

## KINGS COLLEGE OF ENGINEERING

Department of Electronics and Communication Engineering

|                                             |                                                                                           |
|---------------------------------------------|-------------------------------------------------------------------------------------------|
| Name: Dr.P.Malathi                          |         |
| Designation:                                | Professor                                                                                 |
| Qualification:                              | B.E.-ECE,<br>M.E.- Applied Electronics,<br>Ph.D.- Information and Communication           |
| Area of Specialization:                     | Signal Processing, Speech Processing, Image Processing, Neural Networks, Machine Learning |
| Experience:                                 | Teaching:24 years<br>UG: -24 years                                                        |
|                                             | Industry:-6 months                                                                        |
| No. of workshop/Conferences/ FDP attended : | 25                                                                                        |
| Publication:                                | Journal<br>National: - NIL International:8                                                |
|                                             | Conference<br>National: NIL International:7                                               |
| Membership :                                | IETE, ISTE                                                                                |
| Achievements:                               | CLAD certified by National Instruments<br>Best Learnathon Coordinator by ICT Academy      |

### **International Conference Publications :**

1. Convolution neural network based Discrete Social Sharing Emotions on Covid-19 8<sup>th</sup> International Conference on Smart Structures and Systems, ICSSS2022, 2022| conference- paper, DOI: 10.1109/ICSSS54381.2022.9782263EID: 2-s2.0-85132271694
2. Regressive Based Classifier Analytics for the Mechanism of CryptoSystems Security Using EHE Scheme, 8<sup>th</sup> International Conference on Smart Structures and Systems, ICSSS 2022 2022|conference-paper,DOI:10.1109/ICSSS54381.2022.9782245EID:2-s2.0-85132287097-2 citations
3. Deep Architecture of Neural Networks Using Stochastic Integral Computation in VLSI Journal of Physics: Conference Series, 2021 | conference-paper, DOI: 10.1088/1742-6596/1964/7/ 072012EID: 2-s2.0-85112594995, Part of ISSN: 17426596 17426588
4. Enhancement of electrolaryngeal speech using frequency auditory masking and GMM based voice conversion, Proceedings of the 4th IEEE International Conference on Advances in Electrical and Electronics, Information, Communication and Bio-Informatics, AEEICB 2018, 2018 | conference-paper, DOI : 10.1109/AEEICB.2018.8480968EID:2-s2.0-85056419107-9 citations
5. Recognition of isolated words of esophageal speech using GMM and gradient descent RBF networks 2014 International Conference on Communication and Network Technologies, ICCNT2014,2015|conference-paper,DOI:10.1109/CNT.2014.7062749EID:2-s2.0-84994593663-3 citations
6. Ancient Tamil script and recognition and translation using LabVIEW, International Conference on Communication and Signal Processing, ICCSP2013– Proceedings 2013 | Conference - paper, DOI:10.1109/iccsp.2013.6577211EID:2-s2.0-84883435726-14 citations.
7. Li-Fi based human health monitoring system, AIP CONFERENCE PROCEEDINGS Conference - paper, DOI: <https://doi.org/10.1063/5.0110637>

### **FDPs/Workshops attended:**

1. Workshop on Digital Signal Processing June1996, Vi Microsystems Pvt. Ltd, Chennai
2. AICTE-ISTE sponsored Programme on Industry Institute Partnership 10<sup>th</sup> –15<sup>th</sup> March 1997 Regional Engineering College.
3. ISTE Winter School on Industry Institute Linkage- Ways of effective implementation, 17.11.1997-12.11.1997, Periyar Maniammai College of Technology for Women
4. General Orientation on NSS, 18-27<sup>th</sup>August1997, Madras School of Social Work
5. Microwind and ni2 designs, 07.04.2007, CEG, AnnaUniversity
6. FDP on EC1253-Electromagnetic Fields, 01.12.2008-04.12.2008, PITAM
7. FDP on Digital Communication, 24<sup>th</sup> to 30<sup>th</sup> November 2008, Anna University
8. FDP on Mobile Computing, 8<sup>th</sup>to 10 May2008, PITAM
9. Pre Conference Workshop on FPGA based Embedded Processor Overview- NIOS II
10. 7<sup>th</sup> May 2008, Anna University, Chennai
11. Multipurpose Communication Lab Station, 19.12.2008, PITAM
12. Training Programme on Matlab and its Tools, 5<sup>th</sup> -7<sup>th</sup> September 2009 PITAM
13. International Conference on Accreditation- ICA 2011, 18-19 May2011 RMK Engineering College.
14. AICTE sponsored SDP on Communication Dictionary, 30.05.2011 - 12.06.2011, PITAM
15. CSIR sponsored Workshop on Health, Care Technology and Recent Trends in E- Health and M-Health,01.11.2012-02.11.2012, PITAM
16. Indo German Workshop on Applied Mathematics in Engineering and Industry. 25<sup>th</sup> October 2013,

Alpha Group of Institutions

17. Awareness on Quality Systems in Higher Education, 26<sup>th</sup> to 27<sup>th</sup> March 2015, Anna University
18. Technologies for Speaker and Language Recognition, 29<sup>th</sup> and 30<sup>th</sup> April 2015, SSN College of Engineering
19. Winter School on Speech and Audio Processing – Speech Prosody, 8-11 Jan 2016, SSN College of Engineering
20. Speech, Audio and Image Processing using Deep Learning Techniques: Research issues, Innovation and Applications, NIT Warangal and University College of Engineering, Ramanathapuram, 7-17 June 2021
21. Nurturing The Graduates On Industry Readiness, 7 May 2020 ICT Academy
22. Sharing the experiences of NAAC- Assessment and Accreditation Process  
24 June 2020, Dhaanish Ahmed College of Engineering
23. Online Course by AICTE on Examination Reforms, 29 April to 2 May 2020
24. Online FDP on OBE NBA Process-Nasaraopeta Engineering College, OBE-NBA Process, 28<sup>th</sup> May to 1<sup>st</sup> June 2020
25. Online FDP, St. Joseph's Engineering College, Inclusive Procedures and Processes in Assessment and Accreditation by NAAC, 30<sup>th</sup> June to 4<sup>th</sup> July 2020
26. IBM Intellect Design Thinking, 5<sup>th</sup> and 6<sup>th</sup> January 2024.

#### **International Journal Publications:**

1. **An efficient black widow optimization-based faster R-CNN for classification of COVID-19 from CT images**, Multimedia Systems, **2024-04** | Journal article, DOI: [10.1007/s00530-024-01281-4](https://doi.org/10.1007/s00530-024-01281-4), Part of ISSN: [0942-4962](https://doi.org/10.1007/s00530-024-01281-4), Part of ISSN: [1432-1882](https://doi.org/10.1007/s00530-024-01281-4),
2. **Built-In Calibration Standard and Decision Support System for Controlling Structured Data Storage Systems Using Soft Computing Techniques**, Computational Intelligence and Neuroscience, **2022-08-27** | journal-article DOI: 10.1155/2022/3476004 Part of ISSN: 1687-5273 Part of ISSN: 1687-5265
3. **A novel security framework for healthcare data through IOT sensors**, Measurement: Sensors, 2022 | journal-article DOI: 10.1016/j.measen.2022.100535 EID: 2-s2.0- 85140296783, Part of ISSN: 26659174- 14 citations
4. **Evaluation of Optimum Learning Style to enhance Engineering Education**, International Journal of Psychosocial Rehabilitation, **2020-05** | journal-article
5. **Speech Enhancement via Smart Larynx of Variable Frequency for Laryngectomy Patient for Tamil Language Syllables Using RADWT Algorithm**, Circuits, Systems, and Signal Processing, **2019-09-19** | journal-article, DOI: 10.1007/s00034-019-01055-8- 9 citations
6. **Performance Analysis Of Feature Extraction And Enhancement Of Esophageal Speech**, International Journal of Advanced Information and Communication Technology, IJAICT Volume 3, Issue 2, February 2016
7. **Adaptive Bandwidth Allocation In Cognitive Radio**, International Journal of Innovative Research and Development, ISSN:2278-0211, Volume 2, Issue 11, pp.190 -193
8. **Efficient Speaker Verification System with Spoofing Attack**, International Journal of Research In Engineering and Advanced Technology, Volume 1, Issue 6, Dec- Jan 2014, ISSN: 2320-8791
9. **Modified Self Organising Map with Discrete Wavelet Packet Transforms and Linear Prediction coding for Automated Speaker Recognition and Classification**- International Journal of Pattern Recognition and Artificial Intelligence- **Under Review**

**Workshops organized:**

1. Design Thinking for faculty and students
2. Outcome based Education for faculty
3. AICTE sponsored FDP on Communication Dictionary
4. LabVIEW – Core I and II for faculty and students
5. Networking Algorithms for faculty
6. Machine Learning-an Overview for students
7. Research Paper writing – Essentials for faculty

**PATENTS:**

1. Real time face recognition and tracking techniques using HCI-
2. Automatic Gas Cylinder Trolley Controlled Using Mobile Phone To Aid The Elderly-
3. Smart And Intelligent Vehicle With Multiple Capabilities Of Staircase Climbing On All Terrain For Physically Challenged
4. Multipurpose AI Based Robot For Automated Trash Removal And Fire Fighting Using Raspberry Pi

**REVIEWER:**

1. IET Signal Processing
2. Wireless Personal Communication

**Online Courses and Certifications:**

1. NPTEL Course- Human Resource Management
2. NPTEL Course- Human Computer Interaction
3. NPTEL Course- Innovation by Design
4. Upgrad- Advanced PG on Machine Learning and Artificial Intelligence in association with IIT-Bombay