

## CURRICULUM VITAE

### Paresh Kumar Nayak

Associate Professor  
Department of Electrical Engineering  
Indian Institute of Technology (ISM) Dhanbad  
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### Research Interest:

Protection, control and monitoring of power transmission and distribution networks including FACTS devices and large-scale integration of renewable energy resources (Wind/Solar).

Power management control strategy for grid connected electric vehicle charging stations equipped with rooftop solar photovoltaic systems.

### Educational Qualifications:

**Ph.D. (Engg.) 2014**, EE/IIT Kharagpur.

Thesis Title: Innovative Algorithms to Support Distance Relay for Different Power Networks during Critical Conditions.

**Msc (Engg.) 2003**, Specialization – High Voltage Engineering, IISc Bangalore.

Thesis Title: Experimental Investigations on the Lightning Surge Response of Some Lightning Protection Systems.

**B.E. 2000**, **Specialization** – Electrical Engineering, VSSUT, (Formerly UCE) Burla, Odisha.

### Work Experience:

#### Teaching Experience:

**13.04.2022 – present:** Associate Professor, EE/IIT(ISM) Dhanbad.

**19.08.2014 – 12.04.2022:** Assistant Professor, EE/IIT(ISM) Dhanbad.

**12.09.2013 – 18.08.2014:** Assistant Professor, EE/NIT Patna.

**01.08.2008 – 14.07.2009:** Assistant Professor, EE/KIIT University, Bhubaneswar.

**08.08.2005 – 31.07.2008:** Senior Lecturer, EE/KIIT University, Bhubaneswar.

**05.07.2000 – 09.05.2001:** Lecturer (part-time), EE/VSSUT, (Formerly UCE) Burla.

### Industry Experience:

**November 2004 to July 2005:** Transformer Design Engineer, Transformers and Rectifiers (India) Ltd., Ahmadabad.

**March 2004 to October 2004:** Management Trainee, Transformer Design, Kirloskar Electric Co. Ltd., Bangalore.

### Publications:

|   |           |
|---|-----------|
| No. of Papers Published in International Journals                 | <b>33</b> |
| No. of Book Chapters  | <b>06</b> |
| Papers Published in National/International Conference Proceedings | <b>26</b> |

**M.Tech Project Guidance (Sole Guide):** Completed: **26** and On Going: **01**

**Ph.D Guidance (Sole Guide):** Awarded = **06** and On Going = **05**

| Sl. No. | Name of PhD Scholar  | Thesis Title  | Status         |
|---------|----------------------|---|----------------|
| 1.      | Manoj Kumar Senapati | New Control Strategies for Power Management in Grid Connected and Standalone Renewable Systems                                    | Awarded (2020) |
| 2.      | Kumari Sarwagya      | New Algorithms for Detection of High Impedance Faults and Coordination of Protective Relays in Modern Power Distribution Networks | Awarded (2021) |
| 3.      | Sauvik Biswas        | Analysis and Protection of FACTS Compensated Transmission Lines with High Penetration of Wind Power                               | Awarded (2021) |
| 4.      | Bhatraj Anudeep      | Improved Relaying Schemes for Microgrid Protection  | Awarded (2022) |
| 5.      | Prabhu M. S.         | Performance Improvement of Distance Relay during Power Swing and High Penetration of Wind Power                                   | Awarded (2022) |
| 6.      | Subodh Kumar Mohanty | Algorithms to Support Distance Relay Protecting FACTS Compensated Transmission Lines Including Wind Farms                         | Awarded (2024) |
| 7.      | Sikander Singh       | Ongoing   |                |
| 8.      | Shubham Kumar        | Ongoing   |                |
| 9.      | Pankaj Kumar         | Ongoing   |                |
| 10.     | Anish Kumar          | Ongoing   |                |
| 11.     | Suswagata Satpathy   | Ongoing   |                |

### Courses Taught:

1) **Indian Institute of Technology (ISM) Dhanbad**

**UG:** Electrical Technology/Basics of Electrical Engineering, Applied Electrical Engineering, Electrical Machines-I, Electrical Machines and Power System Design, Reactive Power and Voltage Control, Industrial Control and Automation, and Switchgear and Protection, Smart Grid Technology.

**PG:** Power System Operation and Control, Smart Grid Technology

2) **National Institute of Technology Patna**

**UG:** Electrical Technology, Electrical Machines-I, Switchgear and Protection.

**PG:** Advanced Power System Protection.

3) **KIIT University, Bhubaneswar, Odisha**

**UG:** Electrical Technology, Network Theory, Electrical Machines-I and II, Electrical Power Transmission and Distribution, Electromagnetic Field theory, Control System-I, High Voltage Engineering, Utilization of Electric Power, and Renewable Energy.

### Laboratories taken:

**UG:** Electrical Technology Lab, Electrical Machines Lab – I and II, Network Theory Lab, Power System Lab, Modelling and Simulation Lab, Switchgear and Protection Lab.

**PG:** Advanced Power System Protection Lab.

### **Contribution to Laboratory Development at IIT(ISM) Dhanbad:**

**Faculty in charge (2015-2022):** Electrical Technology Laboratory

Developed two new experimental set ups for Electrical Technology Lab. The experiments are used for 1<sup>st</sup> year B-Tech (common) students.

**Faculty in charge (2018-present):** Switchgear and Protection Laboratory

Developed two new experimental set up for Switchgear and Protection Lab. The experiment is used for Final Year B-Tech (EE) and M-Tech (PSE) students.

### **New Syllabus Prepared for M. Tech (Power System Engg.), EE/IIT(ISM) Dhanbad:**

Advanced Power System Protection [L-T-P: 3-1-0]

### **Project Completed:**

Title: Study and Implementation of PMU for Real-Time Monitoring, Control and Protection of Power System, Project value = Rs. 10.00 lakh, Sponsoring agency: IIT(ISM) Dhanbad (2015-2018).

### **Invited Lecture Delivered/Keynote Speaker/Session Chair/Conference Organized:**

- 1) Acting as **Co-Convenor** of 1<sup>st</sup> IEEE International Conference on Smart and Sustainable Developments in Electrical Engineering (SSDEE-2025) scheduled to be held during 28<sup>th</sup> February 2025 to 2<sup>nd</sup> March 2025 at the Department of Electrical Engineering, IIT(ISM) Dhanbad.
- 2) **Session Chair** in the 1<sup>st</sup> International Conference on Smart Energy and Advancement in Power Technologies (ICSEAPT-2021) organized by the Department of Electrical Engineering, in NIT Jamshedpur during 6<sup>th</sup> – 8<sup>th</sup> September 2021.
- 3) **Keynote Speaker and Chairperson** for the Session “PS-4, Day-2 in the *Electrical Power and Renewable Energy Conference-2020 (EPREC-2020)* held on 29<sup>th</sup>-30<sup>th</sup> May, 2020 organized by the Dept. of Electrical Engineering, NIT Jamshedpur.
- 4) **Delivered an expert talk** in the TEQIP-III Sponsored Five days Online Short-Term Course on “*Recent Trends in Renewable Energy and Power System*” organized by the Dept. of Electrical Engineering, NIT Raipur from 20<sup>th</sup> September to 24<sup>th</sup> September 2020.
- 5) **Delivered an expert talk** in the online Short-Term Course on “*Recent Trends in Microgrid (RTM-2020)*” organized by the Dept. of Electrical Engineering, NIT Jamshedpur from 27<sup>th</sup> October to 31<sup>st</sup> October 2020.
- 6) **Delivered an expert talk** on “Synchronphasor Application for Wide-Area Monitoring and Protection of Modern Power System” in the online Short-Term Course on “*Future trends in Wide Area-based Power Systems Control and Protection (WACP-2020)*” organized by the Dept. of Electrical Engineering, MNNIT Allahabad, Allahabad-211004 from 13<sup>th</sup> October to 17<sup>th</sup> October 2020.
- 7) **Delivered an expert talk** on “Relays for Electric Power Network (Transmission & Distribution) Protection”. **Programme Name:** Recent Challenges and Mitigation Thereof on Electrical Safety in Mines on 28<sup>th</sup> June 2018. **Organisation:** IIT(ISM) Dhanbad.
- 8) **Delivered an expert talk** on “Distance Relaying for Transmission Line Protection” and “Synchronphasor Applications to Power System Protection”. **Programme Name:** Faculty Development Programme on 28<sup>th</sup> June 2015. **Organisation:** KIIT University, Bhubaneswar.
- 9) **Delivered an expert talk** on “Effects of Transient Surges/ Over Voltages due to Lightning”. **Programme Name:** Seminar-cum-workshop on “Disaster Mitigation Program against Lightning” on 25<sup>th</sup> July 2008. **Organisation:** Institution of Engineers (India), Bhubaneswar.

### **Administrative Responsibility at IIT(ISM) Dhanbad:**

- 1) **Departmental UG Convenor:** 26<sup>th</sup> Oct-2022 to present.
- 2) **Institute Time-Table Committee Member:** From 22<sup>nd</sup> Nov-2018 - 31<sup>st</sup> Dec-2024.
- 3) **Coordinator:** NBA Accreditation of Electrical Engineering Department.

- 4) **Faculty Advisor:** 1<sup>st</sup> year B-Tech, Electrical Engineering since 1<sup>st</sup> Dec-2014 to 1<sup>st</sup> Dec-2013.
- 5) **Faculty Coordinator:** 1<sup>st</sup> year B. E. (common), Afghanistan students for winter and summer semesters, 2014-2015 from Electrical Engineering Department.
- 6) **Faculty Coordinator:** 1<sup>st</sup> year B. E. (Petroleum Engineering), Sudan Students for winter semester, 2017-2018 from Electrical Engineering Department

### **Professional Services:**

**Conference Organized:** Acted as **Program Co-Chair** for 2025 1<sup>st</sup> IEEE International Conference on Smart and Sustainable Developments in Electrical Engineering (SSDEE-2025) organized during 28<sup>th</sup> February - 2<sup>nd</sup> March 2025.

### **International Journals (Reviewer):**

IEEE Trans. on Power Delivery, IEEE Trans. on Smart Grid, IEEE Systems Journal, IEEE Trans. On Industrial Informatics, IET Generation Transmission and Distribution, IET Science Measurement and Technology, Electric Power Components and Systems (Taylor & Francis), Int. Journal Electric Power Energy System (Elsevier Science), Electric Power System Research (Elsevier Science), International Trans. on Electrical Power and Energy System etc.

### **International Conferences (Reviewer/Meta-reviewer):**

National Power Systems Conference (NPSC) organized in different years at IIT Guwahati, IIT Bhubaneswar, IIT Delhi, IIT Indore etc. INDICON-2017, IIT Roorkee and PEDES-2018, IIT Guwahati etc.

### **Membership in Professional Associations:**

**Senior Member IEEE, USA** (Membership Id: 92512028)

**Life Member, Indian Society for Technical Education** (LM-54491)

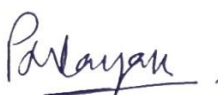
### **Academic Honours and Awards:**

Received “POSOCO Power System Award (PPSA)” from Power System Operation Corporation (POSOCO), a subsidiary of Power Grid Corporation of India Ltd (POWERGRID) and Foundation for Innovation & Technology Transfer (FITT), IIT, Delhi in 2015 for research carried out at doctoral level.

### **Declaration:**

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

Date: 11.03.2025  
IIT(ISM), Dhanbad

  
(Paresh Kumar Nayak)