

Academic Profile



Prof. Dr. A. Lenin Fred

Principal

Mar Ephraem College of Engineering & Technology

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Education:

- **Ph.D. in Computer Science and Engineering** from **Faculty of Engineering**, ManonmaniamSundaranar University, Tirunelveli, India (2005-2010) awarded in 2010.
- **M.E. (Master of Engineering) in Computer Science and Engineering** from Madurai Kamaraj University, India, (1999-2001), awarded in 2001 with **First class**.
- **B.E. (Bachelor of Engineering) in Computer Science and Engineering** from Madurai Kamaraj University, India, (1991-1995), awarded in 1995 with **First class**.

Biography:

Dr. A. Lenin Fred is the Principal of Mar Ephraem College of Engineering & Technology since 2010. He is an eminent scholar, teacher, researcher and administrator. He has been working to nurture and support a dynamic learning community that works collaboratively to strengthen the academic and social achievement of students and the relationship between home, school, and community. He is the Director of Mar Ephraem Centre for Medical Image Processing and serves as a Research Guide for PG students as well as Ph.D Scholars. He drove the special task in signing the Memorandum of Understanding (MoU) with other institutes like A* Star-

The Singapore Bioimaging Consortium(SBIC), Lee Kong Chian School of Medicine-NTU Singapore, Environ Construction Company-Singapore, Rajiv Gandhi Centre for Biotechnology (RGCB)-Thiruvananthapuram,ISRO Propulsion Complex (IPRC)-Mahendragiri, Wolkite University-Ethiopia, Pushpagiri Medical College – Thiruvalla. At present he is the Principal Investigator for the various funded projects and filed two patents.

He received his B.E in Computer Science & Engineering from Madurai Kamaraj University in 1995, M.E in Computer Science & Engineering from Madurai KamarajUniversity in 2001, Doctoral Degree in Computer Science & Engineering, specialized in Digital Image Processing from ManonmaniamSundaranar University,Tirunelveli, in 2010. He is approved by Anna University, ManonmaniamSundaranarUniversity,Bharathiyar University, SathyabamaUniversity as Research Supervisor for Ph.D Program. He had done significant research in the area of Digital Image Processing, Data Mining, Multimodal Biometrics, Industrial Automation and has Published 36papers in these areas.

From 1995 to 2000, he was a Lecturer in Computer Science & Engineering Department, RMK Engineering College, Chennai and 2000 to 2001 in Noorul Islam College of Engineering, India. Where he supervised various undergraduate and post graduate projects and has organized various workshops, seminars and short term courses.

He was the founder & Head of the Department of Information Technology, CSI Institute of Technology, India and headed the Department, from 2001 - 2009, where he had taken up the responsibility of building up the infrastructure and manpower of the department.

He served as Vice Chairman in Computer Science & Engineering Valuation Board of Anna University, Chennai. He is serving as General Chair, Member Organizing Committee, Keynote Speaker, Session Chair of Multiple National and International Conferences. He was the coordinator of INSPIRE Internship Science Camp, VIPNET Orientation Workshop for Tribal School Teachers and Entrepreneurship Awareness Camp held in 2016 at Mar Ephraem college of Engineering and technology.

- He is the reviewer of reputed journals, PLUS ONE and KSII

Transactions on Internet and Information Systems.He received Dr. A.P.J. Abdul Kalam best researcher award and also acting as the Vice Chair-Man of the IET KKLN

Research Interests:

Dr. A. Lenin Fred's area of interests are Digital image Processing, Biometrics, Industrial Automation, Data Mining, Networking, Embedded system.

Professional Membership:

He is having Professional membership in IEEE, ISTE, IET, ISSRD.

Patent Filed:

- 1) An Automated Machine Capable Of Sensing The Latex Layer Of The Rubber Tree And Tapping The Latex Fluids Without Damaging The Cambium Layer Of The Rubber Tree
patent number: 6373/CHE/2015 dated 27.11.2015
- 2) An Easily Movable Solar Roofed Smart Ironing Cart To Interact With Users Through Mobile Applications Capable Of Sensing Climate And Adjusting Automatically
patent number: 201641023740 dated 12-07-2016

Ongoing Funded Projects:

Title	Funding Agency	Duration	Amount Granted
Development of Automated Rubber Tapping Machine to improve the Socio Economic Status of Rubber Growers in Rural Areas	DST	3 years	37,69,651
Development of a Portable	DST	3 Years	34,38,400

instrument for medical image analysing compression and transmission compactable for CT/MRI low slice thickness Images			
Development of customized software for the data management related to integration of Cryo Upper Stage (CUS-Soft)	ISRO RESPOND	1 Year	10,85,000/-
Development of Management Information System” for Wolkite University	Wolkite University	6 months	6,30,000
Development of Dynamic Website” for Wolkite University	Wolkite University	3 months	2,10,000

Publications:

Journals:

2017

- 1) Wilson S, **Lenin Fred**, "**An Efficient Video to Video Face Recognition using Neural Networks**". International Journal of Computer Applications (0975 – 8887) Volume 170 – No.8, July 2017
- 2) Kumar SN, **Lenin Fred A**, Muthukumar S, Ajay Kumar H, Sebastian Varghese P, "**A voyage on medical image segmentation algorithms**". Biomedical Research; Special Issue: Computational Life Science and Smarter Technological Advancement, ISSN 0970-938X, 2017
- 3) Kumar SN, **Lenin Fred A**, Ajay Kumar H, P. Sebastin Varghese, "**Medical Image Edge detection using Hybrid Entropy Multi-thresholding approach**". Research Journal of Pharmaceutical, Biological and Chemical Sciences, Volume 8, Issue 2, 2017

2016

- 4) Jerusalin Carol .J, A. Lenin Fred, Ashy V. Daniel "**Feature Level Two – Dimensional Arrays Based Fusion in the Personal Authentication system using Physiological Biometric traits**". Brazilian Archives of Biology and Technology, Vol.59: e16161074, January-December 2016 <http://dx.doi.org/10.1590/1678-4324-2016161074> ISSN 1678-4324 Online Edition.
- 5) S.N. Kumar, **A. Lenin Fred**, S. Lalitha Kumari ,P. Sebastian Varghese, "**Localized Region Based Active Contour Algorithm for Segmentation of Abdominal Organs and Tumors in Computer Tomography Images**", Asian Journal of Information Technology, Volume: 15, Issue: 23, Page No.: 4783-4789, ISSN : 1993-5994, 2016
- 6) Kumar S.N, Lenin Fred. A, Ajay Kumar. H, Jonisha Miriam L.R, Asha M.R "**Retinal Blood Vessel Extraction using Wavelet Transform and Morphological Operations**". Research Journal of Pharmaceutical, Biological and Chemical Sciences September – October 2016, ISSN: 0975-8585.

- 7) C.P Shirley, Dr. A. Lenin Fred, R. Smitha.S, “**Biologically Inspired Feature Extraction for Human Face Recognition using Multi Angle Movement**”. Asian Journal of Research in Social Sciences and Humanities Vol. 6 No.9, September 2016, pp.1313-1329.
- 8) S. N. Kumar, Dr. A. Lenin Fred, S. LalithaKumari,“**Segmentation of abdominal organs using min cut/max flow algorithm – An application of Graph theory**”, Global Journal of Pure and Applied Mathematics, Vol 12 No. 4, 2016.
- 9) C.P.Shirley, **A.Lenin Fred**, N.R.RamMohan, “**Video Key frame extraction through Wavelet information scheme**”, ARPN Journal of Engineering and Applied Sciences, Vol. 11, No. 7, April 2016.
- 10) **A. Lenin Fred**, S.N Kumar, Anchalo Bensiger S.M, S. LalithaKumari, P. Sebastin Varghese, “**Segmentation Of Abdominal Organs On CT Images Using Distance Regularized Level Set Model – A Semi Automatic Approach**” , International Journal of Engineering Research, Volume No.5, Issue No.4, pp : 244-248, April 2016
- 11) **Dr. A. Lenin Fred**, Ashy V.Daniel, Jerusalin Carol .J, “**SFCM For Efficient Brain Tumor Segmentation**”, International Journal of Advanced Engineering Technology, Vol. No. 7, Issue 1, March, 2016.
- 12) Ajin A, G. Ashwin, **A. Lenin Fred**, “**improved Technique survey of Security Attacks in Information – Centric Networking**”, International Journal of Advanced Research in Management, Architecture, Technology and Engineering, Vol. 2, Issue 4, April 2016.

2015

- 13) **Dr. A. Lenin Fred**, J. Jerusalin Carol and Anisha Isaac, “**Fingerprint Template Secrecy Safeguard System through Generation of Combined Template**”, ARPN Journal of Engineering and Applied Sciences, Vol. 10, No. 16, September 2015.

- 14) I. Jeya Kumar, **Dr. A. Lenin Fred**, Dr. C. SeldevChristopher, “**Color Image Enhancement Based on Depth Order Minimization**”, International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.59 (2015).

2014

- 15) S. Wilson, Dr. **A. Lenin Fred**, “**An Efficient Biometric Multimodal Face, Iris and Finger Fake Detection using an Adaptive Neuro Fuzzy Inference System**” (ANFIS), Middle-East Journal of Scientific Research. 22 (6): 937-947, June 2014.
- 16) **Dr. A. Lenin Fred**, S.N Kumar, “**A Novel Filter Selection for Efficient and Robust Segmentation in MR Human Brain Images Through Comparative Analysis of Various Spatial and Transform Domain Filters**”, International journal of Engineering research & Technology, IJERT, Vol. 3 - Issue 5, May 2014.

2011

- 17) **Dr. A. Lenin Fred**, “**Method to identify True minutiae through Projection in the same ridge line orientation by Visual clues in fingerprint images**”, International Journal of Imaging Science and Engineering (IJISE), GA, USA, ISSN: 1934-9955 Vol-1, No.1-April 2011.
- 18) **Dr. A. Lenin Fred**, “**Method to extract Local and Global ridge structures of fingerprint image by Automatic Selection of Filter Frequency**”, International Journal of Imaging Science and Engineering (IJISE), GA, USA, ISSN: 1934-9955 Vol-1, No.1-January 2011.

2008

- 19) N. Krishnan, S. Ravi, **A. Lenin Fred**, et. al., “**Human Face Detection in Color images using mixed Gaussian color models**”, International Journal of Imaging Science and Engineering, Vol.2, No.1, Jan 2008, ISSN: 1934-9955.

- 20) N.Krishnan, **A.Lenin Fred**, et. al., “**A Simple and Fast Finger Print Feature Extraction**”, International Journal of Imaging Science and Engineering, Vol.2, No.1, Jan 2008, ISSN:1934-9955.
- 21) **A.Lenin Fred**, Krishnan.N., et. al., “**An Adaptive Frequency Selection in fixed length square finger code method of fingerprint feature extraction.**”, International Journal of Imaging Science and Engineering, Vol.2, No.3, ISSN:1934-9955, July 2008.
- 22) **A.Lenin Fred**, Krishnan.N., et. al., “**An Effective False Minutiae Removal method in Gray scale fingerprint images**”, International Journal of Imaging Science and Engineering, Vol.2, No.2, ISSN: 1934-9955, April 2008.
- 23) **A.Lenin Fred**, “**A Position Invariant fingerprint feature extraction in DCT Domain.**”, International Journal of Imaging Science and Engineering, Vol.2, No.2,ISSN:1934-9955, April 2008.

2007

- 24) Krishnan Nallaperumal, Ravi Subban, **A. Lenin Fred**, et.al. “**Face Detection using Multi-scale Morphological Segmentation**”, International Journal of Imaging Science and Engineering (IJISE), GA, USA, ISSN: 1934-9955 Vol-003-October 2007.
- 25) N. Krishnan ,S.Ravi, **A. Lenin Fred**, et al., “**Skin detection using color pixel classification with application to Face Detection**”, Proceedings of IEEE ICCIMA, Vol. 3, pp.436 441, 2007.
- 26) N.Krishnan, **A. Lenin Fred**,et al., “**A Simple and Fast Finger Print Feature Extraction**”, International Conference on Advanced Computing and Communication, Feb 2007.
- 27) Krishnan Nallaperumal, Ravi Subban, **A. Lenin Fred**, et.al., “**Human Face Detection in Color Images using Skin color and Template Matching models for Multimedia on the Web**”, IEEE Conf. on Wireless and Optical Communication Networks (WOCN) 11-13 April 2006, Bangalore, India.

2005

- 28) Nallaperumal Krishnan, **A.Lenin Fred**, S.Padmapriya, “**A Novel Technique for Fingerprint Feature Extraction Using Fixed Size Templates**“, IEEE Indicon 2005 Conference, Chennai, India, pp 371-374, Dec 11- 13. 2005.

Conferences:

2017

- 1) **Dr. A. Lenin Fred,” Choice of embedded processor for medical image processing applications”**, UGC sponsored National seminar on challenges and opportunities in modern electronics, April 2017.

2016

- 2) **Dr. A. Lenin Fred, “Robust Alzheimer’s Disease Classification based on Multimodal Neuroimaging”**, IEEE International Conference on Engineering & Technology (ICETECH), March 2016.
- 3) **Dr. A. Lenin Fred, “A semi automatic Geometric Active Contour model using distance regularized term for Segmentation of Abdominal organs on CT images”**, IEEE International Conference on Engineering & Technology (ICETECH), March 2016.
- 4) **Dr. A. Lenin Fred, “An improved color Segmentation algorithm for the analysis of liver anomalies in CT/PET images”**, IEEE International Conference on Engineering & Technology (ICETECH), March 2016.

2014

- 5) S.N Kumar, **Dr. A. Lenin Fred, “Soft computing based segmentation of Anomalies on Abdomen CT Images”**, International Conference in Information Communication and Embedded Systems (ICICES), Feb 2014. [IEEE digital library ,Best paper award]
- 6) **S.N Kumar, Dr. A. Lenin Fred, “Soft computing based segmentation of anomalies on abdomen CT images”**, International Conference in Information Communication and Embedded Systems (ICICES), Feb 2014.

2007

- 7) **Krishnan Nallaperumal, Ravi Subban, A. Lenin Fred, et.al., “Face Detection using Multi-scale Morphological Segmentation”**, International Conference on Advanced Computing and Communication, ICACC, February 2007, Kariapatti, Madurai, India.
- 8) N.Krishnan , S. Ravi, **A. Lenin Fred et al., “Face Detection in Color images using mixed Gaussian color models”**, International Conference on Advanced Computing And Communication, Feb 2007.