

## **Dr. ANJU YADAV**

**Ph. D. (Electrical Engineering), Nov 2024.**

**M. Tech. (Control & Instrumentation)**

**B. Tech. (Instrumentation Engineering)**

**Address:** 279 O Block, Yashoda  
Nagar, Kanpur, 208011, India.

**Email:** [anjupyadav1994@gmail.com](mailto:anjupyadav1994@gmail.com)

**Mobile No.:** +91-8115815844

### **Profile Summary:**

As an experienced doctorate in Electrical Engineering, I am enthusiastic about pursuing teaching opportunities. I possess in-depth knowledge of core electrical engineering, with a specialization in control and instrumentation. I am a goal-oriented and passionate individual, driven by achieving impactful results. My primary research interests include automation, wireless sensor networks, the Internet of Things, and the operation and control of microgrids. During my Ph.D. research, I focused on the modeling, control, and experimental characterization of PV-integrated battery energy storage systems in low-voltage distribution networks, with the objective of maintaining node-voltage stability under high renewable penetration. My work involved perturbation-based model identification and control-oriented analysis to quantify the impact of coordinated PV–battery control on voltage regulation and system stability. The outcomes provide practical insights into voltage management strategies for inverter-dominated distribution networks. I am proficient in MATLAB, OpenDSS, RTDS, C, C++, LabVIEW, and Python.

I have previously served as a Guest Lecturer in the Electrical Engineering Department at Madan Mohan Malaviya University of Technology, Gorakhpur, Uttar Pradesh, India, from 2019 to 2020. I have recently been awarded a Ph.D. in Electrical Engineering from Motilal Nehru National Institute of Technology Allahabad, India. [Currently, I am working as Guest Lecturer in the Electronics Engineering Department at Harcourt Butler Technical University \(HBTU\), Kanpur from 13/Jan/2025.](#)

### **Educational Qualifications:**

<b>Qualification</b>	<b>School/College/Board</b>	<b>Percentage/CGPA</b>	<b>Year of Passing</b>
Ph.D.	MNNIT Allahabad, Prayagraj	8.5 CGPA	Degree Awarded (Nov 2024)
GATE - 2020	IIT–Delhi / MHRD	384 score	2020
M. Tech. (Control & Instrumentation)	MMMUT, Gorakhpur	8.91 CGPA	2019
B. Tech. (Instrumentation Engineering)	I.E.T Bundelkhand University, Jhansi	79.4 %	2016
Intermediate	UP Board	78.2 %	2012
High School	UP Board	82.3 %	2010

## Publications:

### Journals:

- J1. A. Yadav**, N. Kishor, R. Negi, R. Lazzari, “Characterization and modeling of battery energy storage systems for voltage behavior analysis in low-voltage microgrids,” *Energy Storage*, 2026. **(Under Review)**
- J2. A. Yadav**, N. Kishor, R. Negi, R. Lazzari, “model identification for voltage improvement in energy resources integrated distribution network,” *Smart Energy*, p. 100216, Nov 2025.
- J3. A. Yadav**, N. Kishor, R. Negi, “Voltage profile analysis at planning and operational stages with allowable PV hosting capacity,” *IET Renewable Power Generation*, vol. 18, no. 1, pp. 14-29, Jan 2024.
- J4. A. Yadav**, N. Kishor, R. Negi, M. Opas, P. Raussi, “Performance analysis of bus voltage in distribution network with high penetration of PV controlled via data-driven approach” *International Transactions on Electrical Energy Systems*, vol. 2023, Sep 2023.
- J5. A. Yadav**, N. Kishor, R. Negi, “Bus voltage violations under different solar radiation profiles and load changes with optimally placed and sized PV system,” *Energies*, vol. 16, no. 2, pp. 653, Jan 2023.

### Book Chapters:

1. I. Verma and **A. Yadav**, "IoT-based telemedicine for disease prevention and health **promotion**: A technological breakthrough," *Telemedicine and E-Health Essentials*, P. K. Singh and S. Akhtar, Eds. Boca Raton, FL, USA: Taylor & Francis Group, 2025, Ch. 7, pp. 141–160.

### Conferences:

- C1. A. Yadav**, N. Kishor, and R. Negi, “Neural Network based Identification of 3- $\Phi$  Battery Energy Storage Systems with Different Capacities,” *IEEE 4th International Conference on Power, Control, and Computing Technologies (ICPC2T) 2025*, Raipur, chhattisgarh, India, 20<sup>th</sup>-22<sup>nd</sup> Jan, 2025. IEEE.
- C2. A. Yadav**, R. Priyadarshi, N. Kishor, and R. Negi, “Assessment of Bus Voltage Variations in the Distribution Network using PDF Estimators,” *IEEE 11th Power India International Conference*, Jaipur, India, 10<sup>th</sup>-12<sup>th</sup> Dec, 2024. IEEE.
- C3. R. Priyadarshi, A. Yadav**, N. Kishor, and R. Negi, “Data-driven Modeling of Distribution Network using Experimental Data,” *IEEE 11th Power India International Conference*, Jaipur, India, 10<sup>th</sup>-12<sup>th</sup> Dec, 2024. IEEE.
- C4. A. Yadav**, N. Kishor, R. Negi, M. Opas, P. Raussi, “Voltage Profile Improvement in Distribution Network Under Transient Solar Radiation Conditions,” *InIEEE EUROCON 2023-20th International Conference on Smart Technologies*, Torino, Italy, 6-8 Jul 2023, (pp. 614-619). IEEE.
- C5. A. Yadav**, N. Kishor, R. Negi, “Analysis on Bus Voltage with Optimal Placement and Size of PV System for Different Solar Radiation and Load Changes,” *In2023 5th International Conference on Power, Control & Embedded Systems (ICPCES)*, Allahabad, India, 6-8 Jan 2023, (pp. 1-6). IEEE.

- C6. A. Yadav**, N. Kishor, R. Negi, “Voltage profile analysis in distribution network for allowable hosting capacity from PV integration,” *In2022 1st International Conference on Sustainable Technology for Power and Energy Systems (STPES), Srinagar, India, 4-6 Jul 2022*, (pp. 1-6). IEEE.
- C7. A. Yadav**, L. B. Prasad, “IOT Devices for Control Applications: A Review”, *3<sup>rd</sup> International Conference on Electronics, Communication and Aerospace Technology (ICECA-2019), ISBN: 978-1-7281-0167-5, Jun 2019*. IEEE.
- C8. A. Yadav**, L. B. Prasad, “Application of IOT Devices for Smart Car Parking System”, ‘*International Conference on Advances in Electronics, Electrical & Computational Intelligence (ICAEEC-2019)*’ SSRN-id3575462, Apr. 2020. IEEE.

### Work Experience:

1. Currently working as [Guest Lecturer in the Electronics Department at Harcourt Butler Technical University \(HBTU\), Kanpur from 13/Jan/2025](#).
2. Worked as Research scholar at **Motilal Nehru National Institute of Technology Prayagraj, Allahabad** from September 2020 to November 2024.
3. Worked as Visiting Researcher at **Ricerca sul Sistema Energetico-RSE SpA, Milan Italy**, from July 2023 to August 2023.
4. Worked as Visiting Researcher at **VTT Technical Research Centre of Finland, Espoo, Finland**, from September 2022 to October 2022.
5. Worked as Guest Faculty at **Madan Mohan Malviya University of Technology (MMMUT), Gorakhpur** from July 2019 to August 2020.

### Technical Skills:

1. Basic Knowledge of DlgSILENT PowerFactory Software.
2. Basic Knowledge of RSCAD Software.
3. MATLAB Software.
4. OpenDSS Software.
5. Internet of Things (IOT).
6. Python Language.
7. Raspberry Pi Board.
8. Arduino Integrated Development Environment (IDE)
9. Arduino Uno Board.
10. LabView 2017.
11. PLC and SCADA.

### Trainings:

1. Certificate of completion of 6 weeks training program of MATLAB from ‘**Cetpa Infotech Private Limited**’, Delhi from 21/Nov/2020 to 01/Jan/2021.
2. Completed 8 weeks of training at ‘**Raja Ramanna Centre for Advanced Technology (RRCAT) Indore**’, Department of Atomic Energy, Government of India on the topic of “**Orientation Course on Lasers and Accelerators (OCAL)**” from May 2018 to July 2018.

3. Completed 4 weeks industrial training from ‘**Bharat Heavy Electricals Limited (BHEL)**’, **Jhansi** from 17/June/2015 to 14/July/2015.
4. Certificate of completion of 4 weeks vocational training program in **PLC & SCADA** software’s from ‘**Cetpa Infotech Private Limited**’, **Lucknow** from 10/July/2014 to 06/Aug/2014.

### **Workshops, Short Term Course & Faculty Development Programme:**

1. One-week short term course on “Multi-Agent Systems and Distributed Control (MAS 2024)” organized at Motilal Nehru National Institute of Technology Allahabad, Prayagraj from 27th September – 1st October 2024.
2. Certificate of presentation in the First User Workshop of the ERIGrid 2.0 project, organized online on 20/Oct/2023.
3. One-week short term course on “Emerging Control Methodologies and Resilience: Industry 4.0 (ECMR-2023)” organized at Motilal Nehru National Institute of Technology Allahabad, Prayagraj from 16<sup>th</sup> - 20<sup>th</sup> August 2023.
4. One-week short term course on “Future trends in Wide Area-based Power Systems Control and Protection (WACP-2020)” organized at Motilal Nehru National Institute of Technology Allahabad, Prayagraj from 13<sup>th</sup> - 17<sup>th</sup> October 2020.
5. One week faculty development program on “Recent Advances in Electrical, Electronics & Communication Engineering” organized at Galgotias University from 6<sup>th</sup> - 10<sup>th</sup> May 2024.

### **Field of Interest:**

1. Energy policy and benefits in society
2. Smart Grid.
3. Optimization of Power System.
4. Internet of Things (IOT).
5. Industrial instrumentation and process control.
6. Bio-Medical Instrumentation.
7. Sensor and Transducers.
8. Digital Electronics.

### **Project Undertaken:**

1. Worked as a Visiting Researcher from **1/July/2023 to 30/July/2023** on the project titled “**Model Identification for Voltage Improvement in Distribution Networks – Energy Resources Equivalence (MOTIVATION-ERA)**”. The project was conducted at the experimental test facility of **Ricerca sul Sistema Energetico (RSE), Italy**, under the **ERIGrid 2.0** framework (<https://erigrd2.eu/>). The facility comprises rooftop PV systems (24 kW), battery energy storage systems, controllable generators, and controllable loads, along with additional power resources. The work involved experimental characterization of energy storage systems through the injection of multiple step changes in active and reactive power at the voltage source converters interfacing the ESSs, enabling dynamic model identification and voltage response analysis. The outcomes of this research have resulted in **one journal publications (J2), two conference paper (C1), and (C3)**, with an additional **journal manuscript (J1) currently under review**.

2. Worked as a Visiting Researcher at VTT Technical Research Centre of Finland, Espoo, Finland, from September 2022 to October 2022 on the ERIGrid 2.0–funded project titled “*PERformance analysis of PV-integrated distribution networks with a combination of different control strategies and communication networks (PERFECT)*” (<https://erigrd2.eu/user-projects/#/>). The project focused on applying local data-driven voltage sensitivity estimation to adaptively update **volt–var and volt–watt control functions** of PV inverters for effective bus-voltage regulation. Voltage behavior at selected network buses was analyzed using **power-hardware-in-the-loop (PHIL) simulations with a PV emulator**, while the remaining PV units were controlled using conventional **volt–var (VVC) and volt–watt (VWC) strategies**. The outcomes of this work resulted in **one journal publication (J4) and one conference publication (C4)**.
3. A working model of Internet of Things (IOT) based “Smart Car Parking System”.
4. A working model of ‘Liquid Level Measurement System’ using Ultrasonic Sensor (HC-SR04) and Arduino Uno Board in which monitoring and controlling is done by using LabVIEW 2017 and programming is done on Arduino IDE.
5. A working model of Radio frequency identification (RFID) based attendance cum security system.
6. A working model of ‘Obstacle Avoiding IR Sensor’ using microcontroller ATMEGA ‘89s52’.
7. A working model of ‘Gas Leakage Detector’ using microcontroller ATMEGA ‘89s52’.

### IT Proficiency:

1. Microsoft Office Word, Microsoft Office Excel, and Microsoft Office Power Point.
2. Windows (Win-7, 10).
3. Basic knowledge of C, C<sup>++</sup>, and Python languages.

### Achievements:

1. **Gold Medalist of Madan Mohan Malviya University of Technology (MMMUT), M. Tech. (C&I) Batch: 2017-2019.**
2. **Awarded Scholarship at RRCAT, Indore.**
3. **Topper of Instrumentation Engineering (IN) of I.E.T, Bundelkhand University, Jhansi Batch: 2012-1016.**
4. **III<sup>rd</sup> Topper of BANDA district in High School Examinations-2010**
5. Fee waver seat allotted by Prashad Group of institutions.
6. Holding **1<sup>st</sup> position** in quiz competition ‘ULLHAS’.
7. **1<sup>st</sup> position** in “Rangoli Making” competitions at University Level.
8. **1<sup>st</sup> position** in “Poster Making” competitions at School Level.

### Position of Responsibilities Held:

1. Organizer of University level Competition Events.
2. Cultural event team’s member of Dean Student Welfare (DSW).
3. House captain.

### Extra-Curricular Activities:

1. **Review** the paper for **IET Renewable Power Generation (Wiley)** in 2023.
2. **Review** the conference papers for **BITCON-2024**.

3. Participated in “Women Marathon” on the occasion ‘Women’s Day’ at MMMUT, Gorakhpur, U.P.
4. Blood donation camps (Organizer committee and Participant).
5. Participated in Tree plantation camps.
6. Participated in Cleaning Drives in University campus and Historical Places like: Jhansi fort, Orchha fort etc.

### **Strengths:**

1. Sense of responsibility.
2. Learning attitude.
3. Communication Skills.
4. Team work.
5. Ability to bond with superior, colleague, and subordinates.
6. Can handle various tasks at the same time.

### **Personal Profile:**

- **Father’s Name:** Late. Mr. Ram Milan Yadav
- **Mother’s Name:** Mrs. Savitri Yadav
- **Languages Known:** Hindi and English
- **Hobbies:** Drawing, Cooking, Rangoli Making and Meditation.