

LIST OF PUBLICATIONS (Journal)

1. P. Thangavel and R. Rajendra Prasath, A note on token based control in rings and linear arrays, *The Journal of Computer Society of India*, 32(3)(2002) 62-65.
2. P. Thangavel, and T. Kathirvalavakumar, Training feedforward networks using simultaneous perturbation with dynamic tunneling, *Neurocomputing* 48 (2002) 691-704. (Cited by 6).
3. P. Thangavel, and T. Kathirvalavakumar, Simultaneous perturbation for single hidden layer networks – cascade learning, *Neurocomputing*, **50C** (2003) 193-209. (Cited by 5)
4. T. Kathirvalavakumar, and P. Thangavel, A New Learning Algorithm Using Simultaneous Perturbation with Weight Initialization, *Neural Processing Letters*, (2003), **17**, 55-68. (Cited by 7).
5. R. Rajendra Prasath, and P. Thangavel Shared resource allocation using token passing strategy in interconnected networks, *Information: An International Journal*, **6**(2)(2003) 197-206. (Cited by 1)
6. P. Thangavel, and T. Kumaran, Digital watermarking using dual-tree CWT with a new quality measure SSIM, *Information: An International Interdisciplinary Journal*, **9** (6) (2006) 887-890. (Cited by 1)
7. T. Kathirvalavakumar, and P.Thangavel, A modified backpropagation training algorithm for feedforward neural networks, *Neural Processing Letters*, **23**(2)(2006) 111-119. (Cited by 13)
8. P. Thangavel, and D. Gladis, Hysteretic Hopfield network with dynamic tunneling for crossbar switch and N-Queens problem, *Neurocomputing*, **70**(2007) 2544-2551.(Cited by 6)
9. D. Gladis, P. Thangavel, and A. K. Nagar, Noise removal using hysteretic Hopfield tunneling network in message transmission systems, *International Journal of Computer Mathematics*, **88**(3)(2011)650-660.
10. P. Thangavel, and S. Gopinathan, Image Enhancement System Using Wavelet Transform and a Non-Linear Piecewise Filter, *ICGST International Journal on Graphics, Vision and Image Processing, GVIP*, 11(2011) 41-50. (Cited by 1)

11. M. Sornam, and P. Thangavel, An improved three-term optical backpropagation algorithm, *International Journal of Artificial Intelligence and Soft Computing, (Inderscience)*, 2(4)(2011) 321-333.
12. S. Gopinathan, and P. Thangavel, A Non Linear Technique for Image Enhancement Based on Discrete Wavelet Transform, *European Journal of Scientific Research* 79, 3(2012) 328-336. (Cited by 1)
13. PL. Chithra, and P. Thangavel, A new efficient embedded wavelet image codec based on Multidirectional Traversal Algorithm, *International Journal of Signal and Imaging Systems Engineering (Inderscience)* 5(3)(2012)196-203.
14. P. Thangavel, and R. Kokila, An Extension of FFT Based Image Registration, *Advances in Computing and Information Technology*, 2013, 729-737
15. R. Kokila, and P. Thangavel, FFT Based Image Registration using Corner Response, *International Journal of Computer Science and Electronics Engineering (IJCSEE) Volume 1, Issue 5 (2013)*, 607-613
16. S. Gopinathan, R. Kokila and P. Thangavel, Wavelet and FFT based image denoising using non-linear filters, *International Journal of Electrical and Computer Engineering*, 5 (5) (2015) 1018-1026.
17. Sangavi, V., and Thangavel P., An exotic multi-dimensional conceptualization for medical image encryption exerting Rossler system and Sine map, *Journal of Information Security and Applications*, 55, Dec. 2020, 102626, (Cited by 3)
18. G. Sowmya, Thangavel P., and V. Shankar, A novel hybrid Zhang neural network model for time-varying matrix inversion, *Engineering Science and Technology an International Journal*, in Press.

List of Projects:

Title of the Project	Quantum of Support (Fund)	Funding Agency	Years of Project Operation
A Study on Design of Distributed Algorithms, Neural Networks and	Rs. 5.0 lakhs	All India Council for Technical Education	01.10.2001-30.09.2004 (3 years)

Applications		(AICTE), Govt. of India	
A study on Watermarking and Certain Selected Artificial Systems	Rs.3,79,885/-	University Grants Commission (UGC) Govt. of India	23.07.2002 – 30.06.2005 (3 years)
Robust watermarking of digital images using wavelet like transforms for image security	Rs.15,53,000/-	Ministry of Information Technology(MIT), Govt. of India.	28.3.2006-31.12.2008 2-Years & 7 months
A study on Image Registration and certain selected problems in Artificial Systems.	Rs. 7,65,000/-	UGC	3 years Started on 01.07.2011.

Articles in Conference Proceedings/Edited Volumes.

1. R. Rajendra Prasath, and P. Thangavel, Token based control algorithm with central coordinators, in: Algorithms and Artificial Systems, P. Thangavel (Ed.), Allied Publishers Private Limited, 2003, pp.25-40
2. P. Thangavel, Parallel algorithms for certain selected geometric problems on processor arrays with reconfigurable bus systems, in: Algorithms and Artificial Systems, P. Thangavel (Ed.), Allied Publishers Private Limited, 2003, pp.41-56.
3. T. Kathirvalavakumar and P. Thangavel, Simultaneous perturbation in feedforward networks training, in: Algorithms and Artificial Systems, P. Thangavel (Ed.), Allied Publishers Private Limited, 2003, pp.323-335.
4. P. Thangavel and N. Dhamayanthi, Off-line recognition of handwritten Tamil text using neural network, in: Algorithms and Artificial Systems, P. Thangavel (Ed.), Allied Publishers Private Limited, 2003, pp.339-349.
5. P. J. Plath, M. Baune, M. Buhlert, C. Gerlach, A. Kouzmitchev, P. Thangavel, E. Vanraaij, H. Mathes, S. Diaz Alfonso, and Th. Rabbow, Non-Linear Dynamics in

Chemical Engineering and Electrochemical Manufactory Technologies, in: Non-Linear Dynamics of Production Systems, Wiley-VCH Verlag Gmbh & Co, 2004, pp. 527-557.

6. P. Thangavel and T. Kumaran, Digital Watermarking using Dual-tree CWT with a new quality measure SSIM, in: Proc. 3rd Int. Conf. on Information, (Info'2004), 2004, 351-354.
7. R. Rajendra Prasath, and P. Thangavel, Token based control algorithms for shared resource allocation in general networks, in: Proc. 3rd Int. Conf. on Information, (Info'2004), 2004, 520-523.
8. P. Thangavel and T. Kumaran, Fragile watermark for tamper detection using structural distortion measure, in: Proc. of 2007 IEEE Int. Symp. On Industrial Electronics, held at Vigo, Spain, during 4th-7th June, 2007, pp. 1755-1760.
9. T. Kumaran and P. Thangavel, Genetic algorithm based watermarking in double-density dual-tree DWT, in: Proc. of Int. Conf. on Wavelet Analysis and Pattern Recognition, 2008, ICWAPR'08, held at Hong Kong, during August 30-31, 2008, Vol.2, pp. 585-590.
10. D. Gladis and P. Thangavel, Noise removal using Hopfield neural network in message transmission systems, in: Proc. of Second UKSIM European Symp. on Computer Modeling and Simulation, 2008, held at Liverpool Hope University, Liverpool during Sept. 8-10, 2008, pp. 52-57.
11. T. Kumaran and P. Thangavel, Watermarking in contourlet transform domain using genetic algorithm, in: Proc. of Second UKSIM European Symp. on Computer Modeling and Simulation, 2008, held at Liverpool Hope University, Liverpool during Sept. 8-10, 2008, pp. 257-262.
12. PL. Chithra, and P. Thangavel, A fast and efficient memory image codec (encoding/decoding) based on all level curvelet transform coefficients with SPIHT and Run Length Encoding, Recent Advances in Space Technology Services and Climate Change (RSTSCC), 2010, 174-178.
13. M. Sornam, and P. Thangavel, Complex-valued neural network using simultaneous perturbation with dynamic tunneling technique, Proceedings of the Second International Conference on Computational Science, Engineering and Information Technology, 2012, 569-574.

14. P. Thangavel, and R. Kokila, An Extension of FFT Based Image Registration, *Advances in Computing and Information Technology*, 2013, 729-737
15. Sowmya G. and Thangavel P., Reversible data hiding in encrypted images based on side matching and enhanced complexity function, 2017 International Conference on Algorithms, Methodology, Models and Applications in Emerging Technologies (ICAMMAET)
16. V. Sangavi and Thangavel P., An Image Encryption Algorithm based on Fractal Geometry, Jan. 2019. *Procedia Computer Science* 165:462-469 (Cited by 3)
17. G. Sowmya, and Thangavel P., Convergence of a Finite-Time Zhang Neural Network for Moore–Penrose Matrix Inversion, *Proc. Of Int. Conf. on Intelligent Computing, Information and Control Systems*, Jan. 2021

AWARDS/HONOURS

- (a) Awarded Summer Visiting Fellowship of Indian Academy of Sciences, Bangalore, to work with Prof. M. Lakshmanan, F.N.A.Sc., F.A.Sc., F.N.A., Bharathidasan University, for 8 weeks (during 12 May 1997 to 4 July 1997).
- (b) Awarded Department of Science and Technology's SERC Visiting Fellowship for 3 months to work with Prof. M. Lakshmanan, F.N.A.Sc., F.A.Sc., F.N.A., during the year 1997-98.
- (c) Invited by Prof. P.J. Plath, University of Bremen, Germany to work on Controlling of Chaotic Micro Reactors for 4 months during April – July 2001.
- (d) Invited to deliver a lecture on “Simultaneous perturbation with dynamic tunneling based neural network training algorithms” by Kansai University, Osaka, Japan, on Dec. 3rd 2004.
- (e) Invited by Liverpool Hope University as Visiting Professor from June 8th to 26th, 2007.
- (f) Served as Adjunct Professor for Liverpool Hope University, Liverpool, U.K. for a period of two years from August 2007 to July 2009.