



Associate Professor/ECE
Manakula Vinayagar Institute of Technology,
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Dr.D.Saraswathi, MIEEE, MISTE

Professional Objective:

To pursue a challenging career and be part of a progressive organization that gives scope to enhance my knowledge, skills and to reach the pinnacle in the computing and research field with sheer determination, dedication and hard work.

Career profile:

Seasoned teacher with 14 years of experience in teaching undergraduate and postgraduate courses in Electronics and Communication Engineering. Areas of interest include Machine Learning, Deep Learning, Neural Science, Signal and Image Processing, Medical Image Analysis. Actively participating in continuing learning through conferences and professional research. Thirst towards coding skills which includes MATLAB and PYTHON. Believe in students' abilities to learn and inherent thirst for knowledge with the right environment. Actively work to connect students to their material to transform lives.

Educational qualification:

- Ph.D :** Pondicherry Engineering College / April 2018.
Title of the thesis: "Efficient and Intelligent Computer-Aided Diagnosis system for Mammogram Analysis"
- M.E. :** Applied Electronics/PSG College of Technology/2009
- B.E. :** Electronics and Communication Engineering/Madras University/2002

Work experience: (starting from present position)

Institution	Date		Designation	Nature of Work
	From	To		
Manakula Vinayagar Institute of Technology, Puducherry	15.05.2015	Till Now	Associate Professor	Teaching, Mentoring
Manakula Vinayagar Institute of Technology, Puducherry	03.01.2011	14.05.2015	Assistant Professor	Teaching, Mentoring

Jansons Institute of Technology, Coimbatore	13.07.2009	30.06.2010	Lecturer	Teaching, Mentoring
IFET College of Engineering, Villupuram	14.06.2004	7.08.2007	Lecturer	Teaching, Mentoring
Sasurie Institute of Engg. & Technology, Erode	12.07.2002	30.04.2004	Lecturer	Teaching, Mentoring

Teaching Activities: (Subjects Taught)

(i) Under Graduate :

- 📌 Digital Signal Processing
- 📌 Digital Image Processing
- 📌 Engineering Electromagnetics
- 📌 System Design using IC's
- 📌 Signals and Systems
- 📌 Digital Electronics

(ii) Post Graduate :

- 📌 Advanced Digital Image Processing
- 📌 Multimedia Compression Techniques
- 📌 Advanced VLSI Design

(iii) Laboratories handled:

- 📌 Digital Signal Processing Lab
- 📌 System Design using IC's Lab.
- 📌 Electron Devices Lab
- 📌 Digital Electronics Lab
- 📌 Advanced Communication and Embedded Systems Lab.

Consultancy and Sponsored Research Activities :

Name of the Scheme	Project Title	Duration	Amount Sanctioned	Status Completed/* Ongoing
ICMR-Seminar Grant	Advanced Technology in Health Care : Prospects and Challenges	2 days (21.04.2017 to 22.04.2017)	40000	Completed

Major tasks handled:

SI.No	Work Assigned	Level
1	MVIT Exam Cell Coordinator	College Level
2	Pondicherry University Nodal Officer	College Level
3	M.Tech ECE Coordinator	Department Level
4	MVIT Alumni Coordinator	College Level
5	MVIT Dreams Coordinator	Department Level
6	Signal and Image Processing Specialization Group Coordinator	Department Level
7	QAC member	Department Level
8	Cultural Club Coordinator	Department Level
9	Sports club Coordinator	Department Level
10	Founder's Remembrance Day Coordinator	College Level
11	Siggarathai Nokki MC Desk Coordinator	College Level
12	M.Tech Project Coordinator	Department Level
13	B.Tech Project Coordinator	Department Level
14	Stock Verification Coordinator	College Level
16	MITILENCE symposium EVENT Coordinator	Department Level
17	MITRONCE EVENT Coordinator	Department Level
18	SCHMITT JURIE and Coordinator for Compeering	College Level
19	MITELITE JURIE	College Level
20	Achiever's Day Compeering Coordinator	College Level
21	Compeering Coordinator for Women's Day celebration	College Level
23	SCAN Conference Coordinator	Department Level
24	ICSCAN IEEE Conference organizing Committee member	College Level
25	Fruition-Achiever's Day Compeering incharge	College Level
26	Student Counsellor	Department Level
27	Delivered Guest Lecture in schools about the Importance of Women Education	College Level
29	Mentored the students to participate in various competitions (One Batch received Top Four place in Inframind TCS Contest)	National Level
30	Conducted Internal & External Workshops (Matlab)	College Level

Paper Publications / Presentation:

	Published	Accepted	Communicated	Total
International Journal	10	-	-	10
National Journal	-	-	-	-
International Conference	16	-	-	16
National Conference	08	-	-	08

FDP/STTP/Workshops attended: 28

(Details of publications and training programmes attended in Annexure-1)

Reviewer for the journals:

Neurocomputing (Elsevier) and Taylor & Francis

Research guidance: Nil

Project Guidance :

UG Projects -13

PG Projects - 06

Guest Lectures delivered: 05

Professional Membership:

📌 Life time member - Indian Society for Technical Education

📌 IEEE Member

📌 Life time member - IAENG Member

Annexure-1

i. List of Publications (International/National Journals):

Sl.No	Authors	Title of the paper	Name of the Journal	Volume No.	Month/Year/Page Nos.
1	Saraswathi, D., E. Srinivasan	Computer-Aided Mammogram Diagnosis System using Deep learning Convolutional Fully Complex-valued Relaxation Neural Network Classifier	IET Computer Vision	Vol.11 No.8	July 2017/ 656-662
2	D.Saraswathi, E.Srinivasan P.Ranjitha	An Efficient Level Set Mammographic Image Segmentation using Fuzzy C Means Clustering	Asian Journal of Applied Science and Technology	Vol.1 No.5	May 2017/7- 11
3	D.Saraswathi, E.Srinivasan P.Ranjitha	Extreme Learning Machine for Cancer Classification in Mammograms Based on Fractal and GLCM Features	Asian Journal of Applied Science and Technology	Vol.1 No.4	May 2017/1-6
4	Saraswathi, D., E. Srinivasan	Mammogram Analysis using League Championship Algorithm Optimized Ensembled FCRN Classifier.	Indonesian Journal of Electrical Engineering and Computer Science	Vol.5 No.2	Feb 2017/451 -461
5	D.Saraswathi, E.Srinivasan	Detection of Microcalcifications in Digital Mammograms using Fuzzy	Proceedings of CIC 2016, journal, IJCSIS		19-20 Oct 2016

		Euler Graph segmentation method			
6	D. Dharani, D. Saraswathi	Segmentation of Text from Degraded Document Images by Local Threshold Method	International Journal of Science and Research (IJSR)	Vol.5 No.4	April 2016/ 70-74
7	Saraswathi D, Srinivasan E	A high-sensitivity computer-aided system for detecting microcalcifications in digital mammograms using curvelet fractal texture features	Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization, Taylor & Francis ISSN:2168-1163	Vol.14	Feb 2016, 1-11
8	G.Sharmila , D.Saraswathi , R.Ramkumar	A Survey on Content Based Medical Image Retrieval for MRI Brain Images	International Journal of Research in Engineering and Technology pISSN: 2321-7308	Volume: 03 Issue: 07	May 2014 / 149-154
9	D. Saraswathi, E. Srinivasan	An ensemble approach to diagnose breast cancer using fully complex-valued relaxation neural network classifier	Int. J. of Biomedical Engineering and Technology, Inderscience Publishers ISSN:1752-6418, DOI: 10.1504/IJBET.2014.064651	Vol. 15, No.3	Sep 2014 / 243 - 260
10	Saraswathi D, Srinivasan E	A CAD system to analyse mammogram images using fully complex-valued relaxation neural network ensembled classifier	Journal of Medical Engineering & Technology, Informa Healthcare , (Taylor & Francis) UK Ltd. ISSN: 0309-1902. DOI: 10.3109/03091902.2014.942041	Vol. 38, No. 7	oct 2014 / 359–366

ii. Conference (International Level):

Sl.No.	Authors	Title of the paper	Name of the International conference with venue	Month/Year/Page No.
1	D.Saraswathi, E.Srinivasan	Performance Analysis of Mammogram CAD System using SVM and KNN Classifier	IEEE conference in JCT	Jan 18-19 2017
2	D.Saraswathi, E.Srinivasan, P.Ranjitha	An Efficient Level Set Mammographic Image Segmentation using Fuzzy C Means Clustering	ICMCE 2016, VIT Chennai	16-17 Dec 2016

3	D.Saraswathi, E.Srinivasan	Detection of Microcalcifications in Digital Mammograms using Fuzzy Euler Graph segmentation method	TEQIP-II sponsored CIC 2016, Pondicherry Engineering College, Puducherry.	19-20 Oct 2016/ Vol.14 IJCSIS
4	D.Saraswathi, E.Srinivasan, D.Dharani	An Efficient Feature Extraction Technique for Breast Cancer Diagnosis using Shearlet Transform and PCA	IEEE ICIECS 2016, Karpagam College of Engineering	17-18 March 2016/ Pg. No.1940-1944
5	Chandrabalan. G, Saraswathi.D	An Efficient and Intelligent Security System for Devices Using Fingerprint Recognition	ICETS 2016, Muthayammal Engineering Institutions, Rasipuram	18-19 March 2016/ Pg. No.784-789
6	Chandrabalan. G, Saraswathi.D	An Intelligent and Efficient Security for Devices using Biometric Recognition	ICCS 2016, PEC, Puducherry	17-19 March 2016
7	D.Saraswathi, E.Srinivasan, D.Dharani	An Efficient Feature Extraction Technique for Breast Cancer Diagnosis using curvelet transform and Swarm Intelligence	IEEE WiSPNET 2016, SSN College of Engineering, Chennai	23-25 March 2016
8	D.Saraswathi, E.Srinivasan.	Medical Image Segmentation using Supereulerian Graphs	ICAMM-2016, PSG College of Technology	5-7 Jan 2016
9	D.Saraswathi, E.Srinivasan.	A Curvelet based Texture Feature Extraction and Back Propagation Network for Digital Mammograms	ICCCAN-2015, Chennai Institute of Technology	20-21 Mar 2015
10	D.Saraswathi, G.Sharmila, E.Srinivasan.	An Automated Diagnosis system using Wavelet based SFTA Texture Features	IEEE ICICES, SA College of Engineering ISBN:978-1-4799-3835-3 DOI: 10.1109/ICICES.2014.7034123	27-28 Feb 2014/ 1-5
11	D.Saraswathi, E.Srinivasan, G.Sharmila	A Comprehensive Study of Image Classification Techniques in Medical field	ICIEE, PSG college of Technology	Dec 2013/ 233-238
12	D.Saraswathi, E.Srinivasan, S.Iyyappan	Analysis of CAD systems in Mammographic Screening: A Survey	ICMCE 2013 at VIT, Chennai	Nov 2013/ 800-807
13	Priya,C.; Saraswathi, D.; Baskar, S.; Shailesh, V.	An Novel cram of reconfigurable patch Antenna using RF MEMS	IEEE ICEVENT-2013 at SKP Engineering College DOI: 10.1109/ICEVENT.2013.6496562	Jan-13

14	D.Saraswathi, J.Sathish, J.Baskar	A Simple Algorithmic Approach To Enhance Visual Quality And Reduce Computational Complexity Using EVCS	SMART-2012 at Sri Manakula Vinayagar Engineering College, Puducherry	Dec-12
15	D.Saraswathi, J.Sathish, S.Murugappan	Optimization and Hardware Implementation of AES algorithm using 89C51 Microcontroller	SMART-2012 at Sri Manakula Vinayagar Engineering College, Puducherry	Dec-12
16	D.Saraswathi, Yuvaraj	A High Robustness optimization technique for Digital image watermark embedding & extraction by Genetic Algorithm	SMART-2012 at Sri Manakula Vinayagar Engineering College, Puducherry	Dec-12

iii. Conference (National Level):

Sl.No	Authors	Title of the paper	Name of the National conference with venue	Month/Year/Page No.
1	D.Saraswathi, R.Gokulnath, J.Hemanath Kumar	Improved Biometric Personal Authentication System using Finger Vein	CETEES2018, CK College of Engineeirng and Technology, Cuddalore	March 2, 2018
2	Iyyappan.S, Sharmila.G, Saraswathi.D	Soft computing based Edge Detection Techniques- An overview Approach	NCSCV'13, Anna University, Coimbatore	2013
3	G.Sharmila, D.Saraswathi, S.Iyyappan,	Comparison of various Similarity Metrics for Content Based Image Retrieval and Classification of Images using SVM	TECHCON'14, IFET College of Engineering	April 5, 2014
4	D.Saraswathi , Chanemouga priya, G.Sharmila	An Efficient Color Feature Extraction Method for Content Based Image Retrieval	NCWCAPS'13, Sri Ganesh College of Engineering & Technology	Oct 2013/7-10
5	D.Saraswathi, P.Raja, J.Sathish	A Novel Algorithm For An Efficient Image restoration	NCRVIC-2011, B.S. Abdur Rahman University	April 2011/45
6	D.Saraswathi, A.Prasina	Bio-geography Based Optimization algorithm for Neural networks	NCSCV '09, Anna University, Coimbatore	May 2009/83
7	D.Saraswathi, R.Jegathesewari	Image De-noising Algorithm for Extremely Corrupted images	RCCIT '09, Sona College of Technology	March 2009/44-47
8	D.Saraswathi, P.Raja	Real Time Operating Embedded systems	ISTE 7 th Annual Convention & National Seminar, SMVEC	Nov-04

iv. FDP/Workshops Attended :

Sl.No	Title of the workshop	Venue	Duration	Sponsoring Authority
1	Embedded IOT & IOE	MIT	11-15 Dec 2017	ISTE

2	Internet of Everything (IOE):Gaining deeper insights into emerging digital drive	PEC	4-10 Nov 2017	AICTE-STC
3	NI Graphical system design platform for industrial IOT application	MIT	23-25 March 2017	ICTACT
4	Recent Trends in Signal and Image Processing	PSG College of Technology, Coimbatore.	6th-12th June 2016	TEQIP-FDP
5	Artificial Neural Network (ANN), Fuzzy Logic and Evolutionary Computing using MATLAB	SCS-India	13-14 May 2016	Scientific Computing Solutions
6	Recent advances in Medical Imaging Techniques	Anna University, Chennai	31st July 2015	Anna University, Chennai
7	Neural Networks, Fuzzy Logic and Pattern Recognition for Engineering and Healthcare Applications	M.S.Ramaiah Institute of Technology, Bangalore	27 th -29 th Sep 2013	IEEE
8	Applications of Image Processing Techniques in Next Generation Wireless Networks	Pondicherry Engineering College, Puducherry	20 th - 24 th May 2013	TEQIP-STTP
9	Current Scenario: Open source Technologies	Manakula Vinayagar Institute of Technology	17-18 April 2013	Manakula Vinayagar Institute of Technology
10	Digital Image Processing using Matlab	Manakula Vinayagar Institute of Technology	01-02 March 2013	Manakula Vinayagar Institute of Technology
11	National Programme on Technology Enhanced Learning (NPTEL)	Manakula Vinayagar Institute of Technology	Dec 12 th , 2012	Manakula Vinayagar Institute of Technology
12	PSO and its variants: Concepts and basic implementation in MATLAB	Anna University, Coimbatore	21-22 February 2013	Anna University, Coimbatore
13	Art of Computing	PSG College of Technology , Coimbatore	7-8 December 2012	PSG College of Technology , Coimbatore
14	Research Methodologies and Technical writing of Journal papers & Research Theses	Christ college of Engineering & Technology	11 th Aug 2012	Christ college of Engineering & Technology
15	Support Vector Machines	National Institute of Technology , Trichirappalli	8 th June 2012	National Institute of Technology , Trichirappalli
16	Matlab	RMD College of Engineering	19 th Nov 2011	RMD College of Engineering
17	Current trends in Information retrieval with Research Perspective	PSG College of Technology,	9 th May - 21 st May 2011	AICTE-SDP

		Coimbatore.		
18	Next Generation Wireless Networks	Manakula Vinayagar Institute of Technology	Feb 25,2011	ISTE
19	Multi-core Computing	Anna University, Chennai	14 th to 17 th Dec' 09	Anna University, Chennai
20	Content based Image retrieval and fusion	MIT, Anna university	7 th to 9 th Aug 2009	MIT, Anna university
21	Evolutionary Computing Approaches and its applications	Anna University, Coimbatore	6 th & 7 th March 2009	Anna University, Coimbatore
22	Automotive software Engineering Methodologies	VIT, Deemed University-Vellore	1 st -2 nd Sep 2006	STTP
23	MATLAB for Engineering applications	PSG College of Technology	July 21 st to Aug 22 nd	One Month Continuing Education Programm
24	Simulation of Electronic Circuits using Orcad	SSN College of Engineering, Chennai	3 rd March 2007	SSN College of Engineering, Chennai
25	GIS and Remote sensing	Sathyabama University-Chennai	6 th -17 th Feb 2006	Centre for remote sensing & Geo Informatics, Sathyabama University-Chennai
26	Teaching and Learning Process	IFET College of Engineering	10-12 th Dec 2004	IFET College of Engineering
27	Design and Development of Embedded systems	Karunya Institute of Tech & Sciences, Deemed University-Coimbatore	25 th Oct - 4 th Nov 2004	AICTE-ISTE sponsored STTP
28	Microprocessors and its applications	Anna University-Chennai.	2 nd June to 6 th June 2003	Centre for Faculty Development, Anna University-Chennai.