energy Systems (NEFES 2021)
- ✓ International Conference on Electrical, Computer and Energy Technologies, Cape Town, South Africa (ICECET 2021)
- ✓ SEGAN (Sustainable Energy, Grids and Networks)
- ✓ **Appointed reviewer** of American Journal of Electrical Power and Energy Systems (EPES)

(f) Invited Member:

1. In the "**Technical Programming Committee (TPC)**", ICAE 2021, China
2. In the "**Technical Programming Committee (TPC)**", Electrical Power and Energy Systems, Epower conference (<http://www.epesconf.com>), 2022

(g) Regional Editor and an invited member of the **Editorial Advisory Board** of Journal Européen des Systèmes Automatisés (JESA), (**International Information & Engineering Technology Association (IIETA)**)

(h) Talk delivered in as a Resource Person:

1. "**AICTE Sponsored STTP on Energy Management and Control System for Smart Renewable Energy Remote Power Generation**", EEE, AITS, Rajampet, 27th April, 2021.
2. "**IEEE PES Sponsored Smart Practices Towards Tomorrow's Electric Power Paradigm**", EE, GMIT, Kolkata, 28th May, 2021.
3. Expert talk in "**Technical Webinar**" at Dept. of Electrical Engineering, Swami Vivekananda School of Diploma, Durgapur, 11th June, 2021.
4. As a resource person with Prof. Vivekananda Mukherjee in FDP in DRIEMS, Odhisa, 6th Jan, 2022
5. Expert talk in "**Six days online Faculty Development Program**" at Dept. of Electrical Engineering, Swami Vivekananda School of Diploma, Durgapur, 2023

(i) Seminar / Workshop Organized:

- **International: Co-ordinator for the one-day International Seminar** on “Performance and Economic Analysis of Hydrogen-based Fuel Cell with Photovoltaic Tracking System,” organized by the Department of Electrical Engineering, Dumka Engineering College.
- **National: Co-ordinator for the three-day National** workshop on “Cutting Edge Technologies for Electrical Engineering” from 10th March 2022 to 12th March 2022, organized by Dumka Engineering College (Department of Electrical Engineering)”

Member of the Professional Body:

- **National Institute for Technical Training & Skill Development (NITTSD)**
- **Institute for Engineering Research and Publication (IFERP):** Lifetime Membership
- **International Association of Engineers (IAENG)**
- Member in **All India Council for Technical Skill Development**
- **International Association of Electrical, Electronic and Energy Engineering (IAEEEE)**
- **Affiliated Member in International Association of Academic plus Corporate**

Research Profile:

- (a) **Research Area in Ph.D.:** “*Solution of Voltage Sag in a Distribution System using Renewable Energy Integrated Smart Dynamic Voltage Restorer*”, Supervisor: Prof. Vivekananda Mukherjee, Department of Electrical Engineering, Indian Institute of Technology, Dhanbad
- (b) **M.Tech. Thesis Title:** “*Comparative Performance Assessment of PI and Fuzzy-PI Controlled Dynamic Voltage Restorer for Voltage Sag Mitigation*”, Supervisor: Prof. Vivekananda Mukherjee, Department of Electrical Engineering, Indian Institute of Technology, Dhanbad
- (c) **B.Tech Thesis Title:** “*Transient Stability-Constrained Optimal Power Flow*”, Supervisor: Dr. Priyanka Roy, Department of Electrical Engineering, Techno India, Salt Lake

Area of Interest:

Dynamic Voltage Restorer, Fuzzy Control, Power Quality Improvement, Renewable Energy, Voltage Control

Summary of Research Work (Ph.D.):

System complexity and enhanced sensitivity related to the modern power network navigate the engineers more apprehensive owing to elevate power quality. Inclusion of power electronics accompanied by system interconnection drives the power industry to be more intricate and fault-prone. Eventually, the disruption of power, even for a small time-span, may steer the equipment to malfunctioning and, therefore, enormous data loss may take place leading to significant fiscal damage.

Subsequently, the provision of secured power becomes the most challenging factor for the electrical engineers. In this endeavour, the establishment of reliable and secured power supply is quite appurtenant for the recent age energy driven economy. Therefore, in this effort, the following works have been carried out.

- Analysis of voltage sag is performed in both single-phase and three-phase network topology and subsequent information have been studied.
- In the context of sag mitigation, reduced power-factor controlled energy-optimized dynamic voltage restorer (DVR) topology has been devised.
- To include robustness and to configure the smart, artificially intelligent DVR, execution of fuzzy control (type-1, type-2 and closed-loop type-2) in the core of the DVR arrangement has been explored.
- In the period of scientific improvisation, modern industrialization, and globalization, to ensure the reliability with eco-friendly sources, the proposal of inclusion of photovoltaic and fuel cell in DVR has been made and validated.
- To eliminate the frailty of a single source, hybridization of renewables has been examined.

International Journal Published (SCI/SCIE):

Google Scholar	
Citations	34
h-index	3

- [1] **Mallick, N.** and Mukherjee, V. “Artificially Intelligent MPPT-based photovoltaic integrated smart dynamic voltage restorer,” *International Transactions on Electrical Energy Systems*, 2021. DOI: <https://doi.org/10.1002/2050-7038.13230> [SCI] [I.F: 2.86]
- [2] **Mallick, N.** and Mukherjee, V. “Maximum power point tracking supported proton exchange membrane fuel cell based intelligent dynamic voltage restorer,” *International Journal of Hydrogen Energy*, 2020, 45 (53), pp. 29271-87 [SCI] [I.F: 7.139]
- [3] **Mallick, N.** and Mukherjee, V. “Interval type 2 fuzzy logic controlled advanced dynamic voltage restorer for voltage sag alleviation,” *IET Generation Transmission & Distribution*, 2019, 13 (14), pp. 3020-28. [SCI] [I.F: 2.995]
- [4] **Mallick, N.** and Mukherjee, V. “Self-tuned fuzzy-proportional-integral compensated zero/minimum active power algorithm based dynamic voltage restorer,” *IET Generation Transmission & Distribution*, 2018, 12 (11), pp. 2778-87 [SCI] [I.F: 2.995]

- [5] Roy, R., Mallick, N., Nandi, A., *et al.* “Investigation and analysis of electric vehicles for table operating conditions,” *International Journal of Creative Research Thoughts*, 2022, 10 (10), pp. 338-344
- [6] Mallick, N. and Mukherjee, V. “Advanced Variable Control Embedded Fuzzy-PI Modulated Dynamic Voltage Restorer for Voltage Sag Alleviation,” under review.

Seminar/course attended:

- “*Insight into Fuzzy Modelling: Reasoning in Fuzzy Natural Logic and Its Applications*”, 23rd - 27th Oct., 2017, Indian Institute of Technology (Indian School of Mines), Dept. of Electrical Engineering, Dhanbad, India.
- “*Power Electronics and Control Aspects of Microgrid Systems*”, 26th - 30th Dec., 2018, National Institute of Technology, Rourkela, India.
- “*Global Renewable Power Generation Scenario and Challenges in Microgrids*”, 21st Sept., 2020, National Institute of Technology, Silchar, India.
- *FDP on “Emerging Trends in Electrical Engineering”*, 18th - 22nd Jan. 2021, Swami Vivekananda School of Diploma, West Bengal, India.
- “*Power System Restructuring & Renewable Energy Integration (PSRREI) 2.0*”, 13th - 17th July, 2020, Bharati Vidyapeeth’s College of Engineering, New Delhi, India.
- “*Technologies for the Global Energy Transition: Smart grid, HVDC Interconnectors, Energy Storage and Clear Power Production*”, 16th July, 2020, Manipal University, Jaipur, India.
- “*Recent Trends in Green Energy and Smart Grids*”, 20th – 24th Dec., 2020, Veermata Jijabai Technological Institute, Mumbai, India.
- “*Application of Power Electronics and Drives to Industry (APEDI-2021)*”, 2nd – 6th March, 2021, National Institute of Technology, Sikkim.
- “*Power Electronics Converter for Renewable Energy Systems*”, 15th Feb, 2021, Techno India University, India.
- “*Renewable Energies and Plug-In Vehicles Integration in Microgrid (REPVIM-2021)*”, 26th - 30th Nov, 2021, NIT Rourkela.
- “*Advanced Emerging Technologies, Research, and Practical Application*”, 18th May, 2022, IFERP
- “*Evolution of Intelligent Systems*”, 11th May, 2022, IFERP
- “*Renewable Energy Systems and Sustainability-Education, Research, and Outreach*”, 16th Oct, 2020, IFERP
- "Energy Literacy Training": Certificate of energy literacy, Energy Swaraj Foundation.
- One-week online faculty development program on “Ai and Machine Learning”, January 18-22, 2023, University Institute of Technology (Uit) Himachal Pradesh University, Shimla

- One-week online faculty development program on, “Research Opportunities In Ai, Mi & Iot In The Field Of Electrical Engineering, 08th -14th Feb, 2023, Gmit, Kolkata
- Certification Of Participation in Adobe Academic Essentials Program

Industrial Training:

Organization	Period
CESC Limited	02/01/2012-14/01/2012
West Bengal State Electricity Transmission Company Limited	11/06/2012-23/06/2012
Bharat Coking Coal Limited	05/06/2015-04/07/2015

Core Subjects:

- Electrical Machines
- Power System
- Network Theory

Computer and Language Skills:

- **Electrical Engg., Software:** MATLAB Toolbox, Simulink
- **Programming Languages:** MATLAB
- **Operating Systems:** Windows 10/XP/Vista/7/8
- **Others:** MS word, Excel, Power Point, Whiteboard

Strength:

- Always a ‘yes’ to learn
- Hard-working, thereby flexible with working hours
- Team-player, but has capability to resolve problems independently

Academic Honors:

- GATE qualified in 2013
- GATE qualified in 2014 with 98.74 percentile

Personal Profile:

Name: Nirmalya Mallick
Father's name: Sri. Niharendu Mallick
Mother's Name Smt. Pala Mallick
Father's Occupation Govt. Employee, Rtd. (BSNL)
Mother's Occupation Teacher
Nationality: Indian
Mother Tongue Bengali
Sex Male
D.o.B 09/02/1992
Languages Bengali, Hindi, English
Discipline of Study Electrical Engineering

Permanent Address:

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Kolkata-700063

Present Address:

50/4, R.N.Tagore Road, Nabapally,
Kolkata-700063

Reference Person:

1. Prof. Vivekananda Mukherjee, Associate Professor, Department of Electrical Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad - 826004, Jharkhand (India), Tel.: +91 0326 2235644; Mob.: +91 9471191127; Email: vivek_agamani@yahoo.com.
2. Dr. Gauri Shankar, Assistant Professor, Department of Electrical Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad - 826004, Jharkhand (India), Tel.: +0326 223 5633; Email: gauri1983@gmail.com.
3. Dr. Bikash Das, Assistant Professor, Govt. College of Engineering and Textile Technology, Beharampur, Murshidabad-74211, Tel.: +91 9903270908, Email: bcazdas@gmail.com.

Declaration:

I do hereby declare that the information furnished above is true to the best of my knowledge and belief.

Place: Durgapur

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