

## Dr. Neelam Kassarwani

### Associate Professor

Office: Room No. 643, Block VI

Department of Electrical & Electronics Engineering

Maharaja, Agrasen Institute of Technology, Sector-22, Rohini, Delhi-86

Email: [neelamkassarwani@mait.ac.in](mailto:neelamkassarwani@mait.ac.in)



### Educational Qualifications:

- Ph.D. (Electrical Engineering), “Performance Study of Dynamic Voltage Restorer for Mitigation of Voltage Sags”, Electrical Engineering Department, NIT Kurukshetra, Haryana, 2019, <http://hdl.handle.net/10603/387410>
- M.E. (PAS), “Determination of Optimum Amount and Location of Series Compensation and SVS for an AC Transmission System”, Delhi College Engineering, Delhi University, Delhi, 2009
- B.E. (Electrical Engineering), Madan Mohan Malviya Engineering College, Gorakhpur University, Gorakhpur, 1987

### Area of Interest/Specialization:

- Power System, power quality, Dynamic Voltage Restorer, Materials in Electrical Systems, Load Frequency Control, Optimization Techniques, EHVAC & HVDC

### Experience (Teaching)

- Joined as Lecturer on 4<sup>th</sup> January, 2007 in Maharaja Agrasen Institute of Technology. Promoted as Associate Professor on 1<sup>st</sup> August, 2021 and working till date
- Worked as lecturer in Northern India Engineering College, Delhi from 23<sup>rd</sup> February, 2006 to 3<sup>rd</sup> January, 2007
- Worked as Guest Lecturer in Delhi College of Engineering from 14<sup>th</sup> December, 1999 to June, 2001
- Worked as Lecturer in Aryabhata Polytechnic from 9<sup>th</sup> December, 1999 to 30<sup>th</sup> January, 2006

### Experience (Industrial)

- Worked as Foreman in Rajan Electrical Works, Delhi from 01<sup>st</sup> August, 1997 to 22<sup>nd</sup> February, 2006

### Patent:

- Certificate of publication of “HAND VIBRATOR” in class 28-03 in pursuance of and subject to the provisions of the Designs Act, 2000 and Designs Rules, 2001.  
Application No.: 346308-001;  
Cbr Date: 15/07/2021;  
Cbr Number: 205269  
Journal No.: 50/2022  
Journal Date: 16/12/2022

### Accomplishments/Achievements:

- First Convener, and Organizer of International Conference on Renewable Power ICRP 2024, during 28<sup>th</sup> – 29<sup>th</sup> March 2024 in the college campus, MAIT. Hundred papers are accepted and will be published as proceedings of ICRP 2024 in Springer Nature’s Book series of Lecture Notes in Electrical Engineering.
- Best Paper Award for the paper “A Detailed Study for Power System Analysis in Transmission Substation (220 /66kv) using ETAP” presented in 3rd International Conference on Renewable Power 2024, March 2024
- Appreciation Award for publishing 7 Research Papers (2024)
- Appreciation Award for editing 2 Books (2024)

- Organized one day expert lecture on “IPR & IP Management for startups” on March 12, 2022 (Online Mode), organized by the Entrepreneurship Development Council and Institution’s Innovation Council (Ministry of HRD Initiative). The speaker was Mr. Vivek Arya of Engineering & Technology, Gurukul Kangri (Deemed University), Haridwar.
- Special session organizer of "Innovative Intelligent Techniques in Real-world Engineering" in Springer Nature's International Conference SIGMAA-2023.
- Appreciation Award for publishing 4 Research Papers (2023)
- Organized one day expert lecture on “Entrepreneurship and Innovation as career opportunity” on February 22, 2022 organized by with Institution’s Innovation Council (Ministry of HRD Initiative) in association with Entrepreneurship Development Council. Ms. Arushi Agarwal, Co-founder & CEO of Talentdecrypt was the speaker.
- Organized one day Seminar on “National Energy Conservation Day”, 14<sup>th</sup> December 2021 (On line Mode) organized by the EEE Department, MAIT in association with Institution’s Innovation Council (Ministry of HRD Initiative). The speaker was Prof. (Dr.) Bhaskar Singh of Central University of Jharkhand, Jharkhand.
- Appreciation Award for Paper publishing (2018)
- National Scholarship Holder from 1980-87
- Contributed to PS-I Lab with the Over-Head Line Insulators and Underground Cables of Transmission and Distribution Systems donated by NDPL

#### **Seminars / Workshops/Conference/Webinars/Faculty Development Programmes Attended**

- One-week Faculty Development programme on “Scilab Programming for Scientific Applications” conducted by Information Management and Emerging Engineering Department in NITTTR, Chandigarh from 11-03-2024 to 15-03-2024 at Maharaja Agrasen Institute of Technology, New Delhi.
- Three-day workshop on “Introduction to MATLAB & SIMULINK” organized by the Department of Electrical & Electronics Engineering, Maharaja Agrasen Institute of Technology, Delhi during 07 - 09 May, 2024.
- One-week Faculty Development Programme on “Python with Data Analytics” organized by the Department of Electrical & Electronics Engineering, Maharaja Agrasen Institute of Technology, Delhi during 07<sup>th</sup> -13<sup>th</sup> August, 2023.
- One-week Faculty Development Programme on “Recent Trends in Electrical Engineering” organized by the Department of Electrical & Electronics Engineering, Maharaja Agrasen Institute of Technology, Delhi during 19<sup>th</sup> -24<sup>th</sup> December, 2022.
- One-week online Faculty Development Programme on “Latest Technologies and their Applications in Electrical Engineering and Future Energy” organized by the Department of Electrical & Electronics Engineering, Maharaja Agrasen Institute of Technology, Delhi during 16<sup>th</sup> -20<sup>th</sup> August, 2021.
- One-week online Faculty Development Programme on “Stress Management and Online Teaching Skills” organized by Maharaja Agrasen Institute of Technology, New Delhi during 17<sup>th</sup> -22<sup>nd</sup> July, 2020.
- Five-day online Faculty Development Programme 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 during 06<sup>th</sup> -10<sup>th</sup> July, 2020.
- Five-day online Faculty Development Programme on “Stress and Health Issues Due to COVID: Management and Technical Solutions” organized by Maharaja Agrasen Institute of Technology, New Delhi during 6<sup>th</sup> -10<sup>th</sup> July, 2020.
- First Leadership Talk webinar broadcasted on 2<sup>nd</sup> May, 2020 by MHRD’s Innovation Cell.
- one-week FDP on “Modern Trends in Renewable Energy Sources” organized by Maharaja Agrasen Institute of Technology, Rohini, Sector-22 from May, 2019 at MAIT, Delhi-110086 in offline mode.

- one-week FDP on “Green Energy-Clean Energy” organized by Maharaja Agrasen Institute of Technology, Rohini, Sector-22 from 23 July, 2018 to 28 July, 2018 at MAIT, Delhi-110086.
- Participated in a two-week ISTE STTP on “Electric Power System” conducted by IIT Kharagpur from 12<sup>th</sup> June to 15<sup>th</sup> July, 2017. (Online activity equivalent to one week from 10<sup>th</sup> July to 15<sup>th</sup> July, 2017). This workshop was held under the National Mission on Education through ICT (MHRD, Govt. of India).
- Three-day Training Programme on “Solar Renewable Energy” organized by The National Institute for Entrepreneurship and Small Business Development under Ministry of Skill Development and Entrepreneurship, Govt. of India from 29<sup>th</sup> March to 1<sup>st</sup> April, 2017 at MAIT, Delhi-110086.
- training program on “SCADA, Renewable Energy & smart grid” organized by National Power Training Institute, Ministry of Power, Govt. of India from 20<sup>th</sup> March, 2017 to 22 March, 2017.
- A two-day 1<sup>st</sup> Annual Conference on “Women in Power” organized by IEEE PES from 11-12 March, 2017 at Jacaranda Hall, India Habitat Centre, Lodhi Road, New Delhi-110003.
- Training Program on “Power Sector and State-Of- The Art Technologies [Skill Development] from 29<sup>th</sup> to 31<sup>st</sup> August, 2016 at MAIT, Delhi.
- One day seminar on “Advancements in Power, Energy and Control Systems” held on 2nd May, 2016 organized by electrical and electronics engineering department MAIT sponsored by DRDO Delhi.
- the technical training program on “Solar Energy” held at Maharaja Agrasen Institute of Technology, Delhi from 01- 02 April, 2016 organized by The National Institute for Entrepreneurship and Small Business Development under Ministry of Skill Development and Entrepreneurship, Govt. of India.
- one day IEEE workshop entitled “IEEE Workshop on Power Quality” organized by IEEE PES- IAS Delhi Chapter, at Electrical engineering department, IIT Delhi on 25<sup>th</sup> November 2015.
- Two-week ISTE workshop on “Control Systems” conducted by IIT Kharagpur from 2<sup>nd</sup> to 12<sup>th</sup> December, 2014 held under the National Mission on Education through ICT (MHRD, Govt. of India).
- TEQIP-II sponsored One Week Faculty Development programme on “Recent Trends in Switchgear and Protection” organized by Department of Electrical Engineering, Delhi Technological University, Delhi during 21 - 25 July, 2014.
- One-day National Seminar on “Recent Trends in Electrical Power Systems” on 1<sup>st</sup> March, 2013 organized by Electrical and Electronics Engineering Department, MAIT and sponsored by DRDO, Delhi.
- one day workshop on “Information Security Systems, Software & Ethical Hacking” on 5<sup>th</sup> May, 2012 conducted jointly by Maharaja Agrasen Institute of Technology and M/s. VMDD Technologies, Delhi.
- National Electrical Engineering Conference (NEEC-2011) on “Energy Systems for Tomorrow” held w.e.f. 16-17 December, 2011.

#### **Faculty Coordinator:**

- Departmental Library In-charge of EEE Department
- Lab In-charge of Power System-I
- Subject coordinator of Power System-I

#### **Publications:**

##### **1. Journals**

- Kassarwani, N., Ohri, J., & Singh, A. (2017). Design and performance of dynamic voltage restorer using genetic algorithm. *International Journal of Electronics*, 105(1), 88–103 (Taylor & Francis publication, Thomson Reuters Impact factor = 0.73) <https://doi.org/10.1080/00207217.2017.1347828>
- Neelam Kassarwani, Kassarwani, N., Ohri, J., & Singh, A. (2018). Performance analysis of dynamic voltage restorer using improved PSO technique. *International Journal of Electronics*, 106(2), 212–236.

<https://doi.org/10.1080/00207217.2018.1519859> (Taylor & Francis publication, Thomson Reuters Impact factor = 0.73).

- Neelam Kassarwani, Kassarwani, N., Ohri, J., & Singh, A. (2018). Performance analysis of dynamic voltage restorer using modified sliding mode control. *International Journal of Electronics Letters*, 7(1), 25–39. <https://doi.org/10.1080/21681724.2017.1419508> (Taylor & Francis publication, Thomson Reuters Impact factor = 0.85).
- Neelam Kassarwani, Jyoti Ohri and Alka Singh (2013), ‘Simplified performance of dynamic voltage restorer’, *International Journal of Systems, Algorithms & Applications*, Vol. 3(13), pp.139-142 (IJSAA, IJSA, KISI Impact factor = 2.302).
- Kassarwani, N., Ohri, J., & Singh, A. (2023). Comparative Performance Study of DVR Using Adaptive LMS Filtering-Based Algorithms. *Electric Power Components and Systems*, Vol. 52(7), pp. 1054–1081. (Taylor & Francis) <https://doi.org/10.1080/15325008.2023.2238694> (SCI with Impact Factor 1.5)
- Kassarwani Neelam, "Application of LMS Algorithm for Mitigation of Voltage Sag as Power Quality Problem," in *Applications of Big Data and Artificial Intelligence in Smart Energy Systems: Volume 2 - Energy Planning, Operations, Control and Market Perspectives*, River Publishers, 2023, pp. 97-126, ISSN: 25160230. 65.
- P. Khetarpal, N. Nagpal, M. S. Al-Numay, P. Siano, Y. Arya and N. Kassarwani, "[Power Quality Disturbances Detection and Classification Based on Deep Convolution Auto-Encoder Networks](#)," *IEEE Access*, vol. 11, pp. 46026-46038, 2023, doi: 10.1109/ACCESS.2023.3274732. (SCIE with Impact Factor 3.9)
- H. H. Alhelou, N. Nagpal, N. Kassarwani and P. Siano, "[Decentralized Optimized Integral Sliding Mode-Based Load Frequency Control for Interconnected Multi-Area Power Systems](#)," in *IEEE Access*, vol. 11, pp. 32296-32307, 2023, <https://doi.org/10.1109/ACCESS.2023.3262790>.(SCIE with Impact Factor 3.9)
- **Khetarpal, P.**, Nagpal, N., Kumar, M., Lakshmi, D., Kassarwani, N. (2024). “[Short-Term Electricity Load Forecasting Using Modified Hidden Markov Model](#)”, *Renewable Power for Sustainable Growth, ICRP 2023. Lecture Notes in Electrical Engineering*, vol 1086, pp. 61-74, Springer, Singapore. 2024. [https://doi.org/10.1007/978-981-99-6749-0\\_4](https://doi.org/10.1007/978-981-99-6749-0_4)
- **Kassarwani, N.**, Nagpal, N., Sehgal, J., Siano, P. (2024). “[Optimized Integral Sliding Mode Load Frequency Control of an Isolated Power System](#)”, In: Malik, H., Mishra, S., Sood, Y.R., Iqbal, A., Ustun, T.S. (eds) *Renewable Power for Sustainable Growth. ICRP 2023. Lecture Notes in Electrical Engineering*, vol 1086, pp. 751-762, Springer, Singapore. [https://doi.org/10.1007/978-981-99-6749-0\\_49](https://doi.org/10.1007/978-981-99-6749-0_49)
- D. Lakshmi, R. S. Tiwari, N. Nagpal, N. Kassarwani, G. Vishnuvarthanan and A. Srivastava, "Comparative Study on Forecasting of Schedule Generation in Delhi Region for the Resilient Power Grid Using Machine Learning," in *IEEE Transactions on Industry Applications*, vol. 60, no. 2, pp. 2107-2116, March-April 2024, doi: 10.1109/TIA.2023.3316646.
- Kumar, M., Das, R., Tyagi, A., Nagpal, N., Kassarwani, N., Aggarwal, N. (2024). Machine Learning Algorithms to Diagnose Parkinson’s Disease Using Vocal Data. In: Malik, H., Mishra, S., Sood, Y.R., García Márquez, F.P., Ustun, T.S. (eds) *International Conference on Signal, Machines, Automation, and Algorithm. SIGMAA 2023. Advances in Intelligent Systems and Computing*, vol 1460. Springer, Singapore. [https://doi.org/10.1007/978-981-97-6349-8\\_8N](https://doi.org/10.1007/978-981-97-6349-8_8N).
- S. Roy, H. Gautam, Lakshmi D., S. Gupta, N. Nagpal, N. Kassarwani, “The Utilization of AI in Renewable Energy Systems,” in 3rd International conference on Renewable Power ICRP-2024, Scopus Indexed, March 2024 (**Under Publication**)
- H. Gautam, S. Roy, Lakshmi D, S. Garg, N. Kassarwani, N. Nagpal, “Exploring the Integration of Cyber-Physical Systems and IoT in Smart Grid Technologies,” 3rd International conference ICRP2024, Scopus Indexed, March 2024 (**Under Publication**)
- Kumar, M., Das, R., Tyagi, A., Nagpal, N., Kassarwani, N., Aggarwal, N. (2024). Machine Learning Algorithms to Diagnose Parkinson’s Disease Using Vocal Data. In: Malik, H., Mishra, S., Sood, Y.R., García Márquez, F.P., Ustun, T.S. (eds) *International Conference on Signal, Machines, Automation, and*

Algorithm. SIGMAA 2023. Advances in Intelligent Systems and Computing, vol 1460. Springer, Singapore. [https://doi.org/10.1007/978-981-97-6349-8\\_8](https://doi.org/10.1007/978-981-97-6349-8_8)

- V. Suri, R. Sharma, N. Nagpal, N. Kassarwani, S. S. Deswal and S. Panda, "Coordinated VSG-SMES Control for Enhanced Frequency Stability in Hybrid Power Systems," *2025 International Conference on Power Electronics and Energy (ICPEE)*, Bhubaneswar, India, 2025, pp. 1-6, doi: 10.1109/ICPEE65973.2025.11411538.

## 2. Conference Papers

- Kassarwani, N., Nagpal, N., Siano, P., Al-Numay, M.S., Sharma, R. (2026). Comparative Performance Study of Dynamic Voltage Restorer Employing Various Conventional Control Approaches. In: Malik, H., Mishra, S., Sood, Y., Iqbal, A., Ustun, T.S. (eds) Renewable Power for Sustainable Growth. ICRP 2024. Lecture Notes in Electrical Engineering, vol 6667. Springer, Singapore. [https://doi.org/10.1007/978-981-95-3389-3\\_30](https://doi.org/10.1007/978-981-95-3389-3_30)
- Tiwari, N., Kumar, R., Bisht, N.S., Nagpal, N., Kassarwani, N., Jha, U.K. (2026). Classification and Location of Cable Fault in Underground Cable. In: Malik, H., Mishra, S., Sood, Y., Iqbal, A., Ustun, T.S. (eds) Renewable Power for Sustainable Growth. ICRP 2024. Lecture Notes in Electrical Engineering, vol 6667. Springer, Singapore. [https://doi.org/10.1007/978-981-95-3389-3\\_33](https://doi.org/10.1007/978-981-95-3389-3_33)
- Vashistha, A.M., Kassarwani, N., Nagpal, N., Sharma, N. (2026). A Detailed Study for Power System Analysis in Transmission Substation (220/66 kV) Using ETAP. In: Malik, H., Mishra, S., Sood, Y., Iqbal, A., Ustun, T.S. (eds) Renewable Power for Sustainable Growth. ICRP 2024. Lecture Notes in Electrical Engineering, vol 6667. Springer, Singapore. [https://doi.org/10.1007/978-981-95-3389-3\\_1](https://doi.org/10.1007/978-981-95-3389-3_1)

## Editor

1. Lakshmi D., Neelu Nagpal, **Neelam Kassarwani**, Vishnu Varthanan G., Pierluigi Siano, "E-Mobility in Electrical Energy Systems for Sustainability," Release Date: 4 March, 2024, Copyright: © 2024, Pages: 392, DOI: 10.4018/979-8-3693-2611-4, ISBN13: 9798369326114, ISBN13 Softcover: 9798369346020, EISBN13: 9798369326121. <https://www.igi-global.com/book/mobility-electrical-energy-systems-sustainability/333598>
2. Lakshmi D., Neelu Nagpal, **Neelam Kassarwani**, Vishnu Varthanan G., Pierluigi Siano, "A Sustainable Future with E-Mobility," Release Date: June, 2024, Copyright: © 2024, Pages: 424, DOI: 10.4018/979-8-3693-5247-2, ISBN13: 9798369352472, ISBN13 Softcover: 9798369352489, EISBN13: 9798369352496. <https://www.igi-global.com/book/sustainable-future-mobility/339667#editor-biographies>

