FACULTY : R.Malmathanraj/AP/ECE/NITT

Qualification

Qualification	University / Board	Year	Specialization
Ph.D.	Madras Institute of Technology, Anna University Tamilnadu, India.	2011	Study and Analysis on Reinforcement Learning and Biologically Inspired Algorithms for Interceptor Allocation, Faculty of Information and Communication
M.E. / M.Tech.	Madurai Kamaraj University, TamilNadu, India.	2002	Communication Systems
B.E. / B.Tech.	Manonmaniam Sundaranar University, TamilNadu, India.	2001	Electronics and Communication Engineering

Experience

Organization	Designation	Period
Madras Institute of Technology, Anna University	Project Associate in the DRDO sponsored project "Missile Defence and Interceptor Allocation by RBF Neural Network" at Centre for Aerospace Research (CASR)	14/10/2004 to 30 /11/2005
Dr.Sivanthi Aditanar College of Engineering , Tiruchendur	Lecturer	16/03/2006 to 07/05/2007
National Institute of Technology (NIT), Trichy - 620015, India	Assistant Professor, Dept. of ECE.	07.06.2007 to till date

Professional / Research Interests

- Reinforcement learning
- Medical Image processing

Contact Address

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Sub Menu

1. PUBLICATIONS

JOURNAL / International

S.No.	Title	Author(s)	Journal	Year Vol. (No), Page
1.	Mammogram Tumor Classification using Q learning.	S. T. Selvi and R. Malmathanraj	International Journal of Biomedical Engineering and Technology	vol. 7, no. 4, 339-352, 2011
2.	Mammogram tumor classification using modified Segmentation techniques.	Sriram Kumar D., Malmathanraj Ramanathan, Mohan R and Umamaheswari S	International Journal of Biomedical Engineering and Technology	2013.
3.	Mammogram Classification Using Support Vector Machines,	S.Thamarai Selvi and R.Malmathanraj	International Journal of Soft Computing	3 (3): 212-219, 2008
4.	Prediction of Aerodynamic Characteristics Using Neural Networks	R.Malmathanraj, S.Thamarai Selvi.	Asian Journal of Information Technology	7 (1): 19-26, 2008
5.	Artificial Neural Network application in Parameter Optimization of Rectangular Microstrip Patch Antenna.	Malmathanraj Ramanathan, Thamarai Selvi Somasundaram	UbiCC Journal	Volume 3 No. 2 Publishing Date: 4/15/2008
6.	Solving Missile Defense and Interceptor allocation problem using Reinforcement	R.Malmathanraj, S.Thamarai Selvi and S.Mathanraj	International Journal of Recent Trends in	Vol 2, November 2009.

	learning and optimization techniques.		Engineering	
7.	Document clustering using learning from examples.	G. Thavasi Raja, R. Malmathanraj & M. Arun	IJCA	Vol 39, - No.12, February 2012.
8.	Performance analysis algorithms of multi user detection of DS-CDMA.	G. Thavasi Raja, P. Krishna Chaitanya and R. Malmathanraj	IJCA	Volume 39 - Number 11, 2012.
9.	Characteristic Prediction of Wind Tunnel Tests using Learning from Examples.	Dr. R. Malmathanraj and T. Francis Tyson	IJCA	Volume 35 - Number 6 Year of Publication: 2011.
10.	Wood species classification based on local edge distributions.	M.Sundaram, J.Abitha, R.Malmathanraj, K.Ramar	Optik - International Journal for Light and Electron Optics	Volume 126, Issue 21, November 2015, Pages 2884-2890

National

S.No.	Title	Author(s)	Journal	Year Vol. (No), Page
1.	Solving Battle Management Command Control and Communication problem using Modified BIONET.	S.Thamarai Selvi and R.Malmathanraj	Defence Science Journal	VOL 56, Number 4, October 2006
2.	Missile Defense and Interceptor allocation by LVQ-RBF Multi-agent Hybrid architecture.	S.Thamarai Selvi and R.Malmathanraj	Defence Science Journal	Vol 57, Number 2, March 2007
3.	Utkarsh Gautam, Malmathanraj Ramanathan.,	Simulation for path planning of SLOCUM Glider in near bottom ocean currents using heuristic algorithms and Q learning	Defence Science Journal,	Vol 65, No 3,May 2015, pp 220-225.

CONFERENCES

International

S.No.	Author(s)	Title	Name of the Conference, Place, Date
1.	S.Thamarai Selvi and R.Malmathanraj.	Missile Defense and Interceptor allocation by Modified BIONET	The 9th International Conference on Engineering Applications of Neural Networks EANN2005 Lille, France 24-25-26 Aug 2005.
2.	S.Thamarai Selvi and R.Malmathanraj.	Segmentation and SVM classification of Mammograms	IEEE sponsored ICIT Conference, Mumbai 15-17 Dec 2006.
3.	A.Beno, R.Malmathanraj, S.Thamarai Selvi and Ramlal Yadava.	Artificial Neural Network Application in Parameter Optimisation of Rectangular Microstrip Patch Antenna	Proceedings of the international conference on ADvances in Electronics and Communications (icon ADELCO 2007) National Engineering College, Kovilpatti, Tamilnadu, India, Feb 1-3, 2007. pp. 587-596.
4.	Paul Devasahayam Manuel, Abd-El Barr , R. Malmathanraj , S. Thamarai Selvi and E. Mahendran.	Knowledge Discovery from Text Documents Using Neural Network Based On Abstract Maps	International Conference on Mathematics and Computer Science, Loyola College, Chennai, India, March 1-3, 2007. Chennai, India, pp. 694-700.
5.	S.Thamarai Selvi and R.Malmathanraj.	Solving BMC3 problem using biologically inspired algorithms	Proceedings of the International Conference on Mathematical and Computational Models (ICMCM,2009), PSG College of Technology, Coimbatore 641004 during Dec

			21-23, 2009.
6.	K.Arunkumar, R.Aswath D.Sriramkumar and R.Malmathanraj.	Optimisation of multi slottedRectangular Microstrip Patch antenna using ANN and Bacterial Foraging Optimisation	Asia Pacific International Symposium on Electromagnetic Compatibility, April 12-16(2010), Beijing, China.
7.	I.Balakrishna, R.Malmathanraj, Dr.S.Raghavan.	CPW fed Rectangular Slot antenna for wide band applications	International conference on Digital Convergence, pp. 109-112, Jan. 2011.
8.	R.Malmathanraj, Aswin N Raghavan, V.Srivas and R.Gowtham Rangarajan.	Mammogram tumor classification using Q learning based thresholding	BEATS 2010, NIT JALANDHAR, December.
9.	R.Malmathanraj and M.Arun.	A distributed e-healthcare system for patient monitoring and diagnosis	Advanced Communication Control and Computing Technologies (ICACCCT), 2012 IEEE International Conference on, 23-25 Aug. 2012, pp. 71 - 77 ISBN:978-1-4673-2045-0
10.	Enrich Braz, Dr.R.Malmathanraj and R. Mohan.	Visualization of Hyperspectral Images using Maximum Intensity Pixel Selection and Fusion by Weighted Average	EECS-Proceedings of International Conference on Electrical, Electronics and Computer Science Engineering, March 31, 2013.
11.	Gautam, U., Malmathanraj, R., and Srivastav, C.	Simulation for path planning of autonomous underwater vehicle using Flower Pollination Algorithm, Genetic Algorithm and Q-Learning	Cognitive Computing and Information Processing (CCIP), 2015 International Conference on, 3-4 March 2015, pp 1-5.

| 12. | Malmathanraj Ra., P.Palanisamya., Logeswaran Ra., Easwar Ra., Utkarsh. | Analysis of Fingerprint recognition systems using Local Binary Pattern its variants and BioHashing, Information Technology Yesterday, Today and Tomorrow | A Bilingual International Conference organized by DRDO, 19 February 2015.(Selected for poster presentation) |

National

S.No.	Author(s)	Title	Name of the Conference, Place, Date
1.	S.Thamarai Selvi and R.Malmathanraj.	An agent based approach to Human resource Management	National workshops on ROAD TO Ph.D (NWRPâ€™03) and MACHINE INTELLIGENCE USING SOFT COMPUTING on RMK Engineering College Aug 08-09, 2003.(Abstracts of Proceedings)
2.	R.Malmathanraj, S.Thamarai Selvi and E.Mahendran.	Prediction of Aerodynamic Characteristics using Neural Network	First National Conference on Advanced Computing, Madras Institute of Technology Feb 10-11, 2006.
3.	R.Malmathanraj, S.Thamarai Selvi and J.Ganesh.	AGENT BASED MANAGEMENT BY EXCEPTION USING MODIFIED FUZZY Q LEARNING	First Indian Conference on Computational Intelligence & Information Security (ICCIIS) Thiagarajar College of Engineering, Jan 25, 2007.
4.	R.Malmathanraj and S.Thamarai Selvi.	Brain MRI Image Analysis using Hurst parametric features and SVM	Proceedings of the 5th National Conference on Advanced Image Processing and

			Networking (NACIPAN€™09) Mar 06-07, 2009.
5.	R.Malmathanraj and S.Thamarai Selvi.	Mammogram Classification using Primitive Texture Spectrum and Support Vector	Proceedings of the 5th National Conference on Advanced Image Processing and Networking (NACIPAN€™09) Mar 06-07, 2009.
6.	D.Sriramkumar, R.Malmathanraj, V.Arunkumar.	An analysis of target tracaking methods for phased array antenna	National Conference on recent trends and research issues in antennas,Vol 1, 9th and 10th February 2010, Tiruchendur.

Prepare a list of publications in the format given or Each file has a link with (1) International Journal (2) National Journal (3) International Conference (4 National Conference

2. AWARDS

Sl.No	Name of the Award	Year

3. INVITED LECTURES

Sl.No	Name of the topic	Programme	Date	Organization
1.	Reinforcement learning, Fuzzy learning and Longitudinal control of autonomous vehicles	AICTE sponsored staff development programme on - Advances In Research And Development Of Autonomous Robots,	May 4 2012	EGS Pillay Engineering College, Nagapattinam
2.	Soft computing	IETE Students forum Technical Expert Lecture	28.03.14	Kamaraj College of Engineering and Technology
3.	Local Binary Pattern and its variants	Faculty Development Program on Image Processing	16.6.2014	Arupadai Veedu Institute of Technology Chennai

4`	**"APPLICATION OF NEURAL NETWORKS IN DIAGNOSING CANCER DISEASE USING BIOMEDICAL IMAGE PROCESSING"**	Invited lecture		Dept of Maths, Kongu engineering college

4. SHORT TERM COURSES

Sl. No.	Title	Duration	No. of Participants	Sponsored by
1.				
2.				
3.				
4.				
5.				

5. WORKSHOPS

Sl. No.	Title	Duration	No. of Participants	Sponsored by
1.				
2.				
3.				
4.				
5.				

6. MEMBERSHIP IN PROFESSIONAL SOCIETIES

Sl.No.	Type of membership	Organization	Membership Number
1.	Life member	ISTE	

Technical Paper Reviewer

Sl. No.	Name of the Journal
1	Reviewed articles in Springer Journals Editorial Office, Proceedings of the National Academy of Sciences, India Section A: Physical Sciences.

7. SPONSORED & CONSULTANCY PROJECTS

Completed

Sl. No.	Name of the Project	Sponsoring Agency	Amount (Rs. in Lakhs)	Year of Completion

Ongoing

Sl. No.	Name of the Project	Sponsoring Agency	Amount (Rs. in Lakhs)	Year

Major Consultancy Projects / Rs. 5 Lakhs and above

Completed

Sl. No.	Name of the Project	Sponsoring Agency	Amount (Rs. in Lakhs)	Year of Completion

Ongoing

Sl. No.	Name of the Project	Sponsoring Agency	Amount (Rs. in Lakhs)	Year of Completion

8. PROJECTS GUIDED

Ph.D.

Sl.	Name of the Thesis	Year

No		

M.Tech.

Sl. No	Name of the Thesis	Year
1.	Estimation of Mixing matrix for ICA using biologically inspired algorithms.	May 2010
2.	A Distributed E-healthcare system for patient monitoring and Diagnosis.	December 2011
3.	Genetic Algorithm based Patient scheduler.	May 2012
4.	Reinforcement framework for medical image segmentation.	May 2013

B.Tech.

Sl. No	Name of the Thesis	Year
1.	Steganalysis of LSB encoding in Digital images using GLCM and Neural networks.	May 2010
2.	Multilevel image thresholding using reinforcement learning.	May 2010
3.	Mammogram classification using a novel segmentation technique.	May 2012
4.	Elastic shape texture matching for Face recognition.	May 2014
5.	Estimation of Economic entities using auto regressive modeling and exponential smoothing.	May 2014
6.	Data transmission and receiving through Visible light communication.	May 2014
7.	Fingerprint recognition using NRLBP and modified Biohashing.	May 2014
8.	Deblurring using blind deconvolution Algorithm.	May 2015
9.	Micro chip design optimization using Genetic Algorithms.	May 2015

10. ADMINISTRATIVE ACTIVITIES

Sl. No	Name of the Activity	Year
	Purchased PSPICE s/w Electronic circuits lab & Class coordinator for one semester	--