

Curriculum Vitae

Dr. Manjula Mane

Professor

Department of Electrical Engineering,
University College of Engineering (A),
Osmania University, Hyderabad, Telangana, India

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Dr. Manjula Mane is a Professor of Electrical Engineering, University College of Engineering, Osmania University with over two and half decades of teaching, research, and administrative experience. Her expertise includes power quality, distributed generation, renewable energy integration, and smart grid technologies. She has guided 04 Ph.D. students, published in peer reviewed and reputed journals and International Conferences, and contributed to academic and institutional growth through leadership roles.

Research Interests

Power systems, Power Quality, Electrical Distribution Automation, Smart Grids, Renewable Energy Integration.

Academic Qualifications

- **Ph.D.** in Electrical Engineering, Osmania University, 2014
- **M.E.** (Power Systems) in Electrical Engineering, Osmania University, 2004
- **B.E.** in Electrical Engineering, Osmania University, 1995

Teaching and Research Experience

- Associate Lecturer, Govt. Polytechnic for Women, Nizamabad (Dec 1996 – Aug 1997)
- Lecturer, Department of Electrical Engineering, UCE, OU (Joined Aug 1997)
- Professor, Department of Electrical Engineering, UCE, OU (Present)

Subjects Taught

Undergraduate:

- Microprocessors and Microcontrollers
- Electrical Distribution Systems
- Switchgear and Protection
- Power Quality Engineering
- Smart Grid Technologies
- Microprocessors and Microcontrollers Lab
- Electrical Simulation Lab
- Power Systems Lab

Postgraduate:

- Advanced Power System Relaying
- Distribution System Planning and Automation
- Power Quality Engineering
- Power Systems Lab

Ph.D. Thesis

Voltage Sag Detection and Classification (Under the guidance of Prof. AVRS Sarma)

Professional Memberships

- Senior Member, IEEE
- Fellow (FIE), Institute of Engineers (India)
- Student Advisor, IEEE, Women in Engineering (WIE, AG)
- Member, IEEE, Power and Energy Society

Citations/Registration IDs

- Google Scholar Citations: 189 | H-Index: 6 | I-10 Index: 5 | I-20 Index: 3
- Google Scholar ID: WR9dBaMKlycC
- Scopus ID: 54179635300
- Web of Science: HME-1643-2023
- INFLIBNET-VIDWAN ID: 596923
- ORCID: 0000-0002-7611-0850

Projects

The project titled *“Implementation of an Improved Transformer-less Inverter Topology with Leakage Current Suppression and Constant Common Mode Voltage Control”* **Dr. M. Manjula** as the Principal Investigator, with Dr. Linga Swamy as the Co-Principal Investigator, with a total cost of ₹47 lakhs, has been submitted to the Science and Engineering Research Board (SERB) under the Advanced Research Grant (ARG) scheme (in July 2025).

Minor Project under TEQIP-II

Mitigation of Harmonics for a Non-Linear Load (2015–2016, Rs. 1 Lakh grant) sponsored under TEQIP-II, UCE, OU.

Patents

The patent titled *“Transformer-less Photovoltaic Inverter with Multi-Mode Switching and Active Leakage Suppression Mechanism”* filed with Application No. 202541030773 on 29th March 2025, and was subsequently published on 2nd May 2025.

Ph.D. Supervision and Project Guidance

- Number of Ph.D. Scholars Awarded: 04
- Number of B.E. Projects Guided: 25
- Number of M.E. Projects Guided: 30

Ph.D.'s Supervised: 04

1. B. Sravanthi – Ph.D. thesis entitled *“Pollution Performance of Composite Insulators Removed from Service”* – Awarded on 12th January 2023.
2. S. Vijender Reddy – Ph.D. thesis entitled *“Performance Evaluation of Radial Distribution Network with Distributed Generation Using Optimization Algorithms”* – Awarded on 27th February 2024.
3. C. Srisailam – Ph.D. thesis entitled *“Performance Enhancement of Different Order Systems Using Fractional Order Controller”* Awarded on 29th March 2025
4. Mohammed Imran – Ph.D. thesis entitled *“Comparative Analysis and Development of Improved Transformer-less Inverters for Single-Phase and Three-Phase Photovoltaic Systems”* – Awarded on 7th August 2025.

Number of Publications: 36

- Journals : 22
- Conferences : 14

Reviewer Roles

- IEEE Transactions on Industrial Electronics.
- International Journal of Electrical Power and Energy Systems, Elsevier.
- Springer Nature Journals.

Consultancy Works

- GHMC: Street lighting lamp testing (2013-14).
- APTDC: Inspection for Sound and Light system at Warangal Fort (2014).
- HPCL, Ghatkesar: Ground resistance testing and third-party inspection (2014).

Book Chapters

Mane. Manjula, Imran Mohammed, "Evaluation of Leakage Current in Single-Phase H-Type Transformer less Inverters for PV Grid System", Advances in Greener Energy Technologies, Springer, Singapore, pp. 843-857, May 2020.

Administrative Posts Held

- Chairperson, Board of Studies (Autonomous), UCE, OU (2004–2006, 2008–2010)
- Chairperson, Board of Studies (University), UCE, OU (2011–2013, 2015–2017)
- Head, Department of Electrical Engineering, UCE, OU (2013–2015)
- Assistant Chief Warden, Girls Hostel, OU (2016–2017)
- Director of Evaluation, Exam Cell, UCE (A), OU (2017–2019)
- Director, ERP Cell, UCE (A), OU (2023–Present)

Academic Works

- In charge-Examinations, Department of Electrical Engineering, UCE, OU.
- Faculty Adviser, M. E., Power Systems, UCE, OU.
- Member: Anti Ragging Committee, UCE, OU.
- Convener: ME PTPG Admissions, Department of Electrical Engineering, UCE, OU.

- Member, Board of Studies, Department of Electrical Engineering, UCE, OU.
- Member Board of Studies in Electrical Engineering for various affiliated colleges of OU and JNTU Hyderabad.
- Member, Academic Council, UCE, OU.
- OU nominee at various affiliated colleges of OU.
- Question Paper setting for Ph.D. Eligibility Test, PTPG Entrance Exam, OU, JNTU, RGKUT, MGIT, Vasavi, CBIT, JNTUA, GNITS.

Selection Committee Member / Subject Expert

Served as selection committee member and subject expert for APPSC, NGRI, ARCI, CBIT, Vasavi, MVSR, CVR, etc.

College Level Initiatives

- Automation in Exam Cell (Online fee payment, registration, transcripts)
- Integration of Hostel fee payment into ERP portal.
- Campus Wide Networking-Provides 1Gbps fibre optic connectivity across all departments and hostels. Equipped with high-speed core and distributed switches, firewall, and servers for secure and efficient campus-wide communication.
- Central e-Class Room-Supports technical events, guest lectures, and video conferencing. Enables live audio-video streaming of sessions to other locations on campus for wider accessibility.

Workshops / FDPs/ STTPs Attended

1. FDP on “*Electric Vehicles and Energy Storage Systems: Design, Challenges and Grid Integration Issues*”, Department of Electrical and Electronics Engineering, Anil Neerukonda Institute of Technology and Sciences (ANITS), Visakhapatnam in association with E&ICT Academy, NIT Warangal, 15–19 March 2025 & 19–23 April 2025.
2. Three-Day National Workshop on “*NAAC Accreditation and Outcome Based Education Through AI Powered Digital Learning*”, The Office of the Dean, Development & UGC Affairs and IQAC (Internal Quality Assurance Cell), Tagore Auditorium, Osmania University, Hyderabad, 3–5 March 2025.
3. IEEE WIE International Leadership Summit, Hyderabad, 26–27 August 2022.
4. Online Faculty Development Program on “*Emerging Techniques in Smart Power System: Challenges and Solutions*”, Department of Electrical Engineering, NIT Warangal, 24–28 August 2020.
5. Online Typhoon HIL 5 days Power System & Protection Training Program, Hardware in the Loop Simulation platform, 20–24 July 2020.
6. Online Short-Term Training Program on “*MATLAB based Teaching-Learning in Mathematics, Science and Engineering*”, RAIT, Nerul, Navi Mumbai, in collaboration with Design Tech Systems Pvt. Ltd., 18–22 May 2020.
7. Workshop on “*ETAP Power System Analysis*”, Chennai, 8–12 August 2016.
8. One day workshop on “*Awareness Workshop on Outcome Based Education and Accreditation*”, UCE, OU (TEQIP-II), 18 December 2016.

9. Two-day workshop on *“Teaching Learning and Assessment Methodologies”*, UCE, OU (TEQIP-II), 13–14 December 2016.
10. *“Women for Excellence-2016”*, UCE, OU, 9 March 2016.
11. *“Awareness and Empowerment of Women-2014”*, TEQIP-II, UCE, OU, 10 March 2014.
12. FDP on *“Entrepreneurship”*, NSTEDB, DST New Delhi, at EDC, OU, 30 Dec 2013 – 10 Jan 2014.
10. Workshop on *“Power Quality and Custom Power Devices”*, RVCE Bangalore, 3–7 June 2013.
11. Two-day workshop on *“Power System Security”*, Department of Electrical Engineering, UCE, OU, 14–15 September 2009.
12. *“Summer Faculty Research Fellow Programme”*, IIT Delhi, 18 May – 2 July 2009.

Workshops/ FDPS / Seminars Organized

1. Co-Convener for *“International Conference on Present Challenges and Innovations in Electrical Engineering (PCIEE-2024)”* Organized by Department of Electrical Engineering, University College of Engineering (A), Osmania University, Hyderabad, 20–21 December 2024.
2. Coordinator for Seventh Diamond Jubilee Endowment Lecture on *“If Electricity is the Lifeblood of Modern Society, then Power Electronics is Akin to the Heart”* by Prof. Prasad N. Enjeti, (Texas, A&M, USA), Department of Electrical Engineering, University College of Engineering (A), Osmania University, Hyderabad, 15 December 2023.
3. Coordinator for one-day workshop *“Women Conclave – A Meet Up of Women Professionals (Embrace Equity)”*, IEEE OUCE Women in Engineering Affinity Group, University College of Engineering, Osmania University, 17 March 2023.
4. Technical Publishing Committee Member from Electrical Engineering in organizing 2nd International Conference on Emerging Trends in Engineering (ICETE), University College of Engineering, Osmania University, 28–30 April 2023.
5. Coordinator, *Two-Day Workshop on “Challenges for Professional Women: Work-Life Balance”*, IEEE OUCE WIE AG with UCE, OU, 7–8 February 2020.
6. Coordinator, *3K Run “RUN FOR HER”*, IEEE OUCE WIE AG with UCE, OU, 8 March 2020.
7. Coordinator, *One Week Refresher Course on “Applications of AI Techniques in Electrical Engineering”*, UCE, OU with VSSUT Burla, 18–23 November 2019.
8. Coordinator, *One Day Workshop on “Women For Excellence” WE 2017 (Be Bold For Change)*, UCE, OU, 8 March 2017.
9. Coordinator, *Two-Day Workshop on “Power Quality – Harmonic Analysis for Power Systems”* (TEQIP-II), UCE, OU, 19–20 September 2016.
10. Chairperson, *One Week FDP on “Distributed Generation and Power Quality Issues”* (TEQIP-II), UCE, OU, 30 June – 5 July 2014.
11. Chairperson, *One Week FDP on “Advances in Power Electronics and Drives”* (TEQIP-II), UCE, OU, 12–17 May 2014.

12. Chairperson, *Techsonance-2014* – National Level Student Technical Symposium, UCE, OU, 2014.
13. Chairperson, *Techsonance-2013* – National Level Student Technical Symposium, UCE, OU, 2013.
14. Chairperson, *Second Diamond Jubilee Endowment Lecture*, Department of EEE, UCE, OU, 26 December 2013.
15. Coordinator, *Two-Day Workshop on “AI Techniques”*, UCE, OU, 28–29 September 2009.
16. Coordinator, *Two-Day Workshop on “EDSA – Software Applications to Power Systems”*, UCE, OU, 5–6 December 2008.

Invited Lectures/Sessions Chaired

1. Session Chair for Power System Track in “*International Conference on Present Challenges and Innovations in Electrical Engineering (PCIEE-2024)*” Organized by Department of Electrical Engineering, University College of Engineering (A), Osmania University, Hyderabad, 20–21 December 2024.
2. Session Chair for Power System Track in *2nd International Conference on Emerging Trends in Engineering (ICETE)*, University College of Engineering, Osmania University, 28–30 April 2023.
3. Session Chair for Power System Track International Conference on “Recent Trends in Electrical Electronics Communication and Instrumentation (ICRTEECI-2020)”, Department of ECE, CVR College of Engineering, Hyderabad, 27–28 December 2020.
4. Delivered lecture on “*Power Quality – Harmonic Analysis*”, AICTE sponsored STTP on “Application of AI and IoT to Power Systems including Smart Grid” (Phase-II), Sridevi Engineering College for Women, Hyderabad, 17 December 2020.
5. Guest lecture on “*Power Systems and Power Quality*”, VBIT, Hyderabad, 7 April 2017.
6. Delivered lecture on “*Power Quality – Harmonic Analysis for Power Systems*”, Two-Day Workshop at UCE, OU (TEQIP-II), 19 September 2016.
7. Delivered lecture on “*Electrical Engineering Basics*”, Steinbeis Centre for Technology Transfer India, Hyderabad, 22 June 2015.
8. Delivered lecture on “*Basics of Electrical Engineering*”, Steinbeis Centre for Technology Transfer India, Hyderabad, 27 October 2014.
9. Delivered lecture on “*Solar PV Design*”, One Week FDP on “Distributed Generation and Power Quality Issues”, UCE, OU (TEQIP-II), 3 July 2014.
10. Delivered lecture on “*Detection of Power Quality Problems*”, One Week FDP on “Distributed Generation and Power Quality Issues”, UCE, OU (TEQIP-II), 2 July 2014.
11. Delivered lecture on “*Solar PV Design*”, UGC Sponsored Refresher Course, ASC-JNTUH Kukatpally, Hyderabad, 9–28 June 2014.
12. Delivered lecture on “*Power Quality Disturbances Detection and Classification*”, ESCI Hyderabad, 31 January 2014.

13. Delivered lecture on “Automation and Power Quality Issues”, FDP on “Recent Trends in Automation and Control”, CVR College of Engineering, Ibrahimpatnam, Hyderabad, 19 November 2013.

Publications

Journal

1. L. Nadam, M. Chakravarthy, M. Manjula, “Optimized Energy Management for PV Hybrid Power Systems with DC Bus Voltage Control”, *International Journal of Electrical and Electronics Research (IJEER)*, October 2024.
2. T. Dinesh, M. Manjula, “Design of an ORBP-Based Fractional Order Controller for Load Frequency Control in a Multi-Area Power System with Integration of RES”, *Przegląd Elektrotechniczny*, September 2024.
3. Narender Jatoth, K. Ravikumar, M. Manjula, “A Ripple Free Soft-Switched Integrated Series Resonant Converter for Main and Local LED Lighting Application”, *Nanotechnology Perceptions*, August 2024.
4. L. Nadam, M. Chakravarthy, M. Manjula, “Power Flow Control between the Grid and Distributed Generation for Dynamic Load Variation with VSC Converter”, *International Journal of Innovative Science and Research Technology (IJISRT)*, Vol.9, Issue 7, July 2024.
5. Santhosh Kumar K., P. Mallikarjun Sharma, M. Manjula, “An Image Classification with Smart Customized Deep Convolutional Neural Network Based Islanding Detection for PV Inverter-Interfaced Grid System”, *International Journal of Engineering Research and Development (IJERD)*, July 2024.
6. K. Swarna Latha, P. Mallikarjuna Sharma, M. Manjula, “Heuristic Algorithms for Power Quality Analysis in IEEE-33 & IEEE-57 Bus Systems Using FACT Devices and Tracking”, *International Journal of Intelligent Systems and Applications in Engineering*, ISSN 2147-6799, June 2024.
7. Narender Jatoth, K. Ravi Kumar, M. Manjula, “Two Input Buck-Boost Integrated Soft-Switched Ripple Free LED Driver with Reduced Voltage Stress”, *International Journal of Intelligent Systems and Applications in Engineering*, ISSN 2147-67992, March 2024.
8. C. Srisailam, M. Manjula, K. Muralidhar Goud, “Load Frequency Control in Deregulated Power System with Renewable Energy Sources: Hybrid GOA-SNN Technique”, *Optimal Control Applications and Methods (Wiley)*, February 2024.
9. L. Nadam, M. Chakravarthy, M. Manjula, “Dynamic Power Control in Utility-Connected Microgrids: A Back-to-Back Converter Approach for Efficient Integration of Solar and Wind Energy”, *Journal of Namibian Studies*, ISSN 2197-5523 (online), January 2024.
10. Simarla Vijender Reddy, M. Manjula, “Performance of Distribution Network by Connecting Solar and Wind DGs”, *Renewable Energy Focus (Elsevier)*, January 2024.
11. L. Nadam, M. Chakravarthy, M. Manjula, “Real and Reactive Power Flow Control between the Utility Grid and MG System with VSC”, *Journal of Educational Administration: Theory and Practice*, ISSN 2148-2403, July 2023.
12. B. Rupa, Namratha Manohar, M. Manjula, “Power Quality Improvement Using Dual Multilevel Converter for Micro Grid-Connected PV Energy Systems Using ANFIS”,

International Journal of Electrical and Electronics Research (IJEER), Vol.11, Issue 2, e-ISSN 2347-470X, June 2023.

- 13.T. Dinesh, M. Manjula, "A Fractional Order Tilt Integral Controller Based Load Frequency Control with Dispersed Generation and Electric Vehicle", *International Journal of Electrical and Electronics Research (IJEER)*, Vol.11, Issue 2, e-ISSN 2347-470X, June 2023.
- 14.M. Manjula, C. Srisailam, "Optimal Fractional Order Controller for Liquid Level System", *Gravida Review Journal*, ISSN 0363-8057, 2023.
- 15.Simarla Vijender Reddy, M. Manjula, "Reliable and Efficient Operation of Distribution Network by Connecting Solar Distributed Generation", *International Journal of Applied Power Engineering (IJAPE)*, Vol.12, ISSN 2252-8792, March 2023.
- 16.C. Srisailam, M. Manjula, "Optimized FOPID Controller for Transient Stability Improvement in a Microgrid with Energy Storage", *SSRG International Journal of Electrical and Electronics Engineering (IJEEE)*, Vol.10, Issue 2, ISSN 2348-8379, February 2023.
- 17.Vijender Reddy Simarla, M. Manjula, "Power Loss Reduction and Voltage Regulation in DN with Unbalanced Loads by Connecting DG using MOSMA", *International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (IJAREEIE)*, Vol.11, Issue 4, April 2022.
- 18.Farah Fahem Hussain, M. Manjula, "Power Quality Improvement with Renewable Sources for Non-Linear Load with PI and Fuzzy Controller", *IJRSET Journal*, Vol.5, Issue 5, ISSN 2319-8753 (online), April 2016.
- 19.M. Manjula, A V R S Sarma, Sukumar Mishra, "Empirical Mode Decomposition with Hilbert Transform for Classification of Voltage Sag causes using Probabilistic Neural Network", *International Journal on Electrical Power and Energy Systems*, Vol.44, pp. 597-603, January 2013.
- 20.M. Manjula, A V R S Sarma, "Comparison of Empirical Mode Decomposition and Wavelet Based Classification of Power Quality Events", *ENERGY Procedia*, Elsevier, 2011.
- 21.M. Manjula, A.V.R.S. Sarma and G.V. Naga Lakshmi "Wavelet Transform for Classification of Voltage Sag Causes using Probabilistic Neural Network", *International Journal of Electrical Engineering*, ISSN 0974-2158 Volume 4, No.3, pp. 299-309, 2011.
- 22.M. Manjula, A V R S Sarma "Classification of Voltage Sag Causes using Probabilistic Neural Network and Hilbert – Huang Transform", *International Journal of Computer Applications (0975 - 8887)* Vol.1, No. 20, 2010.

International Conferences

1. Simarla Vijender Reddy, M. Manjula, "Voltage Regulation and Power Loss Reduction in DN with DG when load changes using MOSMA" International Conference on Emerging Trends in Engineering (ICETE 2023).
2. T. Dinesh, M. Manjula, "A Multi Degree of Freedom Based Hybrid Fractional Order Controllers for Load Frequency Control in Hybrid Systems," ICETE 2023.

3. C. Srisailam, M. Manjula, "*Optimized Analytical Crone Controller for Electric Vehicle System*", International Conference on Emerging Trends in Engineering (ICETE 2023).
4. T. Dinesh, M. Manjula "A fractional order tilt integral controller-based load frequency control with dispersed generation and electric vehicle" International Conference Recent Trends in Electrical, Electronics, Communications, and Instrumentation (ICRTEECI 2021).
5. Jyothi Nemmadi, M. Manjula, "*Solar PV Fed Based Shunt APF for Power Quality Enhancement of DG-Grid System Using Fuzzy Logic Controller*", International Conference on Emerging Trends in Engineering (ICETE 2023).
6. S. Vijender Reddy, M. Manjula, "Calculation of Voltages and Power Losses with Multiple DG Units with Change of Load" Springer book, Advances in Decision Science, 2020.
7. S. Vijender Reddy, M. Manjula, "The Optimal Size of Multiple DG Units in Distribution Network with Change of Load" IEEE-2019 Global Conference for Advancement in Technology (GCAT), Bangalore.
8. S. Vijender Reddy, M. Manjula, "Optimal Planning of Multiple Distributed Generation Units in Distribution Network using Ant Colony Search Algorithm" 2018 IEEE International Conference on Innovative Technologies in Engineering.
9. A. Sangeetha Yamini, M. Manjula, "Mitigation of Harmonics in an AC Microgrid with Passive and Active Filters" 3rd International Conference on Electrical, Electronics, Engineering Trends, Communication, Optimization and Sciences, May 2016.
10. M. Manjula, A. V. R. S. Sarma, "Assessment of Power Quality Events by Empirical Mode Decomposition based Neural Network", Proceedings of the World Congress on Engineering 2012, London, U.K.
11. M. Manjula, Sukumar Mishra, A. V. R. S. Sarma, "Empirical Mode Decomposition based Probabilistic Neural Network for faults classification", International Conference on Power and Energy systems IIT Chennai, December 2011.
12. M. Manjula, A. V. R. S. Sarma, Sukumar Mishra, "Detection and classification of Voltage sag causes based on Empirical Mode Decomposition", International Conference INDICON-2011, BITS Pilani, Hyderabad.
13. M. Manjula, A. V. R. S. Sarma, Sukumar Mishra, "Faults Classification for Voltage Sag Causes based on Empirical Mode Decomposition with Hilbert Transform", International Conference on Control, Communication and Power Engg., Pune, November 2011.

National Conferences

1. M. Manjula, C. Srisailam, "Fractional order controller-based performance enhancement of Electrical Vehicle system" National Conference on Future Electricity Systems: Challenges and Current Trends (NCEFES2021).
2. M. Manjula, A.V.R.S. Sarma and Sarada Devi "Detection of Power Quality Disturbances based on Empirical Mode Decomposition with Hilbert Transform" National Conference PSPOO, JNTU, Kakinada, 2011. (Best Paper Award).

3. S. Asha Kiranmai, M. Manjula, A V R S Sarma, "Mitigation of Various Power Quality Problems using Unified Series Shunt Compensator in PSCAD/EMTDC." 16th National Power System Conference, Dec 2010.