

Monika Bhardwaj

Department of Electrical and Electronics Engineering (Room No.: 642C)

Maharaja Agrasen Institute of Technology

(Affiliated to: Guru Gobind Singh Indraprastha University, New Delhi)

(Ranked 21st University by National Institutional Ranking Framework, MHRD, Govt. of India.)

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Highlights

<ul style="list-style-type: none">• Micro Grid Control• Power System Stability Analysis• Advanced Control Systems	<ul style="list-style-type: none">• Computing Platforms: Windows, Macintosh• Programming Languages: Java (Core and Advanced), C, C++• Tools: MATLAB, SCADA, PLC• Languages: German (Level 2), English, Hindi• Software packages: PSS/E
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Accomplishments

I have good knowledge base of Sliding Mode, Optimal, Adaptive and Robust Control that needs an esteemed platform like yours to grow and develop; Also, I hold the basics of JAVA, C, C++, OFFICE COMPUTING and knowledge of engineering software MATLAB, PSS/E, SCADA and PLC. Further, I have a knack of rising to the occasion and delivering in the most difficult hostile situations. AI Security & Governance Certified by Securiti in July 2025; AWS Academy Educator (April 07, 2025), AWS Academy GenAI Foundations (August 11, 2025), AWS Academy Machine Learning Foundations (August 18, 2025).

Experience

- **Assistant Professor** (September 2012 – July 2017)
Dr. Akhilesh Das Gupta Institute of Technology & Management (formerly known as Northern India Engineering College) (GGSIU), New Delhi
- **Assistant Professor** (August 2017 – Till Date)
Maharaja Agrasen Institute of Technology (GGSIU), New Delhi

Education

- **Master of Technology (Ex M. Tech.: Artificial Intelligence)**, 2025 onwards
Indian Institute of Technology (IIT), Bhilai, Chattisgarh, India
- **Ph.D. in Electrical Engineering (Pursuing)**, 2017 onwards
Amity University, Noida, Uttar Pradesh, India
- **Master of Technology (M. Tech.: Control Systems)**, 2015 (CGPA: 8.93/10) **Gold Medal**
Amity University, Noida, Uttar Pradesh, India
- **Bachelor of Technology (B. Tech.: Electrical and Electronics Engineering)**, 2012 (81.20%): 3rd Rank in College.
Dr. Akhilesh Das Gupta Institute of Technology & Management (formerly known as Northern India Engineering College) (GGSIU), New Delhi, India
- **12th Board (CBSE)**, 2008 (88.60%)
St. Mark's Sr. Sec. Public School, New Delhi, India

- **10th Board (CBSE), 2006 (92.60%)**
St. Mark's Sr. Sec. Public School, New Delhi, India

Patent(s)

- Design Patent registered for **AI Based Mental Health Checking Device** under The Patent Office, Govt of India in June **2025**
- Design Patent registered for **AI Based Asthma Detection Device** under The Patent Office, Govt of India in December **2024**

Publications and Conferences

- Authored a paper on **Opportunities and Challenges Related to AI in Education** at the **1st IEEE International Conference on Recent Trends in Computing and Smart Mobility Conference (RCSM 2025)** held at MANIT, Bhopal, India during December 05-06, **2025**
- Presented a paper on **Transformative effect of AI in Education** at the **International Conference on Transforming Higher Education for Future: Education 4.0 (THEC 2025)** held at Thapar Institute of Engineering and Technology, Patiala, Punjab, India during September 26-27, **2025**
- Presented a paper on **Optimization Driven Control of Grid connected Microgrids: A Review of Recent Advances and Future Directions** at the **11th International Conference on Electrical Energy Systems (ICEES 2025)** organized by the Department of Electrical and Electronics Engineering, Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam, India during August 21-23, **2025** pp. 552-555, doi: 10.1109/ICEES67011.2025.11212975
- Published a paper on **Grid-connected PV inverter system control optimization using Grey Wolf optimized PID controller**. *Sci Rep* **15**, 28869, August **2025**. <https://doi.org/10.1038/s41598-025-10617-7>
- Presented a paper on **Mental Health Monitoring Device** at the **6th International Conference on Recent Advances in Information Technology (RAIT 2025)** held at the Indian Institute of Technology (Indian School of Mines), Dhanbad, India from 06-08 March **2025**, pp. 1-6, doi: 10.1109/RAIT65068.2025.11089379
- Presented a paper on **Integrated Cleaning and Sun Tracker for Solar Panels** in the **International Conference on Advanced Materials for Sustainable Innovation (IC – AMSI 2024)** organized by VIPS-TC, School of Engineering and Technology during 29-30 August **2024**, 978-981-96-4491-9, 630811_1_En, (Chapter 17), Springer Proceed. in Energy, DOI: https://doi.org/10.1007/978-981-96-4492-6_17
- Published a Book Chapter titled **Strategic Integration of AI in Materials Science for Enhanced Performance** in the IIP Book Series "Advancing Innovation in Smart Systems, Energy, Materials, and Manufacturing: Unleashing the Potential of IoT, AI, and Edge Intelligence", IIP Series, Volume 3, October, **2024**, Page no.235-258, e-ISBN: 978-93-6252-115-6, DOI/Link: <https://www.doi.org/10.58532/nbennuraich13>
- Published a Book Chapter titled **Manufacturing Excellence: Harnessing the Power of AI and Edge Intelligence**, in the IIP Book Series "Advancing Innovation in Smart Systems, Energy, Materials, and Manufacturing: Unleashing the Potential of IoT, AI, and Edge Intelligence", IIP Series, Volume 3, October, **2024**, Page no.123-140, e-ISBN: 978-93-6252-115-6, DOI/Link: <https://www.doi.org/10.58532/nbennuraich7>
- Presented a paper on **Automatic Solar Panel Cleaning System for Dust and Dirt Removal** in **5th International Conference on Electric Power and Renewable Energy (EPREC 2024)** organized by Department of Electrical Engineering, NIT Jamshedpur

during 24-26 May 2024; **Won Best Paper Award**; DOI: https://doi.org/10.1007/978-981-96-0104-2_13

- Presented a paper on **Power Quality Enhancement and Coordination Control of a Microgrid System connected to a Grid using Hybrid Optimization Approach in International Conference on Power, Instrumentation, Energy, and Control (PIECON-2023)** organized by Department of Electrical Engineering in **Aligarh Muslim University**, Uttar Pradesh, India during 10th - 12th February 2023; pp. 1-6, doi: 10.1109/PIECON56912.2023.10085750
- Presented a paper on **Performance analysis of a Microgrid system connected to a Grid using EHO Optimization Technique** in the **1st International Conference on Smart Energy and Advancement in Power Technologies (ICSEAPT-2021)** organized by the Department of Electrical Engineering, in **National Institute of Technology Jamshedpur**, Jharkhand, India during 6th – 8th September 2021; Published in **Smart Energy and Advancement in Power Technologies, Lecture Notes in Electrical Engineering 926, Springer**, ISBN No: Volume 1 978-981-19-4970-8, Volume 2 978-981-19-4974-6, Series ISSN 1876-1100, Series E-ISSN 1876-1119. https://doi.org/10.1007/978-981-19-4971-5_2
- Presented a paper on **Performance Enhancement of a Grid Connected Micro Grid System using PSO Optimization Technique** at **IEEE International Conference on Computing, Communication and Intelligent Systems (Technically co-sponsored by IEEE UP Section)** organized by School of Engineering and Technology, **Sharda University, Greater Noida**, Uttar Pradesh on 18-19th October 2019; Published on **IEEE Xplore Digital Library**; pp. 110-115, doi: 10.1109/ICCCIS48478.2019.8974480
- Presented a paper on **Adaptive Intelligence Techniques for Microgrid Systems in National Conference on Innovative & Emerging Trends in Engineering and Technology (IETET-2019)** held at **ADGITM (GGSIPU)**, Shastri Park on 18-19th April 2019
- Presented a paper on **Study of Dynamic Behavior of Machines in an Interconnected System in REDSET 2015 (2nd International Conference)** held at **G.D. Goenka University, Gurgaon** on 30-31st October 2015; Published in **International Journal of Applied Engineering Research (IJAER)**, Vol.10, No. 94, pp. 63-68, 2015
- Published a paper on **High Power Boost Converter for 1.3KW Portable DC Application in International Journal of Advance Research in Science & Engineering (ISSN 2319-8354)**, Volume 03, Issue 09, September 2014

Book Publication(s)

Monika Bhardwaj, Aabhas Bhardwaj, *The Sharp Edge of AI Thought Leadership: Lead with purpose, lift others, and leave a legacy that lasts*, Amazon Kindle Edition, 2025.

Membership(s)

- **Lifetime Member in Indian Society for Technical Education (ISTE)** since April 2022
- **Lifetime Member in Institution of Engineers (India)** placed in Electrical Engineering Division since July 2021

Achievements and Awards

- Participated & Awarded Certificate in **Faculty Training Program on Faculty-Industry Interaction: Exploring Emerging Technologies** organized by Department of Electrical and Electronics Engineering, Maharaja Agrasen Institute of Technology from December 17-19, **2025**
- Awarded **Appreciation Certificates/Research Incentives** for publishing papers in SCI/Scopus Journals in 2024-2025 on the occasion of Teacher's Day at **MAIT** in September **2025**
- Received **Letters of Appreciation** for coordinating Summer School 2025 in ITE Department, Summer Training Program 2025 in EEE Department and CATPAI Cohort Batch 1 Program at Maharaja Agrasen Institute of Technology during July -August **2025**
- Participated & Awarded Certificate in One Week **Short Term Course on Power System Restructuring & Renewable Energy Integration (PSRREI 7.0)** at Bharati Vidyapeeth's College of Engineering, Delhi held during August 04-08, **2025**
- Participated & Awarded Certificate in One Week **Short Term Course on Renewable Energy Control & Network Integration for Smart Grids (RE-CONNECT- 2025)** at Netaji Subhas University of Technology, New Delhi, India held during May 26-30, **2025**
- Participated & Awarded Certificate in 6 weeks **Generative AI workshop for Certified Advanced Technology Professional in Artificial Intelligence (CATPAI)** organized by Maharaja Agrasen Technical Education Society from March 25 – April 29, **2025**; Recognized for **Best Capstone Project**
- Participated & Awarded Certificate in Joint **Faculty Development Program on IoT Applications with Sensors, Embedded Systems and Data Analytics** jointly organized by Electronics and ICT Academies at IIT Roorkee, MNIT Jaipur, NIT Patna, IIT Guwahati and IIITDM Jabalpur under the assistance of Ministry of Electronics and Information Technology (MeitY) from February 17-28, **2025**
- Participated & Awarded Certificate in 1 week **Faculty Development Program on AI-ML Based Smart Grid** organized by Department of Electrical Engineering, Basaveshwar Engineering College Bagalkote, Karnataka from January 30 to February 03, **2025**
- Participated & Awarded Certificate in AICTE Training and Learning (ATAL) Academy **Faculty Development Program on Medical Imaging in “the Third Dimension: Advanced Techniques and Clinical Applications** at Maharaja Agrasen Institute of Technology from December 16-21, **2024**
- Participated & Awarded Certificate in **Faculty Development Program** by EdGate Technologies on **Artificial Intelligence, Machine Learning & Deep Learning** held at Intel Unnati Lab, Maharaja Agrasen Institute of Technology from December 02-06, **2024**
- Participated & Awarded Certificate in AICTE recognized **Faculty Development Program on Data Analysis of Cyber Attacks through ML and Deep Learning** conducted by Information Management and Emerging Engineering Department, NITTTR Chandigarh from November 25-29, **2024**
- Participated & Awarded Certificate in AICTE Training and Learning (ATAL) Academy **Faculty Development Program on Emerging Trends in Control Systems and Sensor Technologies** organized by Netaji Subhas University of Technology, New Delhi conducted from October 21-26, **2024**
- Participated & Awarded Certificate in a 5-day **Workshop on Sustainable Development: Intersection of Green Energy and e-Mobility (IGEEM 2024)** organized by Department of Electrical Engineering, NIT Rourkela and sponsored by Science and Engineering Research Board (SERB) from October 16-20, **2024** at NIT Rourkela, Odisha

- Awarded **Appreciation Certificate/Research Incentives** for publishing papers/Book Chapters in 2023-2024 on the occasion of Teacher's Day at **MAIT** in September **2024**
- Participated & Awarded Certificate in 1 Week **Faculty Development Program on Control Techniques for Renewable Energy Systems (CTRES 2024)** organized by Netaji Subhas University of Technology, New Delhi conducted from July 8-12, **2024**
- Participated & Awarded Certificate in 1 Week **Faculty Development Program on Generative AI** organized by the Department of Computer Science & Engineering, Maharaja Agrasen Institute of Technology, Delhi in collaboration with Azure Developer Community and Reskill held during July 8-12, **2024**
- Awarded **Course completion certificate on Optimization Onramp** by **MathWorks Training services** in May **2024**
- Participated and Awarded Certificate in a 3 days **Workshop on Introduction to MATLAB and Simulink** organized by Department of Electrical and Electronics Engineering, Maharaja Agrasen Institute of Technology from May 7-9, **2024**
- Participated & Awarded Certificate in 1 Week **National Faculty Development Program on AI Implementation in Electric Vehicles** organized by the Department of Electrical and Electronics Engineering, School of Engineering and Technology, Sandip University, Nashik, Maharashtra in collaboration with Pantech E-Learning conducted from April 22-27, **2024**
- Participated & Awarded Appreciation Certificate for outstanding **contribution** as a **member of MAIT Arrangement Committee** in Springer Nature's **3rd International Conference on Renewable Power (ICRP 2024)**, held on March 28-29, **2024** at MAIT Delhi
- Participated & Awarded Certificate in AICTE recognized **Faculty Development Program on SCILAB Programming for Scientific Applications** conducted by Information Management and Emerging Engineering Department, NITTTR Chandigarh from March 11-15, **2024**
- Participated & Awarded Certificate in AICTE Training and Learning (ATAL) Academy **Faculty Development Program on Semiconductor Materials, Devices, Design and Applications** at Maharaja Agrasen Institute of Technology from December 18-23, **2023**
- Awarded Certificate of contribution as **Reviewer** in the “**International Conference on Recent Developments in Control Automation and Power Engineering (RDCAPE 2023)**” at Amity University, Noida held in October **2023**
- Awarded **Appreciation Certificate** for publishing papers in 2022-2023 on the occasion of Teacher's Day at **MAIT** in September **2023**
- Participated and Awarded Certificate in **Faculty Development Program on “Python with Data Analytics”**, organized by Teaching Learning Centre, Ramanujan College, University of Delhi in collaboration with Department of Computer Science & Engineering, Maharaja Agrasen Institute of Technology from August 07-13, **2023**
- Participated and Awarded Certificate in Online **Faculty Development Program on “New Generation Digital Sub-Station”**, organized by Tata Power – DDL in Department of Electrical & Electronics Engineering, MAIT from May 18-19, **2023**
- **Appointed as Editorial Board Member of American Journal of Electrical and Computer Engineering (AJECE)** since April **2023**
- Awarded **Course completion certificate on Artificial Intelligence and Machine Learning Fundamentals** by Udemy in January **2023**
- Participated and Awarded Certificate in **Faculty Development Program on Recent Trends in Electrical Engineering** organized by Department of Electrical and Electronics Engineering from December 19-24, **2022**
- Awarded **Appreciation Certificate** for publishing papers in 2021-2022 on the occasion of Teacher's Day at **MAIT** in September **2022**

- Awarded **Appreciation Certificate** for publishing papers in 2020-2021 on the occasion of Teacher's Day at **MAIT** in September **2021**
- Participated and Awarded Certificate in Online **Faculty Development Program** on "**Latest Technologies and their Applications in Electrical Engineering and Future Energy**", organized by Department of Electrical & Electronics Engineering, Maharaja Agrasen Institute of Technology from August 16-20, **2021**
- Participated and Awarded Certificate in five days **short course** on "**Machine learning to Deep Learning: A journey for remote sensing data classification**" organized by **Indian Institute of Remote Sensing, Indian Space Research Organization**, Department of Space, Govt. of India from July 05-09, **2021**
- Participated and Awarded Certificate in Online **Faculty Development Program** on "**Advances in Renewable Energy and Smart Grid Integration**" organized by Department of Electrical and Electronics Engineering, Amity School of Engineering and Technology, Amity University Uttar Pradesh, Noida, India from May 31 – June 04, **2021**
- Participated and Awarded Certificate in one day **Webinar** on "**Electrical Power Systems, Renewable Energy, Smart Grids & Switchgear Protection**" using NEPLAN Simulation Software organized by IndiaSoft Technologies (P) Ltd., Pune on November 03, **2020**
- Participated and Awarded Certificate in **Faculty Development Program** on "**Cyber Security and Cryptography**" conducted by **Electronics and ICT Academy, IIT Roorkee** from October 07 - 11, **2020**
- Participated and Awarded Certificate in **Faculty Development Program** on "**Stress Management and Online Teaching Skills**" organized by Department of Electrical and Electronics Engineering, Maharaja Agrasen Institute of Technology from August 17-22, **2020**
- Participated and Awarded Certificate in one day **International Webinar** on "**Entrepreneurship in Technical Start Ups (ETS-2020)**" organized by Maharaja Agrasen Institute of Technology, Sector-22, Rohini, New Delhi on August 07, **2020**
- Participated and Awarded Certificate in online **Faculty Development Program** on "**Power Quality and Reactive Power Management**", organized by the Department of Electrical Engineering, Delhi Technological University, Delhi in association with Clariant Power System Ltd., Pune, from July 06 -10, **2020**
- Participated and Awarded Certificate in one week **E-Faculty Development Program** on "**Stress and Health Issues Due to COVID-19: Management and Technical Solutions**" organized by Maharaja Agrasen Institute of Technology, Sector-22, Rohini, New Delhi from July 06 – 10, **2020**
- Participated and Awarded Certificate for clearing **Quiz on Electrical Engineering**, organized jointly by EEE Department, BPIT and EEE Department, DTU on July 01, **2020**
- Participated and Awarded Certificate in two days International Webinar on "**Real Time Modeling & Control of Energy Systems and Devices**" organized by Department of Electrical and Electronics Engineering, JSS Academy of Technical Education, Noida from June 11 - 12, **2020**
- Participated and Awarded Certificate in five days **Faculty Development Program** on "**Recent Innovations and Technologies in Electric Vehicles**" organized by Electrical and Electronics Engineering Department, GATES Institute of Technology, Andhra Pradesh from June 08 – 12, **2020**
- Participated and Awarded Certificate in an online International Symposium on "**COVID 19 and Beyond: The new normal in HEIs**" conducted by Internal Quality Assurance Cell, J.C. Bose University of Science and Technology, YMCA, Faridabad on June 10, **2020**

- Participated and Awarded Certificate in one day **Faculty Development Program** on “**Recent Developments and Future Directions in Artificial Intelligence**” conducted by Amity University Uttar Pradesh, Noida on June 03, **2020**
- Participated and Awarded Certificate in webinar on “**Concepts of Robot Programming & Application**” conducted by IRTC, ASF, Ghaziabad on May 30, **2020**
- Participated and Awarded Certificate in webinar for **Faculty Development Program** on “**Outcome Based Education Software**” organized by vmedulife software services on May 28, **2020**
- Participated and Awarded Certificate in an online workshop on “**Awareness on Industry Safety during COVID 19**” organized by S.A Engineering College, Chennai on May 23, **2020**
- Participated and Awarded Certificate in an e-Workshop on “**How to Make Research Better & Matter too**” organized under the aegis of IQAC by Maharaja Agrasen Institute of Management Studies (MAIMs) established by Maharaja Agrasen Technical Education Society under GGSIPU, Delhi on May 18, **2020**
- Participated and Awarded Certificate in **Faculty Development Program** on “**Machine Learning and Its Applications**” conducted by **Electronics and ICT Academy, IIT Roorkee** from May 04 - 12, **2020**
- Participated and attended the **India First Leadership Talk Webinar** by **MHRD’s Innovation Cell** on May 9, **2020**
- Participated and Awarded Certificate in two days online workshop on “**Patent Drafting and Processing with Importance of Trademark and Copyright**” organized by **Journal of Advanced Engineering Research** powered by Hexacube India on May 6-7 **2020**
- Participated and attended the **India First Leadership Talk Webinar** by **MHRD’s Innovation Cell** on May 2, **2020**
- Awarded Certificate of contribution as **Reviewer** in the “**3rd IEEE International Conference on Recent Developments in Control Automation and Power Engineering (RDCAPE 2019)**” at Amity University, Noida held in October **2019**
- Participated and attended “**IEEE Authorship Workshop**” on “How to Publish a Technical Paper in IEEE” at Amity University, Noida in September **2019**
- Awarded **Appreciation Certificate** for publishing papers in 2018-2019 on the occasion of Teacher’s Day at **MAIT** in September **2019**
- Participated and Attended ‘Modern Trends in Renewable Energy Sources’; the **Faculty Development Program** conducted at **MAIT (GGSIPU), New Delhi** in May **2019**
- Participated and Attended ‘Green Energy – Clean Energy’; the **Training Program** conducted by **National Power Training Institute, Faridabad** on July 26, **2018**
- Participated and Attended ‘Green Energy – Clean Energy’; the **Faculty Development Program** conducted at **MAIT (GGSIPU), New Delhi** in July **2018**
- Participated and Attended ‘Two Week ISTE STTP on Electric Power System’; the **Faculty Development Program** conducted by **IIT Kharagpur** at **BPIT (GGSIPU), New Delhi** in July **2017**
- Headed as the **Event Organizer** and **Project Coordinator** in EEE Department, NIEC in **2015** and **2016**; **Won 1st prize in B.Tech. Major Project Competition 2017** as Mentor
- Acted as the **Organizer** in Annual-Cultural Fest **INNOVIZ 2017** and **ALUMNI MEET 2016** at NIEC
- Awarded **Merit cum Scholarship Certificates** for outstanding performances in M. Tech in **Amity University** in **2014** and **2015**
- Awarded Recognition Certificate for contribution as an **Organizer** in organizing a **seminar** on “Emerging Trends in Distribution Generation 2012” at NIEC

- Amongst the top 20 rank holders of GGSIP University and top 5 rank holders of NIEC in Electrical Department
- Awarded Appreciation Certificate by **Hindi Academy –Delhi** for securing **92%** marks in Hindi in CBSE Examination
- A **SCHOLARSHIP** holder in school and awarded appreciation certificate for securing **100%** marks in **Science** in CBSE Examination
- **Headed** the **ECO-CLUB** society in school and was awarded recognition
- Awarded **FIRST** Prize by Ramakrishna Mission in **ALL INDIA VIVEKANAND’S QUIZ** contest- 2003
- Awarded by Unified Council for participation in **National Level Science Talent Search Examination-2006**