


**TRICHY ENGINEERING COLLEGE**  
Sivagnanam Nagar, Trichy-Chennai NH, Konalai, Trichy - 621 105.

## **FACULTY PROFILE**

Name (in BLOCK LETTERS)	Dr. <b>D. LOGANATHAN</b>
Present Designation & Dept:	<b>Principal, Office – TEC.</b>
Subject Area of Interest	<b>Image Processing , Information Security</b>
Passport photo	
Address (for communication)	Dr. <b>D. LOGANATHAN</b> 322, Gangeya Apartments, Samayapuram Naal Road, Samayapuram Trichy 621112. INDIA. Mobile No. : <b>(+91) 94860 18682</b> Email ID : <b>drloganathan @ gmail . com</b>
Address (Office)	Dr. <b>D. LOGANATHAN</b> <b>Principal,</b> <b>TRICHY ENGINEERING COLLEGE</b> Sivagnanam Nagar, Konalai, Trichy - 621 105. Mobile No.: <b>94860 18682</b> Email ID : <b>drloganathan@trichyengg.ac.in</b> <b>principal@trichyengg.ac.in</b>
Date and Place of Birth	<b>04<sup>th</sup> May 1961, Dindigul, India</b>
Gender	<b>Male</b>
Marital Status	<b>Married</b>
Nationality	<b>Indian</b>
Membership in Professional Bodies	<b>Life Member(s) ISRS, IEI, CSI, ISTE</b> Yearly Membership -- Nil --

**01) Research & Educational Degree(s):**

<b>Research Degrees</b>	<b>Dept./Subject (Specialization)</b>	<b>Title of the Dissertation/ Thesis</b>	<b>Year of award</b>	<b>University</b>	
Ph.D.	Computer Science & Engineering	BIT PLANE METHOD FOR PROGRESSIVE TRANSMISSIONS OF IMAGES	2008	Faculty of Information & Communication Engg., CEG campus, Anna University, Chennai. INDIA	
<b>Educational Degrees/ Exams</b>	<b>Name of the Board/ Institution / University</b>	<b>Subject/ Specialisation</b>	<b>Year of Passing</b>	<b>% of Marks/ CGPA</b>	<b>Division/ Class/ Grade</b>
M.Sc.(Tech.)	Birla Institute of Technology and Science, Pilani. INDIA	Computer Science	1983-84	7.04 CGPA out of 10.0	First class
B.E.	-- Integrated PG--				
H.S.C	PUC from G.T.N. Arts College, Dindigul under Madurai Kamaraj University	Maths, Physics, Chemistry	1978	74.0 %	First class
S.S.L.C	Tamil Nadu School Board	General Sciences	1977	77.5 %	First class

**02) Teaching Experience/Post(s) held :**

**Total Teaching experience : P.G. for M.E./M.Tech & MCA : 36 year 01 Month & Teaching experience : U.G. Classes for B.E./B.Tech : 36 year 01 Month**

<b>College/ Institution</b>	<b>Designation</b>	<b>Duration</b>		<b>Experience</b>	
		<b>From</b>	<b>To</b>	<b>Year</b>	<b>Month</b>
<b>Trichy Engineering College, Trichy.</b> INDIA	Principal	Feb. 2025	Till date	0(zero)	9(nine)
<b>Puducherry Technological University</b> (Erstwhile Pondicherry Engineering College) Puducherry INDIA	Professor	July 2008	May 2023	14 (fourteen)	10 (ten)
	Assistant Professor	June 1999	July 2008	9 (nine)	1 (one)
	Lecturer	June 1988	June 1999	11 (eleven)	0 (zero)
	Programmer	April 1987	June 1988	1 (one)	2 (two)

**03) Administrative experience(s)**

Such as Dean, HoD, T&amp;P, NSS, Hostel, Exams, Admissions, Committee

Description	Role(s)	Duration	From To Dates
Professor & Dean(Research)	Administrating Research Cell activities such as Scholar admissions, DC meets, scholarships, completion	04 Month	Dec. 2021 - Mar. 2022
Professor & Head of Department	Coordinating Department activities, assisting NBA, NIRF cells	03 Years	Sept. 2012 - Sept. 2015
CENTAC coordinator	Admitting students for MCA program	02 Years	2010 -11 and 2011-12 admission years
Expert Member, AICTE, Govt. of India	Acted as Panel Member for a number of times in evaluating new and established Educational institutes	One Day Inspection Visit	2010-2020
Expert Member, NBA, Govt. of India	Acted as Panel Member in evaluating established Educational institute	Three Day Inspection Visit	2011
Expert Member, Anna University	Acted as Panel Member for a number of times in evaluating new and established Educational institutes	One Day Inspection Visit	2008-2025
M. Tech (CSE) Project Guide	Guided more than 25 individual projects in various fields of CSE	One semester Project	1987 - 2023
MCA Project Guide	Guided more than 30 individual projects in various fields of CSE	One semester Project	1987 - 2023
B. Tech (CSE) Project Guide	Guided more than 45 group projects in various fields of CSE	One semester Project	1987 - 2023
IEI Project Guide	Guided two IEI projects for completion of AMIE certificate in the field of Computer Science and Engineering	3 months each	2012-13

**04) Details of PhD Completed / presently guiding****Research Experience** excluding years spent in M.Phil. / Ph.D. : 15 year 0 Month

Sr. No.	Name of the Ph.D. Scholar	Title of the Thesis	Year of Award	University awarded
1.	Ms. Preethi Pondicherry University	Enhanced Firefly Based Vector Quantization Codebook Design in Image Compression	2021	Pondicherry University
2.	Mr. Vijayaraj.J Pondicherry University	Detection Of Lung Tumors By tearable Wavelet Transform Using Gray Level Co-occurrence Matrices And Locating Tumor Growth By Motion Prediction Model	2022	Pondicherry University
3.	Ms. K. Yazhini Pondicherry University	Enhanced Convolutional Neural Network Architectures By Hyper-Parameter Tuning For Effective Classification Of Diabetic Retinopathy Stages	2022	Pondicherry University

4.	Mr. Santosh Kumar Satapathy Pondicherry University	An Efficient Stacking Ensemble Learning Techniques for Automated Sleep Staging Applied To Polysomnography Signals Data	2022	Pondicherry University
5	Mrs. C. Bhuvanewari Annamalai University	Application of Image Processing Techniques for classification and detection of Lung diseases using Computed Tomography images	2015	Annamalai University
6	Mr. C. Kumar Annamalai University	- - Pursuing - -		Annamalai University

### 05) Research Papers in Peer-Reviewed or UGC listed Journals INTERNATIONAL JOURNALS/CONFERENCES

1. Dr. Loganathan and N. Indhira Priyadharsini, **"Implementation of Semi-Fragile Lossless Watermarking System with New Key Sequence"**, International Conference on Sensors, Security, Software and Intelligent Systems–ISSSIS09, Coimbatore Institute of Technology Coimbatore, pp 92-95. (2009).
2. Dr. Loganathan and Ilavendhan A, **'Survey Of Digital Image Steganography In DWT Domain'**, International Conferences on Computer Applications – ICCA2012 held at Pondicherry on 2012.
3. Dr. Loganathan and Suresh L, **"Image Resolution Enhancement Based On Edge Directional Interpolation in Duel Tree- Complex Wavelet Transform"**, International Conferences on Computer Applications – ICCA2012 held at Pondicherry. (Jan 2012).
4. Dr. Loganathan, Jamal J, Nijanathan P and Kalichy Balamurugan V, **"Robust Video Indexing and Retrieval based on Face Recognition through Enhanced Detection and Fast LDA"**, National Multi Conference on Recent Trends in Computing - MPGINMC 2012 held in Nanded, on April 2012.
5. Dr. Loganathan, and Gopi Krishnan S, **"Color Image Cryptography Scheme Based on Visual Cryptography"**, Proceedings of 2011 International Conference on Signal Processing, Communication, Computing and Networking Technologies (ICSCCN 2011), pp – 404-407 (2011).
6. Dr. Loganathan and Ramamoorthy, P., **"Multicost routing approach in wireless ad hoc networks"** in the Proceedings of Journal of Computer Sc., pp. 1739-1748, vol. 8, issue 10, 2012.
7. Dr. Loganathan, C. Bhuvanewari and P. Aruna, **"Association rule for CBIR and CAD Medical Diagnostic using Feature Selection Technique"** National Conference on Computing Techniques' 2013, University college of Engineering, Villupuram, ISBN : 978-93-80609-13-3. April 5, 2013.
8. Dr. Loganathan, C. Bhuvanewari and P. Aruna, **"A model based approach for detection and classification of lung diseases"**, TEQIP-II Sponsored 2nd National Conference on Information Technology – NCIT 2013, Pondicherry Engineering College, Puducherry. pp; 228-232, Dec. 2013.
9. Dr. Loganathan, C. Bhuvanewari and P. Aruna, **"Feature Selection using Association Rules for CBIR and Computer Aided Medical Diagnostic"**, International Journal of Computer & Communication Technology (IJCCT), ISSN 0975 - 7449, Volume-4, Issue-1, 2013, PP 60-64, 2013.
10. Dr. Loganathan, C. Bhuvanewari and P. Aruna, **"Advanced Segmentation Techniques Using Genetic Algorithm for Recognition of Lung Diseases from CT Scans of Thorax"**, International Journal of Engineering Research and Applications (IJERA), ISSN: 2248-9622, Vol. 3, Issue 4, PP.2517-2524. Jul-Aug 2013, ( Impact factor1.325) .
11. Dr. Loganathan, C. Bhuvanewari and P. Aruna, **"Classification of the Lung Diseases from CT Scans by Advanced Segmentation Techniques using Genetic Algorithm"**, International Journal of Computer Applications (0975 – 8887) Published by Foundation of Computer Science, New York, USA Volume 77– No.16, PP.21-27. Impact factor ( 0.821). (ISBN: 973-93-80877-75-8), 2013.
12. Dr. Loganathan, C. Bhuvanewari and P. Aruna, **"Performance evaluation of feature extraction and feature selection for classification of lung diseases"**, Journal of Theoretical and Applied Information Technology, (E-ISSN 1817-3195 / ISSN 1992-8645) vol.61 20th March 2014. Vol. 61 No.2 (Annexure II – Scopus indexed).

13. Dr. Loganathan, C. Bhuvanewari and P. Aruna, "**Classification of Lung Diseases by Image Processing Techniques Using Computed Tomography Images**", International Journal of Advanced Computer Research (ISSN (print): 2249-7277 ISSN (online): 2277-7970) Volume-4 Number-1 Issue-14 March-2014.
14. Dr. Loganathan and D. Preethi, "**Modified Firefly Algorithm for Vector Quantization Codebook Design in Image Compression**", International Journal of Engineering Science Invention, (IJEAT) ISSN (Online): 2249- 8958, volume-8-issue-6 (SCOPUS). 2019
15. Dr. Loganathan and D. Yazhini, K., "**Analyzing and Replacing the Selfish Node Using Fa-Rep Protocol in MANET**", International Journal of Engineering Science Invention PP. 01-10 (2018)
16. Dr. Loganathan and D. Yazhini, K., "**Efficient Image Steganography using Lion Optimization Algorithm**" Journal of Applied Science and Computations Volume VI, Issue II, ISSN NO: 1076-5131 Page No:1638 - 1645. 2019
17. Dr. Loganathan and D. Preethi, "**Image Quality Assessment Metrics based on Distortion Measures**" International Journal of Engineering Science Invention, (IJESI) ISSN (Online): 2319 – 6734, ISSN (Print): 2319 – 6726, PP. 52-58 Special Issue, (UGC JOURNAL). 2018
18. Dr. Loganathan and J. Vijayaraj, "**A Survey of Image Segmentation Algorithm for Irritable Bowel Syndrome Recognition**", International Journal for Modern Trends in Science and Technology, Volume: 04, Issue No: 01, January 2018, ISSN: 2455-3778 (UGC JOURNAL). 2018
19. Dr. Loganathan and J. Vijayaraj, "**Steerable wavelet transforms with modified extreme learning machine for lung segmentation and cancer detection in lung CT images**", International Journal of Engineering & Technology, 7 (4) 6122-6130 Website: www.sciencepubco.com /index.php/IJET doi: 10.14419/ijet.v7i4.23127 (2018).
20. Dr. Loganathan and J. Vijayaraj, "**A Novel Study Based On Adaptive Solitary Pulmonary Nodule Segmentation Using Digital Radiography Image**", International Journal of Pure and Applied Mathematics, Volume 119 No. 14, 1399-1406, ISSN: 1314-3395 (SCOPUS INDEXED). 2018
21. Dr. Loganathan and J. Vijayaraj, "**Traffic Congestion Control Of Vehicles Based On Edge Detection Using Image Processing**", International Journal of Pure and Applied Mathematics, Volume 119 No. 14, 1407-1418, ISSN: 1314-3395 (SCOPUS INDEXED). 2018
22. Dr. Loganathan and D. Preethi, "**Multi wavelets with integer multi wavelets transform algorithm for image compression**" 2017 International Journal of Pure and Applied Mathematics Volume 116 No. 21, 251-257 ISSN: 1311-8080 (printed); ISSN: 1314-3395, Special Issue, (SCOPUS)
23. Dr. Loganathan and Santosh Kumar Satapathy, "**Prognosis of Automated Sleep Staging based on Two-Layer Ensemble Learning Stacking Model using Single-Channel EEG Signal**", Soft Computing, Springer. (Indexing: SCI, Scopus) (Second Revision Submitted in 2021).
24. Dr. Loganathan and Santosh Kumar Satapathy, "**Automated Classification of Multiple Sleep Stages using Polysomnography Signals: A Convolution Neural Network Approach**", Journal Multimedia Tools and Application's, Springer. (Indexing: SCI, Scopus)
25. Dr. Loganathan and Santosh Kumar Satapathy, "**Performance Analysis of Machine Learning Algorithms on Automated Sleep Staging Feature Sets**", CAAI Transactions on Intelligence Technology. Wiley (Indexing: Scopus, Ei Compendex, GoOA, ESCI and DOAJ, 2021).
26. Dr. Loganathan and Santosh Kumar Satapathy, "**A study of Human Sleep Stage Classification based on Dual Channels of EEG Signal using Machine Learning Techniques**", SN Computer Science, Springer (Indexing : ACM Digital Library, DBLP) (Accepted & In press 2021).
27. Dr. Loganathan and Santosh Kumar Satapathy, "**Sleep-Wake Sleep Stages Classification using Machine Learning Techniques Based on Single-channel of EEG Signal**", Artificial & Computational Intelligence, Artificial Computational Research Society, Volume-1 Issue-V, Online ISSN:2582-516X (Indexing : Google Scholar, CORE, J-Gate) (Accepted 2021).

## 06) NATIONAL JOURNALS/CONFERENCES

- NIL

## 07) Books authored & published

1.	Dr. Loganathan and D. Preethi, " <b>Quantization Table Selection using Firefly with Teaching and Learning based Optimization Algorithm for Image Compression</b> " Hand Book of Multimedia Information Security: Techniques and Applications (HMIS) 2019, (Springer). ISBN (Online):978-3-030-15887-3, ISBN (Print): 978-3-030-15886-6, <a href="https://link.springer.com/chapter/10.1007/978-3-030-15887-3_23">https://link.springer.com/chapter/10.1007/978-3-030-15887-3_23</a>
2.	Dr. Loganathan and Santosh Kumar Satapathy, " <b>Sleep, Sleep Disorder and Polysomnography</b> ", Chapter ID: BioNC-23 for Bio-inspired Neurocomputing and Studies in Computational Intelligence Scopus, [Indexed in Web of Science, DBLP and Springer link] (Online) DOI 5495-978-981-15-7_6, © 2021
3.	Dr. Loganathan and Santosh Kumar Satapathy, " <b>A Study of Human Sleep Staging Behavior Based on Polysomnography Using Machine Learning Techniques</b> " Chapter ID: 14 for Data Analytics in Bioinformatics: A Machine Learning Perspective [Indexed in Scopus, Web of Science, DBLP and Wiley link] (Online) <a href="https://doi.org/10.1002/9781119785620.ch14">https://doi.org/10.1002/9781119785620.ch14</a>
4.	Dr. Loganathan and Santosh Kumar Satapathy, " <b>An Introduction to Sleep, Sleep Stages and Sleep Disorders</b> ", for CRC Press Book on Medical internet of Things: Techniques, Practice & Applications, [Indexed in Scopus]

## 08) Patents / Awards/Certificates

❖	Selected to participate in an International training programme held at Center of the International Cooperation for Computerization (CICC), Tokyo, Japan during Jan- Mar 1994, from 100s of aspirants with computer proficiency by regional and national level written examination followed by a technical interview at Computer Society of India Headquarters, New Delhi.
❖	Selected and deputed to College of Engineering, Anna University, Chennai, to take up research work leading to Doctoral degree, under AICTE sponsored Quality Improvement Programme for a period 3 academic years from July 2001 to 2004.

## 09) Workshop / FDP / Seminar / Conference Attended

➤	Participated a workshop on " <b>Software Engineering Tools and Techniques(SETT2000)</b> " conducted by the School of Computer Science and Engineering, College of Engineering, Anna Uni. during Dec. 27 <sup>th</sup> to 29 <sup>th</sup> , 2000
➤	Participated a six week Short course on Quality Improvement Programme DCA Module -II titled as " <b>Computer Organisation and Micro Processors</b> " held at Technical Teachers Training Institute, Chennai during 19 <sup>th</sup> August to 25 <sup>th</sup> Sept. 1985
➤	Participated an ISTE sponsored Winter School on " <b>Pattern Recognition and Neural Networks</b> " organized by School of Computer Science and Engineering, College of Engineering, Anna University during 15 <sup>th</sup> to 28 <sup>th</sup> November 1991.
➤	Participated in an " <b>Academic Interface Programme - Head Start, a HoDs meet 2004</b> " organized by Tata Consultancy Services, Siruseri, Chennai
➤	Participated in a Seminar titled as " <b>Systems Usability Seminar</b> " organized by Indo European Systems Usability Partnership (IESUP) and Computer Society of India (CSI) at Department of Computer Science & Engineering, College of Engineering, Anna University held on 20 <sup>th</sup> March 2004
➤	Participated in an one day tutorial on " <b>Content Based Image Retrieval (CBIR)</b> " organized by University of Hyderabad, at Department of Computer Science & Engineering, College of Engineering, Anna Uni. held on 30 <sup>th</sup> November 2002
➤	Participated in an one day IP Awareness/ Training Program under National

Intellectual Property Awareness organized by Intellectual Property Office, India  
at PTU, Py. held on 08<sup>th</sup> Feb. 2022

**10) Workshop/FDP/ Seminar/ Conference Organised/GUEST LECTURE DELIVERED**

1. Delivered a Chief Guest Lecture during Inauguration of Association (ASCOME) activities for the benefit of BE Computer Science & Engineering students at V.R.S. College of Engineering and Technology, Arasur, Villupuram on 04<sup>th</sup> August 2008