

Padhmakumar P K – Professional Profile

Designation

Head of the Department
Department of Electronics Engineering
Govt. Polytechnic College, Pala

Qualifications

- M.Tech in Electronics and Communication Engineering (Specialization: Applied Electronics & Instrumentation)
(College of Engineering, Trivandrum)
University of Kerala
- B.Tech in Electronics and Communication Engineering
(MA College of Engineering, Kothamangalam)
M.G University Kottayam
- Pre-Degree
(St. Thomas College, Pala)
M.G University Kottayam

Experience

Over two decades of experience in teaching and academic administration across premier technical institutions in Kerala. Currently serving as Head of the Department at Govt. Polytechnic College, Pala.

Institutions Served

- Model Polytechnic College, Mattakkara – 2001 & 2003
- IHRD THSS Puthuppally – 2002
- Government Polytechnic College, Kottayam – 2003 to 2009 & 2012 to 2017
- College of Engineering, Thiruvananthapuram – 2009 to 2012
- Government Women's Polytechnic College, Thiruvananthapuram – 2018 to 2023
- Government Polytechnic College, Neyyattinkara – 2024 to 2025

Areas of Interest

- Power Electronics and Drives
- Space Vector Modulation Techniques for Inverter Control
- VLSI and Embedded Systems
- Renewable Energy Systems
- Robotics

Research & Academic Contributions

Conference Proceedings (IEEE)

- Three Dimensional Space Vector Modulation for Three Phase Four Leg Inverters – A Review, IEEE ICETIETR 2018, Toc H Institute of Science and Technology (<https://doi.org/10.1109/ICETIETR.2018.8529087>)
- Application of DPWM on 3D Space Vector Modulation with ghy Coordinate System for Three Phase Inverters, IEEE IPRECON 2020, College of Engineering Karunagappally (<https://doi.org/10.1109/IPRECON49514.2020.9315240>)

Journal Publications

- 3D Space Vector Modulation for Intelligent Control of Multilevel Inverters Integrated with Solar PV, International Journal of Trend in Scientific Research and Development (IJTSRD), Vol. 2, Issue 5, Jul-Aug 2018 (<https://www.ijtsrd.com/papers/ijtsrd17138.pdf>)
- Unbalanced Load Management Using Three-Phase Four-Leg Inverters with 3DSVM, International Journal of Trend in Scientific Research and Development (IJTSRD), Vol. 3, Issue 4, May-Jun 2019 [Read Paper](<https://www.ijtsrd.com/papers/ijtsrd24050.pdf>)
- Optimized Solar Charge Controller Using Hybrid MPPT Algorithm for a Three Phase Four Leg Inverter, International Journal of Advances in Engineering Research (IJAER), Vol. 17, Issue II, Feb 2019, (<https://www.ijaer.com/viewabstract.php?id=1459>)
- 3D SVM for Three Phase Four Leg Inverters using ghy Coordinate System to Reduce Computational Complexity, International Journal of Science and Research (IJSR), Volume 13 Issue 3, March 2024 (<https://dx.doi.org/10.21275/SR24309235520>)
- Modified 3DSVM with Discontinuous PWM for Three Phase Four Leg Inverters to Reduce CMV, International Journal of Scientific Research and Engineering Development (IJSRED), Volume 7 Issue 2, Mar-Apr 2024 (<https://www.ijsred.com/volume7/issue2/IJSRED-V7I2P24.pdf>)
- Comparative Study of Conventional 3DSVM Techniques for Three Phase Four Leg Inverters with New ghy Coordinate System, International Journal of Scientific Research and Engineering Development (IJSRED), Volume 7 Issue 3, May-Jun 2024 (<https://www.ijsred.com/volume7/issue3/IJSRED-V7I3PXX.pdf>)