

Curriculum Vitae

Dr. Shanthi K J

DOB: 21/07/1962

Address: 'Akshaya', MNRA 6, Valiyakunnu,
Avanavanchery PO, Attingal-695103

Phone: 8618911483

Email: shanti_kj@yahoo.co.in/shanthi.kj@ieee.org



Academic Qualifications

Degrees	Class/Grade	University/ Institution	Stream	Year of award
BE	First Class	Mysore University /SJCE Mysore	Instrumentation Technology- Regular	1987
MTech.	First Class	CUSAT-Cochin	Digital Electronics – Regular	1994
PhD	-	University of Kerala/College of Engg. Trivandrum	Electronics	2012

Produced one PhD under Visvesvaraya Technological University (VTU), Karnataka

Service Profile

Year		Designation	Institution
From	To		
1987	1988	Lecturer	PDA College of Engg., Gulbarga
1988	1992	Lecturer	BVB College of Engg., Hubli (Dept. Instrumentation Technology)
1997	2000	Lecturer,	SCT College of Engg., Trivandrum (Dept. Electronics & comm.)
2000	2009	Senior lecturer	
2009	2010	Asst. Prof.	
2010	2013	Associate Prof.	Dr. Ambedkar Institute of Technology, Bengaluru (Dept. Medical Electronics)
2013	2022 (Superannuated)	Professor and Head	
Jan 2025	--	Adjunct Professor	Marian Engineering College Kazhikuttom
Areas of Interest: Biomedical Signal/Image Processing, Neural Network/Deep learning			

List of Publications

Journals and Book Chapter:

1. K J Shanthi, M Sasikumar and C Kesavadas; *Neuro-Fuzzy Approach Towards Segmentation of Brain MRI Based on Intensity and Spatial Distribution*, **Journal of Medical Imaging and Radiation Sciences, ELSEVIER** Vol. 41, pp 66-71, Jun2010 ;
2. K J Shanthi, M Sasikumar and C Kesavadas; *Segmentation of Brain MRI and Comparison of Different Approaches of 2D Seed Growing*, Book Chapter, **Springer-verlag Berlin, IFMBE Proceedings**
3. Shanthi K J, D K Ravish *A Guide to Practical Implementation of Wavelet Filters for Image Denoising* **Journal of Electronics and Communications Engineering – International Organisation of Scientific Research** ISSN 2278-2834, pp 44-48
4. D K Ravish, K J Shanthi **Parametric Spectral Estimation of Transient Otoacoustic Emissions for Auditory Function Measurements** International Journal of Innovative Research in Science and Engineering ISSN 2454-9665, Vol. 3 Issue 07, July 2017
5. Shanthi KJ, Kamala C, Ravish D K **Neural Network Based Drowsiness Detection System using Physiological Parameters** in International Journal of Emerging Trends in Computer Science Feb. Issue 2019
6. Mala Sinnor. Shanthi K J **Survey on Filtering Techniques Applied to ECG Signal** International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-9 Issue-7S, May 2020
7. Mala Sinnor. Shanthi K J **An ECG Denoising Method Based on Hybrid MLTP-EEMD Model** International Journal of Intelligent Engineering Systems *Vol.15, No.1, 2022* DOI: 10.22266/ijies2022.0228.52 575-583
8. Mala Sinnor, Dr. Shanthi K J, **An Improved Firefly Optimization Algorithm for Analysis of Arrhythmia Types**, International Journal on Recent and Innovation Trends in Computing and Communication, (2023) Vol 11 (7s), pp 430–436.
9. Mala Sinnor, Dr. Shanthi K J, **Analysis and Classification of Arrhythmia Types Using Improved Firefly Optimization Algorithm and Autoencoder Model, Multiagent and Grid Systems–** An International Journal 19 (2023) pp 43–60 IOS Press pp.43-60.
10. Mala Sinnor, Dr. Shanthi K J, **Arrhythmia Identification and Classification using Runge Kutta Optimizer-Based Hyperparameter Optimization for Long Short-Term Memory**, Journal of The Institution of Engineers (India): (2024), Springer

International Conferences:

1. 1. K J Shanthi, M Sasikumar ***Skull Stripping and Segmentaion of Brain MRI using FCM Algorithm and Thresholding Technique***, Proceedings of the Second International Conference on Emerging Adaptive Systems and Technologies, NICE, Kumaracoil, Tamil Nadu, India 1, pp 445-449, 2007
2. Shanthi, K.J.; Sasikumar, M.; ***Skull striping and automatic segmentation of brain MRI using seed growth and threshold techniques***, IEEE Proceedings of the International Conference on Intelligent and Advanced Systems, ICIAS 2007. , KualaLumpur, **Malaysia** 25-28 Nov. 2007 Page(s):422 – 426
3. Shanthi, K.J.; Sasikumar, M.; Kesavadas, C.; ***Neural network model for Automatic Segmentation of Brain MRI***, IEEE Proceedings of the 7th International Conference on System Simulation and Scientific Computing, 2008. ICSC 2008. Asia Simulation Conference, Beijing, China 10-12 Oct. 2008 Page(s): 1125 – 1128
4. Shanthi, K.J.; Sasikumar, .; Kesavadas, C.; . ***Comparison of Two Methods for Automatic Segmentation of Brain MRI Based on 2D Seed Growth and Two Stage FCM Algorithm*** IEEE Proceedings of the International Conference on Computational Intelligence for Modeling Control & Automation, Vienna, Austria, 2008 Page(s):1059 – 1064
5. Shanthi, K.J.; Ashok, L.R.; Anandu, A.S.; Gokul Das, B.; ***FPGA Implementation of Image Segmentation Processor*** IEEE Proceedings of the 2nd International Conference on Emerging Trends in Engineering and Technology (ICETET), Nagpur, India, 2009, Pages 364-367
6. Shanthi KJ and Dr. M Sasikumar; ***VLSI Implementation of Image Segmentation Processor for Brain MRI***; Amritha ACM-W Celebration of Women in Computing, Sep 16-17, 2010, Amritha University Coimbatore ACM, USA article 38, ISBN:978-1-4503-0194-7
7. Anil Aravind, Shanthi K J ***Haritha*** INDICON 2012 IEEE Conference Cochin India
8. Shanthi KJ, Ravish D K and Dr. M Sasikumar; ***Image Processing an Early Detection to Alzheimer's Disease***; IEEE INDICON 2014 Dec. 13-15 IIT Bombay
9. Shanthi KJ, Ravish D K ***Heart function Monitoring ,Prediction and prevention of Heart Attacks using Artificial Neural Networks*** IEEE International Conference CCCI 27-29 Nov. 2014 at Mysore
10. Ravish D K, Shanthi KJ Chethan R B ***Remote Health Care Systems for Smart Cities*** Proceedings of International Conference on Smart Cities ICDSC 2016 Bangalore
11. Shanthi KJ ***Improving eHealth Care Delivery Efficiency for Smart Cities in India*** Proceedings of International Conference on Smart Cities ICDSC 2016 Bangalore
12. D K Ravish, Shanthi KJ Nayana R Shenoy ***Design Of Pneumogram For Chronic Obstructive Pulmonary Disease Diagnosis*** International conference on Signal

processing & System Design Conference Proceedings ISSN NO: 1076-5131, Volume VI, Issue I, pp.3688-3693, Feb./2019

13. K. J. Shanti, B. Hegde, P. R. Shreya and M. M. Chaitra, **Automated System for Determination of Pupil Size Using Multispectral Imaging** 2021 IEEE Bombay Section Signature Conference (IBSSC), 2021, pp. 1-4, doi: 10.1109/IBSSC53889.2021.9673177.

National Conference:

1. Shanthi KJ **Image Segmentation Techniques and Applications** National Conference CCSO 2011 Bangalore
2. Shanthi KJ, Ravish D K, **Development of a Pure Tone Screener** NSA 2014 organised by All India Institute of Speech and Hearing Mysore
3. Shanthi KJ, Ravish D K **Visual Text Aided System Of Sign Language Using Android OS** NSA 2014 organised by All India Institute of Speech and Hearing Mysore

PATENTS

1. A DIGITAL DENTAL TAPE FOR MEASURING THE OCCLUSAL VERTICAL DIMENSION OF A PATIENTS FACE
PATENT APPLICATION PUBLICATION
(21) Application No.201941023281 A
(19) INDIA
(22) Date of filing of Application:12/06/2019
(43) Publication Date: 18/12/2020

2. Design patent for Vein Detector granted: Patent No. 313045-001

Major Grants Received: Received an amount of Rs. 14,53,333/ (Rupees Fourteen Lakh Fifty Three Thousand Three Hundred Thirty Three) as grant form AICTE under MODROB scheme during Sept. 2020 for Development of Biomedical Calibration and Testing Lab.

Courses/ workshops/ Seminars/ conferences/Organised:

Attended number of courses and conferences during my service and organized more than 50 such activities. And delivered Technical Talks at Faculty Development Programmes

Outreach Activities:

- AICTE Expert Committee Member:
- Board of Studies member:
- Board of Examiner:
 - Ramaiah Institute of Technology, Bangalore,
 - Dayanand Sagar College of Engineering, Bangalore

Others:

Reviewer for IEEE Conferences, PhD Examiner and evaluator for University of Kerala and Anna University

Major Events Organised

1. IEEE International Conference RAICS-2012 at Trivandrum, Kerala Contributed as Program Chair organized by IEEE Kerala Section
2. International Health Conference b-ecare 2018, Bangalore in association with Aventyn. Inc. USA
3. Pool Campus for Biomedical engineering graduates of South India at Bangalore during 2020 in Association with IBSC (an association for biomedical engineers)

Professional Society Membership

Senior member IEEE, Member IEEE EMBS Society, Life Member ISTE,

Women in Engineering Chair (IEEE WIE) for Kerala Section during 2010-2012

sd/

Dr. Shanthi K J