


FACULTY PROFILE

1	Name of Faculty	K Meenakshy			
2	Designation	Professor			
3	Department	Electrical & Electronics Engineering			
4	Contact No.	9446402490			
5	Email	meenakshymoorthy@gmail.com , meenakshy@gectcr.ac.in			
	DOB	23/10/1968			
6	Academic Qualifications				
	Degree	Year	Branch/Area of Specialization	Institution	
	B Tech	1990	Electrical & Electronics	College of Engineering, Trivandrum	
	M Tech	1995	Power System	College of Engineering, Trivandrum	
	Ph D	2011	Image Processing	Cochin University of Science & Technology, Kochi	
7	Professional Experience				
	Period Served	Name of institution		Designation	
	1996 - 1999	Department of Instrumentation, CUSAT		Lecturer(Contract)	
	1999 - 2000	SOE, CUSAT		Lecturer (Adhoc)	
	2000 - 2016	Govt. Engineering College, Thrissur		Assistant Professor	
	2016- June 2019	Govt. Engineering College, Kozhikode		Associate Professor	
	June 2019 - Till Date	Govt. Engineering College, Thrissur		Professor (NC)	
8	Publications (List is attached)				
	Journal	Nos. 13			
	International Conference	Nos. 9			
	National Conference	Nos. 5			

9	No. of STTPs attended from 2012 till date	(List is attached)	
10	Membership in professional Bodies	ISTE Life member IEEE Senior Member	
11	No. of M.Tech. projects guiding/guided from 2012 till date	Guided 10	Guiding 1
	No. of PhD Scholars guiding	Submitted - 2, Guiding -5	
12	Field of interest	Image Processing, Biomedical Applications, Embedded System Design	
13	Additional Responsibilities executed	<ol style="list-style-type: none"> 1. Chairman of Biomedical Engineering Branch of Calicut University from 2012 onwards 2. IEEE Student Branch Counselor- GEC Thrissur 2011-April 2016- GEC Kozhikode (June 2016- June 2019) 3. Ladies Hostel Warden 2018 June to 2019 June 4. NPTEL SPOC at GEC Kozhikode from 2017-2019 5. E Journal Coordinator at GEC Kozhikode from 2016-2019 	
14	Awards/Recognition	<ol style="list-style-type: none"> 1. Outstanding Branch Counselor award IEEE Kerala Section for the year 2013. 2. Vice- Chair WIE, IEEE Kerala Section, 2016 3. Active SPOC for NPTELSWAYAM course for July- October 2018 Semester 4. Active SPOC for NPTELSWAYAM course for Jan-April 2019 Semester 	

PUBLICATIONS DETAILS

National Conference

1. **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.*
2. **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.*
3. **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 (PICC 2010), Government Engineering College, Thrissur, March 2010.*
4. **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.*
5. **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

1. **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
2. **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
3. **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.
4. **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
5. **Sreejil Raju, 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 (PICC), 9-11 Dec 2015, Thrissur, India, pp 1-7. Print ISBN 978-1-4673-8071-3.

6. **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
7. **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
8. **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
9. **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.

Journal

1. **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.

2. **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.
3. **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.
4. **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.
5. **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, Vol 3(1), Jan 2014, pp 1-5.
6. **Santhosh Raj, Meenakshy K,** A unique grid power controller for DFIG based wind turbine generator system with or without battery storage device, IJIRSET, Volume 5, Special Issue 5, April 2016 pp 9-18
7. **Krishna Moorthy, Meenakshy K,** Prediction of Fragmentation of Kidney stones: A Statistical Approach from NCCT images, CUAJ, Vol10 , Issue 7-8, July-August 2016, pp E237-240.

8. **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>
9. Manju B, Jaya V.L, K Meenakshy, R Gopikakumari, Comparison of SMRT and Wavelet Texture Features, International Journal of Engineering and Future Technology, Volume 14, Issue No. 3, pp.14-22,2017
10. **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.
11. **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, Volume 19, NO 6, Dec 2018 pp 15.1 - 15. 12 UK Simulation Society.
12. **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 pp 324-335

13. **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.

14. **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. Pp 116-125

15. 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 (IJITEE) ISSN: 2278-3075, Volume-9 Issue-1, November 2019,pp , 381-385

LIST OF STTP'S ATTENDED (from 2012 onwards)

Course Name	Conducted by	Sponsoring Agency	Period		Duration
			From	To	
Computer Analysis of Power System	Dept of EEE, GEC, Thrissur	FSTDC	25.06.18	29.06.18	5 days
Faculty Development Program for Student	RSET, Kochi	AICTE	08.06.18	10.06.18	3 days

Induction					
Research Proposals and patents	Dept. of CE, GEC, Thrissur	FSTDC	27.11.17	1.12.17	5 days
Holistic Approaches for Leadership Empowerment	Dept. of CE, GEC, Thrissur	FSTDC	17.07.17	21.07.17	5 days
Open Source Tools for Computing	Dept. of CSE, GEC, Thrissur	FSTDC	11.07.16	15.07.16	5 days
Hands on Training on System Design using NI Labview	Dept. of EEE, GEC, Thrissur	FSTDC	29.02.16	04.03.16	5 days
Wind Emulator	Dept. of EEE, GEC, Thrissur	IIC	03.02.16	05.02.16	3 days
Statistical Techniques and its application in Engineering Research	Dept of Economics, GEC, Thrissur	TEQIP Phase II	16.03.15	20.03.15	5 days

Advanced MS Excel For Engineers	GEC, Thrissur	ISTE	24/06/14	27/06/14	4 days
Hands on Training for FPGA Based Embedded System	GEC, Thrissur	QIP	17/03/14	21/03/14	5 days
Open Source Software for Engineers	GEC, Thrissur	TEQIP -II	17/02/14	19/02/14	3 days
Applications of Power Electronics	GEC Thrissur	TEQIP-II	07/10/13	11/10/13	5 days
Mathematical Modelling and Analysis of systems	GEC, Thrissur	TEQIP-II	10/06/13	15/06/13	6 days
Embedded System Design for Power Measurements	ESIC, Hyderabad	TEQIP-II	13/02/13	15/02/13	3 days
Academic Leadership	IIM Kozhikode	TEQIP	17/01/13	19/01/13	3 days

Embedded system design using Microcontroller and FPGA	GEC, Thrissur	DTE	06/08/12	11/08/12	6 days

LIST OF STTP'S COORDINATED

Sl No	Name of Course	Period	No. of days	Name of institution
1	Mathematical Modelling and Analysis of systems	10.06.13 to 15.06.13	6 days	Govt. Engineering College, Thrissur
2	Hands on Training on System Design using NI Labview	29.02.16 to 04.03.16	5 days	Govt. Engineering College, Thrissur

LIST OF CONFERENCE ORGANISED

Sl No	Name of Course	Period	No. of days	Name of institution
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1	3rd International Conference on Materials for the Future - Innovative Materials, Processes, Products and Applications - 'ICMF 2013'	06.11.13 to 08.11.13	3 days	Government Engineering College, Thrissur
2	IEEE International Conference on Power Instrumentation Control and Computing	09.12.15 to 11.12.15	3 days	Govt. Engineering College, Thrissur
3	National Conference on Emerging Trends in Technology - NET 2016	07.10.16-08.10.16	2 days	Government Engineering College, Kozhikode

LIST OF STUDENT PROJECTS/STUDENT RESEARCH PROJECTS

Ph D Projects Guided

Sl No	Name of Project/research work	Period	Brief Description	Name of Student
1	Fusion Based Automatic Segmentation of Brain Tumour from MRI Images	2014-2019	Segmentation of brain tumor from MRI carried using using HAC based classifier. MSPTF based features are used. A refinement is also carried out to improve the segmentation	Maya UC

			result	
2	Impact of long-term physical training on cardiac control of autonomic nervous system and stress-recovery characteristics using physiological signals - Focus on women police recruits of Kerala	2015-2019	The study was carried out using objective measures of Heart Rate Variability(HRV), Heart Rate Recovery (HRR), Electro Dermal Activity (EDA) and subjective questionnaires.	Remya George

M Tech Projects guided

Sl No	Name of Project/research work	Period	Name of Student
1	Modelling of Wind Turbine System and its Grid Performance Analysis	2010-2011	Vivek Mohan
2	Sensored and Sensorless Control (Using Back EMF Zero Crossing Detection) for brushless DC Motor	2011-2012	Preetha Philip
3	Power Quality Improvement of new seven level inverter with less number of switches using intelligent systems	2012-2013	Priya S P
4	Maximum Power Point tracking using different Intelligent Systems	2012-2013	Harisha D.K

5	Stability Enhancement of Wind power integrated system using PID controlled SVC and power system stabiliser	2013-2014	Nayana K S
6	Modelling of Hybrid AC/DC Micro grid linked to electric vehicle charging station using battery energy storage systems	2014-2015	Syam V S
7	Power System Stability Improvement wind farm fed to Multi machine system using STATCOM	2014-2015	Sreejil Raju
8	Analysis of power injection into the grid using a DFIG based wind energy conversion system	2015-2016	Santosh Raj
9	Sensorless control of BLDC motor	2016-2017	Chandini K P
10	EEG controlled robotic arm	2017-2018	Anaswara P

B Tech Projects guided

Sl No	Name of Project/research work	Period	Name of Student
1	Power Quality Classification using Discrete Wavelet transform	2012	Rakesh Krishnan Rakesh R Prabhu Rakesh Viswanadhan Ranjith R Rejith Jose
2	Fuzzy logic based relaying for power transformer protection	2013	Jiyad K Joe Joy Joseph Babu Keerthana Kennedy

3	Power generation from Speed Breaker	2015	Lalu K B Deepak K T Anoop K A Midhun T M
4	Campus Management system	2017	Athira Sahadevan Cliffiya Rose maria Deepti D S Drisya K
5	Women Safety Night Patrolling Robot	2019	Athira Mohan Deepti Aloysias Sajna T Fuad Ibrahim

**INTERACTION WITH OUTSIDE WORLD/INVITED
TALKS/PARTICIPATION IN CONFERENCES etc.**

1. Expert Talk on Texture Modeling in the ISTE STTP 'Modeling and Optimization Techniques in Engineering' ,MOTE 2010, organized by Division of Electronics Engineering School of Engineering Cochin University of Science and Technology,Kochi-22 from 18 to 30 October 2010.
2. Expert Talk on Biomedical Instrumentation - an Overview on 27 September 2011 at Workshop organized by Rajagiri Institute of Science and Technology , Kochi
3. Chaired a session of the National Conference conducted by Production Engineering Department, Government Engineering College Trichur on 6th September 2 012
4. 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

5. 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
6. Expert Talk on Processing of Biomedical Images at AICTE Sponsored STTP on Frontiers in Biomedical Engineering on 29 April 2013 at Model Engineering College, Thrikkakara.
7. Expert Talk on FPGA based digital system design using VHDL at Sahrdaya College of Engineering & Technology, Kodakara on 4th September 2014
8. Expert Talk on Basics on VHDL at TEQIP sponsored workshop FPGA Based System Design organized by GEC , Thrissur on March 17, 2014
9. Expert Talk on Biomedical Processing at FSTDC Sponsored STTP conducted by Dept of Computer Science, GEC Thrissur on January 6 2015.
10. 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
11. 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
12. Chaired a session at KETCON 2019 held at Government Engineering College Thrissur on Feb 2019.
13. Expert Talk on Computational Methods for Image Processing, at AICTE sponsored FDP on Computational Methodas on Fluid and Structural Mechanics from 1 July to 12 July 2019 at RSET, Kochi on 05.07.2019