



Dr Meenakshy K

Professor and Head, Electrical and Electronics Engineering

Administrative Responsibilities

- Website and Social Media Committee Secretary
- Head of the Department, EEE
- Member, Professional Body Committee
- Member Industry Institute Interaction Cell

Education Summary

- Ph. D In Biomedical Image Processing from Cochin University of Science and Technology
- M.Tech in Power system from College of Engineering, Trivandrum
- B.Tech in Electrical and Electronics, College of Engineering, Trivandrum

Employment History

- Lecturer (Contract), Department of Instrumentation, CUSAT, 1996 - 1999
- Lecturer (Adhoc), SOE, CUSAT, 1999 - 2000
- Assistant Professor, Govt. Engineering College, Thrissur, 2000 – 2016
- Associate Professor, Govt. Engineering College, Kozhikode, 2016- June 2019
- Professor, Govt. Engineering College, Thrissur, June 2019 – Jun 2022
- Professor and Head, Government Engineering College, Palakkad July 2022- 02 May 2023
- Principal, Government Engineering College, Wayanad, May 2023- 02 June 2023
- Principal, Government Engineering College, Palakkad, 03 June 2023- 10 August 2024
- Principal, Government Engineering College, Thrissur, 12 August 2024 – 31.03.2025
- Director, Academics, Adi Sankara Institute of Science and Technology 1 July 2025- 28 Feb 2026

Areas of Interest

- Image Processing
- Biomedical Applications
- Embedded System Design

Specialised Training

- Lumina 26, faculty Orientation Program conducted by Christ College of Engineering from 22.06.26 to 25.06.26
- Strategic Planning and Institutional development conducted by NITTR, Kalamessery, Kochi sponsored by Ministry of Education from 23.06.2024 to 28.06.2024, 6 days
- Control System and Sensors Technology conducted by Dept. of EEE, GEC, Thrissur, sponsored by AICTE Training And Learning Academy from 04.01.2021 to 08.01.2021, 5 days
- Recent Trends in Computer Networking Technologies conducted by Dept. of Computer Science, CUSAT sponsored by TEQIP Phase III from 16.12.2019 to 22.12.2019, 7 days
- Computer Analysis of Power System, conducted by, Dept of EEE, GEC, Thrissur, sponsored by FSTDC from 25.06.18 to 29.06.18, 5 days
- Faculty Development Program for Student Induction conducted by RSET, Kochi sponsored by AICTE from 08.06.18 to 10.06.18, 3 days
- Research Proposals and patents conducted by Dept. of CE, GEC, Thrissur sponsored by FSTDC from 27.11.17 to 1.12.17, 5 days
- Holistic Approaches for Leadership Empowerment conducted by Dept. of CE, GEC, Thrissur sponsored by FSTDC from 17.07.17 to 21.07.17, 5 days
- Open Source Tools for Computing conducted by Dept. of CSE, GEC, Thrissur, sponsored by FSTDC from 11.07.16 to 15.07.16, 5 days
- Hands on Training on System Design using NI Labview conducted by Dept. of EEE, GEC, Thrissur sponsored by FSTDC from 29.02.16 to 04.03.16, 5 days
- Wind Emulator conducted by Dept. of EEE, GEC, Thrissur sponsored by IIIC from 03.02.16 to 05.02.16, 3 days

Journals/Papers published

- **National Conference**
- **K. Meenakshy and R. Gopikakumari**, “Feasibility study for categorizing renal stones,” *In*. Proceedings of the National Conference on Recent Innovations in Technology (NCRIT), RIT ,Kottayam, pp.1-4, March 2009.
- **K. Meenakshy and R. Gopikakumari**, “Study on renal stones using grey level statistical texture features,” *In*. Proceedings of the Third National Conference on Intelligent and Efficient Electrical Systems, PSG College of Engineering, Coimbatore pp. 83-86, Aug. 2009.

- **K. Meenakshy, R.C. Roy, V. Bhadran and R. Gopikakumari**, “Feasibility of texture analysis using 2-D MRT,” *In. Proceedings of National Conference on Power Instrumentation Computing and Control (PICCC 2010)*, Government Engineering College, Thrissur, March 2010.
- **Preetha Philip, Dr Meenakshy K**, “Modelling of Brushless DC Motor Drive Using Rotor Position Detection Algorithm,” *In proceedings of National Conference on Advances in Manufacturing, Systems and Processes, NAIMSAP 2012*, Government Engineering College, Thrissur, pp. 374-377, 5-7 September 2012.
- **Manju B, Dr Meenakshy K, Dr. R. Gopikakumari** “Optimum Selection of 8x8 UMRT based Texture Descriptors using Genetic Algorithm,” *In proceedings of National Conference on Recent Trends in Electrical and Electronics Engineering, NCRTEEE 2013*, Jerusalem College of Engineering, Chennai, May 2013, pp 111-114.
- **International Conference**
- **K. Meenakshy, R.C. Roy, V. Bhadran and R. Gopikakumari**, “2-D MRT features for texture classification,” *In. Proceedings of Second International Conference on Computing, Communication and Networking (ICCCN 2010)* , Chettinad College of Engineering, Karur. 29-31 July 2010
- **S.P. Priya and Dr.K. Meenakshy** “Power Quality Improvement of a Seven Level Inverter with Less Number of Switches using Intelligent System “ *In proceedings of ICMF 2013*, Government Engineering College, Thrissur, 6-8 November 2013, pp 405
- **D.K. Harisha and Dr.K. Meenakshy** “Maximum Power Point Tracking for Solar PV using Intelligent Systems”, *In Proceedings of ICMF 2013*, Government Engineering College, Thrissur, 6-8 November 2013, pp 470.
- **Manju B, Meenakshy K, Gopikakumari**, Prostate Disease Diagnosis from CT images using GA optimized SMRT based Texture Features, (*International Conference on Information and Communication Technologies (ICICT 2014)*, CUSAT, 3- 5, Dec 2014, pp 1692- 1699) Elsevier Procedia Computer Science 46 (2015) pp 1692 – 1699
- **SreejilRaju, Meenakshy K**, Power System Stability Improvement of Wind Farm Fed to a Multi Machine System by using STATCOM, *International conference on Power, Instrumentation, Control and Computing (PICCC)*, 9-11 Dec 2015, Thrissur, India, pp 1-7. Print ISBN 978-1-4673-8071-3.

- **Maya UC, Meenakshy K**, Unified Model based Classification with FCM for Brain Tumor Segmentation, International conference on Power, Instrumentation, Control and Computing (PICC), 9-11 Dec 2015, Thrissur, India, pp 1-7. Print ISBN 978-1-4673-8071-3
- **Shweta C, Meenakshy K**, Combined NLM Weiner Filter based Denoising, International conference on Power, Instrumentation, Control and Computing (PICC), 9-11 Dec 2015, Thrissur, India, pp 1-7. Print ISBN 978-1-4673-8071-3
- **R. George and K. Meenakshy**, "Stress-recovery correlates of cardiac vagal modulation in women recruit undergoing basic combat police training," *2016 IEEE Annual India Conference (INDICON)*, Bangalore, 2016, pp. 1-5. doi: 10.1109/INDICON.2016.7838986
- **Anil Kumar K.R and Meenakshy K**. Extraction of Blood Vessels in Retinal Images for Automatic Diagnosis of Diabetic Retinopathy", IC-AMMN-2K16, DTE sponsored International Conference on Advances in Applied Mathematics, Materials Science and Nanotechnology Engineering and Industrial Applications organized by Federal Institute of Science and Technology, Hormis Nagar, Angamaly, Kerala during 07-01-2016 to 09-01-2016.
- **Sunny T.D., Roshita Raj P, Meenakshy K**, Classification of Motor Imagery Signals using ANFIS to control a robotic system, IEEE International Conference on Power, Instrumentation, Control and Computing, 19-21 Dec 2020, GEC, Thrissur
- **Navya V.N., Meenakshy K**, Application of Signal Processing to detect Urinary Dysfunction: A Review on different techniques, IEEE International Conference on Power, Instrumentation, Control and Computing, 19-21 Dec2020, GEC, Thrissur.
- **DadiRamu, Meenakshy K, Suresh K Damodar**, A modified droop control method for DC Microgrid with improved voltage regulation and current sharing, , IEEE International Conference on Power, Instrumentation, Control and Computing, 19-21 Dec 2020, GEC, Thrissur.
- **Haripriya C, Meenakshy K**, International Conference on Circuit control and Energy, ICCCE, 7-9 July 2021, Christ College of Engineering, Irinjalakuda
- **DadiRamu, Meenakshy K, Suresh K Damodar** , An adaptive PI based distributed control method to maintain accurate power sharing and voltage regulation in DC Microgrids, INDICON 2022, 24-26 November, CUSAT, Kochi
- **Navya VN, Meenakshy K, Manju B, Swarun Raj RS**, Wavelet Thresholding for GWO Optimisation for EEG Denoising - ICTEST 2024 technically sponsored by IEEE April 11-13 2024, Govt Model Engg College, Kochi
- **Journal**
- **K. Meenakshy, R. Gopikakumari**, "Texture descriptors based on 1-D MRT," International Journal of Recent Trends in Engineering, vol. 2, No. 6, pp. 1-3, Nov. 2009.

- **Preetha Philip, Dr.Meenakshy K,**” Modelling Of Brushless DC Motor Drive Using Sensored And Sensorless Control (Back Emf Zero Crossing Detection),” *In International Journal on Emerging Technology and Advanced Engineering* (ISSN 2250-2459), Vol. 2, Issue 8, pp. August 2012.
- **Manju B, Jaya VL, Meenakshy K, Gopikakumari,** 8 x 8 SMRT based Texture Descriptors, Lecture notes on Software Engineering, Vol 3(4), Nov. 2015 pp 295-298.
- **Nayana KS, Meenakshy K,** Stability Enhancement of Wind Power Integrated System Using PID Controlled SVC and Power System Stabiliser, *International Journal of Scientific Engineering and Technology*, Vol. 3(10), October 2014, pp 1250-54.
- **Maya UC, Meenakshy K,** Brain Tumor Segmentation Using Asymmetry Based Histogram Thresholding and K- Means Clustering, *International Journal of Research in Engineering and Technology*, eISSN: 2319-1163, Dec 2014, pp 62-65.
- **Santhosh Raj, Meenakshy K,** A unique grid power controller for DFIG based wind turbine generator system with or without battery storage device, *IJRSET*, Volume 5, Special Issue 5, April 2016
- **Krishna Moorthy, Meenakshy K,** Prediction of Fragmentation of Kidney stones: A Statistical Approach from NCCT images, *CUAJ*, Vol 10, Issue 7-8, July-August 2016, pp E237-240.
- **Maya UC, Meenakshy K,** “Hierarchical Agglomerative Clustering Based Combined Feature Selection and Multi-Class Support Vector Machine for Brain Tumour Classification”, *Journal of Medical Imaging and Health Informatics*, Volume 7, No 8, December 2017, pp.1714-1722(9). DOI: <https://doi.org/10.1166/jmihi.2017.2271>
- **Remya George, ²Biju Bahuleyan, ³K. Meenakshy** "Cardiovascular response to simulated real and non-real life stressors - A comparative case study using heart rate variability and personality traits in a physically trained group " *In International Journal of Pure and Applied Mathematics* Volume 119 No. 16, 2018, 2647-2664 ISSN: 1314-3395., Academic Publishers.
- **¹Remya George, ²Biju Bahuleyan, ³K. Meenakshy,** "Assessing the Effect of Long Term Physical Training and Classification of Training Status using HRV and HRR of Female Police Recruits" *In International Conference on Digital Imaging and Biomedical Informatics- Sapience 2018*, at SNGCE, Kochi, and Published in *International Journal of Simulation: Systems, Science and Technology*, ISSN: 1473-804x online, UK Simulation Society.

- **¹Remya George, ²Biju Bahuleyan, ³K. Meenakshy**, “Heart Rate Variability Dynamics in Stroop’s Color Word Test- A Case Study Addressing the Psycho Physiological Fatigue Status in an Aerobically Conditioned Group”, In Jour of Adv Research in Dynamical & Control Systems, Vol. 10, 15-Special Issue, 2018
- **Noushira K.I., Anil Kumar K.R., Meenakshy K.** "A Survey on Feature Extraction Methods in Retinal Fundus Images for Diabetic Retinopathy", International Journal of Computer Sciences and Engineering, Vol.7, Issue 4, April 2019 pp 77-87.
- **Anil Kumar K.R., Meenakshy K** "Retinal Vasculature Extraction using Non-subsampled Contourlet Transform and Multi-structure Element Morphology by Reconstruction" International Journal of Recent Technology and Engineering, ISSN 2277-3878, Volume -8, Issue 2, July 2019.
- **Anil Kumar K.R., Noushira K.I., Meenakshy K.,** "Classification of Diabetic Retinopathy Features using Bag of Feature Model", International Journal of Innovative Technology and Exploring Engineering, ISSN: 2278-3075, Vol-9, Issue-1, Nov 2019, pp: 381-385.
- **Anil Kumar K.R., Megha P.M., and Meenakshy K.,** "Diabetic Retinopathy Detection & Classification Techniques: A Review", International Journal of Scientific & Technology Research, ISSN: 2277-8616, Vol-9, Issue-3, March 2020, pp: 1621-1628.
- **R Dadi, K Meenakshy, S K Damodaran**, “A Review of Secondary Control Methods in Microgrid”, Journal of Operation and Automation in Power Engineering, Vol 11, No 2, pp 105-112, [10.22098/JOAPE.2022.9157.1636](#), Feb 2022
- **George Remya, Jose Reshma, Meenakshy K, Jarin T, Senthil Kumar S**, “ Effect of long term exercise training on physiological signals and personality traits in women in law enforcement”, Journal of Intelligent and Fuzzy Systems ,pp 1-13, October 2022 DOI: 10.3233/JIFS-221588, vol , pp 1-13, 2022
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External Interaction

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- Expert Talk on Texture Modeling in the ISTE STTP 'Modeling and Optimization Techniques in Engineering' ,MOTTE 2010, organized by Division of Electronics Engineering School of Engineering Cochin University of Science and Technology, Kochi-22 from 18 to 30 October 2010.
- Expert Talk on Biomedical Instrumentation – an Overview on 27 September 2011 at Workshop organized by Rajagiri Institute of Science and Technology , Kochi

- Expert Talk on Tools for processing of Biomedical Images at ISTE-SRM STTP on Image Processing on 07.06.2013 at IHRD College of Engineering, Attingal
- Expert Talk on Biomedical Processing at AICTE Sponsored Faculty Development Programme conducted by Albertan Institute of Science and Technology on 09.05.2013 at AISAT , Kochi
- Session on Processing of Biomedical Images at AICTE Sponsored STTP on Frontiers in Biomedical Engineering on 29 April 2013 at Model Engineering College, Thrikkakara.
- Session on FPGA based digital system design using VHDL at Sahrdaya College of Engineering & Technology, Kodakara on 4th September 2014
- Session on Basics on VHDL at TEQIP sponsored workshop FPGA Based System Design organized by GEC , Thrissur on March 17, 2014
- Expert Talk on Biomedical Processing at FSTDG Sponsored STTP conducted by Dept of Computer Science, GEC Thrissur on January 6 2015.
- Expert Talk on Transforms for Biomedical Image Processing at TEQIP Sponsored STTP on Applications of Various Transforms in Engineering from 9 Jan to 13 Jan on 11.01.2017 at IHRD Kalloppara Engineering College, Thiruvalla
- Expert Talk on Fundamentals of Matlab at TEQIP sponsored STTP of Matlab applications organized by Department of Chemical Engineering, Government Engineering College, Kozhikode on Feb 2017
- Expert Talk on Computational Methods for Image Processing, at AICTE sponsored FDP on Computational Method as on Fluid and Structural Mechanics from 1 July to 12 July 2019 at RSET, Kochi on 05.07.2019
- A session on Image Processing in Biomedical Applications in KTU sponsored FDP on Advancements in Image Processing Applications organised by Department of Computer Science and Engineering, SCMS School of Engineering and Technology, Karukutty from 29th August to 2nd September 2022
- Keynote address for CoreEL Edu Summit on 9th November 2023 at Kochi
- An address on Unleashing the power of Engineers to advance the sustainable development goals as part of World Engineering Day on 11th March 2025 at IEI Trichur Local Chapter Hall, Viyyur, Thrissur.
- A session on Introduction to Microprocessor 8085- architecture and Instruction Set on 15.06.2026 in IEEE Malabar Subsection and MES College of Engineering, Kuttipuram sponsored FDP on Microcontroller based System design using ARM and RISC Architecture from 15-19 June 2026