



Dr. Vishnu P Madhanmohan

Associate Professor, Electrical & Electronics Engineering

Administrative Responsibilities

- Deputy HoD
- Department IQAC Coordinator
- Department Placement Coordinator
- In Charge of IEI – Electrical Professional body
- Class advisor of 2024 – 2028 EEE Batch
- Research and Development cell member
- NBA Criteria 8 Coordinator
- NIRF Nodal Officer
- Stream head – Circuits and Power Systems
- Lab in charge – Power Systems
- Arts Fest Coordinator

Education Summary

- PhD in Electrical Engineering, APJ Abdul Kalam Technological University, Kerala (2015–2021), Government Engineering College, Thrissur. Thesis: “Generalized Algorithm for Enhanced Power Generation of Partially Shaded Photovoltaic Systems with Minimum Peaks in Electrical Characteristics”.
- AICTE PG Certification in 3D Printing, IIT Palakkad
- M.Tech in Power Electronics, Visvesvaraya Technological University, Belgaum, Karnataka (2010–2012), St Joseph Engineering College, Mangaluru. First class with distinction. Thesis: “Modified hill climbing method using fuzzy logic control for maximum power point tracking”.
- B.Tech in Electrical & Electronics Engineering, Calicut University (2005–2009), Vidya Academy of Science & Technology, Thrissur. First class. Project: “Simulation of Wind Power Impact on DFIG Turbine Connected to Utility Grid”

Employment History

- Assistant Professor, Department of EEE, Christ College of Engineering, Irinjalakuda, Thrissur (March 2021- present)
- Research Scholar, Department of Electrical Engineering, Government Engineering College, Thrissur (July 2015 – Feb 2021): research, teaching assistant and lab in charge
- Guest Faculty (July 2014 – June 2015): PG Diploma in Sustainable and Green Energy Technologies, Department of Chemistry, Christ College, Irinjalakuda; and part-time evening batch B.Tech, Department of Electrical Engineering, Government Engineering College, Thrissur
- Assistant Professor, Department of EEE, IES College of Engineering,

Journal/Papers Published

- Vishnu P. Madhanmohan, M. Nandakumar and Abdul Saleem "Durer's Square Based Photovoltaic Configuration to Mitigate Partial Shading Losses" 2020 International conference on Power Electronics and Renewable Energy Applications (PEREA) IEEE, 2020
- Vishnu Madhanmohan, A. Saleem and M. Nandakumar, "An Algorithm for Enhanced Performance of Photovoltaic Array under Partial Shading Condition," in IEEE Access, doi: 10.1109/ACCESS.2020.3025906
- Vishnu P. Madhanmohan, and M. Nandakumar. "Effects of partial shading in different PV module configurations with minimum interconnections." 2018 International Conference on Power, Instrumentation, Control and Computing (PICC). IEEE
- Vishnu Madhanmohan, M. Nandakumar, and Abdul Saleem. "Enhanced performance of partially shaded photovoltaic arrays using diagonally dispersed total cross tied configuration." Energy Sources, Part A: Recovery, Utilization, and Environmental Effects (2020): 1-19.
- Durer's Square Based Photovoltaic Configuration to Mitigate Partial Shading Losses" 2020 International conference on Power Electronics and Renewable Energy Applications (PEREA), organized by IEEE and Government College of Engineering Kannur. from November 28-29, 2020
- "Effects of Partial Shading in Different PV module Configuration with Minimum Interconnections" in the international conference PICC 2018, conducted by Government Engineering College ,Thrissur from 18 to 20 January 2018
- "Modified Hill Climbing Method Using Fuzzy Logic Control for Maximum Power Point in PV system" in the National conference NCRDPE 2015, conducted by Sri Venkateshwara College of Engineering, Bangalore on 5 August 2015
- "A modified Hill Climbing Method Using FLC for MPPT systems" in National conference IESPEC 2013, conducted by IES College of Engineering, Thrissur
- M. J. Manu, P. S. Akshay, G. Kattukaran, Glenchrist, A. Anto and V. P. Madhanmohan, "A Smart Wearable Device for Tracking and Fall Detection for Geriatric People, Alzheimer Patients and Children with Autism," 2021 5th International Conference on Electrical, Electronics, Communication, Computer Technologies and Optimization Techniques (ICEECCOT), Mysuru, India, 2021, pp. 333-337, doi: 10.1109/ICEECCOT52851.2021.9708064.
- N. D. Parappully, S. Joseph, P. S. Rajeswari, P. Immanuel Sabu and V. P. Madhanmohan, "IoT Based Solar Performance Monitoring System," 2023 9th International Conference on Smart Computing and Communications (ICSCC), Kochi, Kerala, India, 2023, pp. 627-631, doi: 10.1109/ICSCC59169.2023.10334989.

Specialized Trainings

- "Advanced Scientific Writing, AI-Assisted Research & Ethical Publication" (5-day FDP), IES Engineering College, Chittilappilly, Thrissur (21–25 June 2026)
- "Artificial Intelligence Applications in Autonomous Vehicles" (4 days), BNMIT EV Club, Bengaluru (22–27 April 2024)
- "Intelligent and Innovative Technologies in Computing, Electrical and Electronics" (2 days), Department of ECE, BNMIT, Bengaluru (24–25 January 2024)
- "Orientation Program on AICTE Technical Book Translation", Kerala University of Digital Sciences, Innovation and Technology, with AICTE (15 September 2022)

- “Advancements in Technology for Interdisciplinary Research” (5 days), Department of ECE, Universal Engineering College, Thrissur (22–26 August 2022)
- “Inculcating Universal Human Values in Technical Education”, AICTE (May 2021)
- “Building Emotional Intelligence and Resilience: Case Method of Experiential Teaching and Learning”, Mahatma Gandhi National Council of Rural Education, MHRD, Hyderabad (May 2021)
- “Workshop on Research Writing and Authorship”, Government College of Engineering, Kannur, organised by Centre of Excellence in Systems Energy & Environment (January 2020)
- “The Art of Technical Writing and Publishing in the Pursuit of Academic Excellence”, SCMS School of Engineering and Technology, organised by Innovation and Entrepreneurship Development Centre (January 2020)
- “School on Advanced Control Systems”, Government Engineering College, Thrissur, sponsored by Directorate of Technical Education, Kerala (December 2019)
- “Solar Photovoltaic System Design and MPPT Implementation”, Department of Electrical Engineering, NIT Trichy (May 2019)
- “Control Systems and Sensor Technology on the topic Robotics and Artificial Intelligence”, Government Engineering College, Thrissur, sponsored by AICTE
- “Control Systems: Theory and Applications”, Department of Electrical Engineering, Government Engineering College, Thrissur (December 2017)
- “National Workshop on Matlab Simulation & Embedded System Development for Power Electronic Converters – hands-on training”, Department of Electrical Engineering, NIT Calicut (July 2017)
- “Capacity Building Program on Energy Conservation Building”, Energy Management Centre, Trivandrum (June 2017)
- “Workshop on Design and Installations of Solar PV Systems”, Energy Management Centre, Trivandrum (April 2017)
- “Research Colloquium on Research Opportunities in Power Systems”, College of Engineering, Trikaripur (March 2017)
- “Short Term Training Programme on Advances in Off grid and Grid tied Solar PV Systems”, Government College of Engineering, Kannur (March 2017)
- “Research Colloquium on Power Quality and Renewable Energy”, Rajiv Gandhi Institute of Technology, Kottayam (February 2017)
- “IEEE Fall School on Modern Sliding Mode Control”, Department of Systems & Control, IIT Bombay-(October 2016)
- “Short Term Training Programme on Energy Audit”, Government Engineering College, Thrissur (October 2015)
- “Faculty Development Program on Instructional Design & Delivery System”, NITTTR, at IES College of Engineering, Thrissur (February 2013)
- “Orientation course for NSS Programme Officers”, National Service Scheme, Rajagiri College of Social Science, Kalamassery (October 2012)

NPTEL Certifications

- Product Design and Development, NPTEL (IIT Roorkee), July–August 2025 – Elite Silver
- Metal Additive Manufacturing, NPTEL (IIT Kanpur) – Elite
- Rapid Manufacturing, NPTEL (IIT Kanpur) – Elite Silver

Patents

- “Performance Evaluation of L-Movement Reconfiguration of PV Array under Partial Shading Conditions” –Indian utility patent, Application No. 202641056777, published 15 May 2026

Funded Projects and Consultancy

- Faculty Research Seed Grant (FRSG), 2024–25: “Automated reconfiguration of solar photovoltaic arrays and batteries during partial shaded conditions”, with Dr. Needhu Varghese. Sanctioned ₹1.0 lakh (1 year). Outcomes: patent filed, journal paper drafted, experimental set-up built, conference paper accepted.
- AICTE Book Translation (PI), 2022–23: First-year translator for Malayalam, “Basic Electrical and Electronics Engineering (with Lab Manual)”. ₹1.0 lakh, 1 year.
- AICTE Book Translation (PI), 2024–25: Third-year book translation, “Power Systems I”. ₹0.2 lakh, 1 year.

Projects Guided

- Solar powered automatic rubber sheet making machine
- Cleaning system for solar panels
- Effects of partial shading in different PV module configurations and mitigation
- “PRAVAH” – a complete water management companion
- IoT based performance monitoring systems of solar power plants
- IoT based smart agriculture system
- Smart switching for a partially shaded system

Achievements

- Received fellowship from the Department of Higher Education, Government of Kerala, for PhD research work (2015–2018)
- Translated AICTE textbooks into Malayalam: “Basic Electrical and Electronics Engineering (with lab manual)” (first year) and “Power Systems I” (third year)
- Served as District-level Coordinator for programmes organised by the Energy Management Centre, Kerala

Reviewer Roles

- Journals: Journal of Photonics for Energy; IEEE Access; Energy Sources, Part A: Recovery, Utilization, and Environmental Effects; Sustainable Energy Technologies and Assessments
- Regular reviewer of various IEEE conferences organised in Kerala and Karnataka

Other Academic Contributions

Christ College of Engineering (2021 onwards)

- In charge of the department research bulletin
- Designer of department posters and booklets
- Student mentor of the 2020–2024 batch
- Conducted value-added course on fan motor rewinding and introduction to BLDC motor
- Conducted a workshop on LaTeX documentation
- NBA Criteria 3 Coordinator (earlier role)
- Organised the international conference ICCCE’21

IES College of Engineering (2012–2014)

- In charge of ISO and the Placement cell of the department
- Co-ordinator of the national conference IESPEC’13
- Co-ordinator of the national level exhibition Navasrothus’13
- NSS Programme Officer (2012–2013); organised a 7-day NSS special camp in a tribal colony at Nelliampathi

Areas Of Interest

- Partial shading effects on photovoltaic arrays
- Renewable energy systems
- Solar photovoltaics

Achievements

- Received fellowship from Department of Kerala higher education for research work (2015-2018)

