

Staff Name	:	Dr. D. Lakshmi
Faculty ID	:	TEC56
Designation	:	Associate Professor
Qualification	:	B.E., M.E., Ph.D.
Teaching Experience	:	27 years 6 months
Area of specialization	:	Medical Image Processing, Computational Intelligence
Subjects Expertise	:	Digital Image Processing Electronic Devices Analog and Digital Circuits Digital Signal Processing
Journals/Conferences published	:	<p>Journals :</p> <ol style="list-style-type: none"> 1. D Lakshmi, R Janaki, V Subashini, K Senthil Kumar, CA Catherine Aurelia, ST Ananya, "<u>Prediction of Age, Gender, and Ethnicity Using Haar Cascade Algorithm in Convolutional Neural Networks</u>", International Conference on Worldwide Computing and Its Applications, 205-219, Springer Nature Singapore. 2. Thendral Natarajan, Lakshmi Devan, Ramaprabha Palayanoor Seethapathy, Senthil Kumar Balakrishnan, "<u>A customized ConvNeXt-XL network with fusion of deep and handcrafted features for colposcopy image classification</u>", International Journal of Imaging Systems and Technology, Volume:34, Issue:2, pages:e23036, 2024/3 3. S. Immaculate Joy, K. Senthil Kumar, M. Palanivelan, and D. Lakshmi, "Review on Advent of Artificial Intelligence in Electrocardiogram for the Detection of Extra-Cardiac and Cardiovascular Disease", IEEE Canadian Journal of Electrical and Computer Engineering, Vol:46, Issue:2, SPRING 2023 4. T Natarajan, L Devan, "<u>Transfer learning supported accurate assessment of multiclass cervix type images</u>, Part H: Journal of Engineering in Medicine", Volume No.237, Issue :2, 2023

5. D Lakshmi, J Sivakumar, K Palani Thanaraj, N Thendral, "Customized convolution neural network for multi-class lung abnormality classification from CT images", Information technology in industry, Volume:9, Issue:1, Pages:49-57
6. D. Lakshmi, J. Sivakumar, S. Ramani," Multi-Class SVM Prediction Model for Lung Cancer Diagnosis", International Conference on Artificial Intelligence for Smart Community, AISC 2020, 17–18 December, Universiti Teknologi Petronas, Malaysia. Lecture Notes in Electrical Engineering (LNEE, volume 758)
7. D. Lakshmi K. Palani Thanaraj M. Arunmozhi, "Convolutional neural network in the detection of lung carcinoma using transfer learning approach", Int J Imaging Syst Technol. 2019;1–10.DOI: 10.1002/ima.22394,IF :1.254/ H-Index - 43
8. Thendral. N, Lakshmi. D,"Performance Comparison of SVM Classifier Based on Kernel Functions in Colposcopic Image Segmentation for Cervical Cancer", ISMAC-CVB 2018, Springer Book Series- Lecture Notes in Computational Vision and Biomechanics, pp: 1835-1844.
9. Lakshmi. D, Niruban. R," Mathematical model for Characterization of Lung Tissues using Multiple Regression Analysis", Book Title - Soft Computing in Data Analytics, Springer Book Series - Advances in Intelligent Systems and Computing, AISC, Vol.758, pp:117-123
10. Lakshmi, D., Roy Santosham and H. Ranganathan,, "Automated Texture Based Characterization of Fibrosis and Carcinoma Using Low-Dose Lung CT Images", International Journal of Imaging Systems and Technology, Vol - 24, Issue -1 -Mar 2014, Pages: 39-44, Online ISSN: 1098-1098. DOI: 10.1002/ima.22077. – ANNEXURE- I, Impact Factor: 0.768.
11. Lakshmi, D., Roy Santosham and H. Ranganathan, "ANOVA of Texture based Feature Set for Lung Tissue Characterization using CT Images", Journal of Computer Applications, Vol.7, Issue-1, Jan-Mar 2014, pp.1-5, ISSN: 0974-1925.
12. D. Lakshmi, Roy Santosham, H. Ranganathan, "ANFIS in the Characterization of Fibrosis and Carcinoma using Lung CT

Images”, Indian Journal of Computer Science and Engineering, Vol.4,Issue-4, Aug-Sep 2013, E - ISSN: 0976-5166, P-ISSN: 2231-3850,pp-317-323

13. D. Lakshmi, Roy Santosham, H. Ranganathan, “Neural Network in the Characterization of Fibrosis and Scar Carcinoma using Lung CT Images”, IJERIA, Vol. 7, No II, May 2014.

Conferences:

1. Vignesh Kanna, Yaieesh Abdul Qaadir A, D. Lakshmi, ”Enhanced Steganography for Secure Data Transmission Using Generative Adversarial Network(GAN)”, International Conference on Artificial Intelligence and Future Science, ICAIFS’24, Proceedings,
2. R Umamaheswari, D Lakshmi, VS Pandi, B Geetha, S Sumithra, PY Ragini, “An Advanced Deep Learning Approach for Primary Osteoporosis Prediction Using Radiographs with Clinical Covariates”, *7th International Conference on Electronics, Communication and Aerospace Technology, ICECA 2023 - Proceedings, 2023, pp. 788–793*
3. P. Nagarajan, R. Ramadevi, D.Lakshmi, T. Kowsalya, J. Jenise Anitha,” Foetal ultrasonographic Sparse representation evaluation of spectral trust maps”, AIP Proceedings, Jan 2023, Volume:2523
4. R. Janaki, D. Lakshmi,” A Novel Implementation of Esophagus Diagnosis Using Deep Learning”, 2nd International Conference on Advance Computing and Innovative Technologies in Engineering Conference Date: 28th and 29th April 2022, IEEE Conference Record No.: 53722
5. Lakshmi, D., Roy Santosham and H. Ranganathan, “Comparison of Texture Analysis in the Differentiation of Carcinoma from Other Lung Abnormalities using Low Dose CT Images”, IEEE EMBS-Special Topic Conference on Point-Of-Care Technologies(IEEE- EMBS POCHT 2013), Bangalore, India, 16-18th January 2013, pp.271- 274. DOI:10.1109/PHT.2013.6461337
6. Lakshmi, D., Roy Santosham and H. Ranganathan, “PCA for Non-Invasive Tissue Characterization of lung using low-dose Computed Tomography Images”, National Conference on Recent Innovations in Science Engineering and Technology (NCRISSET

		<p>2014), Institute of Research and Journals, Pune, India, 10st August 2014, pp.71-73</p> <p>7. D. Lakshmi, Roy Santosham, H. Ranganathan, “ Non-Invasive Method of Characterization of Fibrosis and Carcinoma using Low-Dose Lung CT Images”, IEEE – International Conference on Systems, Man and Cybernetics 2013 (IEEE SMC 2013), Manchester, U.K., 13-16th October 2013, pages-2168-2172. DOI:10.1109/SMC.2013.371</p> <p>8. D. Lakshmi, H. Ranganathan, “Gray-Level Co-occurrence Matrix based Isolated Nodule Classification for the Diagnosis of Lung Cancer”, Joint International Conference on Swarm Evolutionary and Memetic Computing (SEMCCO 2011) and Fuzzy and Neural Computing Conference (FANCCO 2011), Andhra University, Visakhapatnam, India, 19-21st December 2011, pages 24-28.</p> <p>9. D.Lakshmi, H. Ranganathan, “Morphological Processing in Segmentation of Lung from CT scan images for Diagnosis of Lung Cancer”, National Conference on Emerging Trends in Communication Systems (NCETCS 2008), DMI College of Engineering, Anna University, Tamil Nadu, India, 19th September 2008, pages 116-119.</p> <p>10. D.Lakshmi, Roy Santosham, H. Ranganathan, “Application of ANOVA in Lung Tissue Characterization using CT images”, National Conference on Advances in Computing and Technology (NCACT 2014), VIT University Chennai Campus, India, to be held on 21st February 2014, pages:32-37.</p> <p>11. Srinivasan K S, Lakshmi D, Ranganathan H, Gunasekaran N, “Non-Invasive Estimation of Hemoglobin in Blood using Color Analysis”, First international Conference on Industrial and Information Systems, August 2006, DOI: 10.1109/ICIIS.2006.365788</p>						
Conference / workshop attended	:	<table border="1"> <thead> <tr> <th data-bbox="660 1805 762 1877">S.No</th> <th data-bbox="762 1805 1235 1877">Program & Venue</th> <th data-bbox="1235 1805 1430 1877">Duration</th> </tr> </thead> <tbody> <tr> <td data-bbox="660 1877 762 1984">1.</td> <td data-bbox="762 1877 1235 1984">IPR Awareness Program under NIPAM Scheme</td> <td data-bbox="1235 1877 1430 1984">Feb 2024</td> </tr> </tbody> </table>	S.No	Program & Venue	Duration	1.	IPR Awareness Program under NIPAM Scheme	Feb 2024
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2.	Six Days FDP on Future Directions in Image Processing, SRM Institute of Science and Technology, Vadapalani Campus	30.10.2023 to 4.11.2023.
3.	FDP on Arduino using Kotlin by IIT Bombay (Spoken Tutorial Project)	
4.	FDP on Android App using Kotlin by IIT Bombay (Spoken Tutorial Project)	9.5.2022
5.	International Webinar on “Robotics in Healthcare” By NITTR, Chennai	29 th April 2022(Friday) 10.00am to 12.00noon
6.	FDP on Embedded System Design using Intel SoC FPGAs at SSN College of Engineering	1-5 Feb 2022(5 Days)
7.	FDP on Intel SoC FPGAs and Intel HLS Compiler at Loyola ICAM College of Engineering and Technology	22 and 23 rd Nov 2021(2 Days)
8.	Two Day Workshop on “Analog and Digital System Design Using Cadence Tool” at Sri Eshwar College of Engineering, Coimbatore	26 & 27.10.2021(2 Days)
9.	AICTE Sponsored STTP on “Supervised and Unsupervised Machine Learning using Google Cloud”, at RMK College of Engineering and Technology, 2-7 November 2020	6 days
2	FDP on “Pattern Recognition using Neural Networks for Image Processing” at VIT University, 19-23 rd October 2020	5 days
3.	Webinar on “Effective Presentations using Outlines in Powerpoint” on 1 st September 2020	1 day

4.	Capacity Building Webinar on Tools and Resources for Virtual Lab practice, 06-08- 2020 to 08-08-2020	3 days
5.	Webinar on Essentials for setting up an AI/DL Lab, 17-07-2020	1 day
6.	Recent Trends in Biomedical Application, 13.7.2020 to 17.07.2020	5 days
7.	Get Ready for AI with MATLAB and SIMULINK, 18/06/2020 - 20/06/2020	3 days
8.	Three day Online Faculty Development Program on Technologies for Healthcare, 08/06/2020 - 10/06/2020	3 days
9.	Data Analysis and Visualization of COVID 19 Dataset Using Python, 7.05.2020	1 day
10.	Attended a Workshop on Arduino, a course in IOT series Under 'Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching' (PMMMNMTT), Funded by the Ministry of Human Resource Development, Government of India on 8 th ,Febraury 2020, by IIT Bombay	1 day
11.	Attended a Faculty Development Program on "Deep Learning" at SRM Institute of Science and Technology held from 27th to 29th May 2019	3 days
12.	Attended a Faculty Development Program on "VLSI and Embedded Systems for IOT Applications" at SRM Institute of Science and	5 days

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Funded Project Details	:	SERB Sponsored Rs.1,00,000 to conduct a National Seminar On Recent Trends in Biomedical Engineering for Medical Diagnostic Applications, 2022-2023.						
Awards & Achievements	:	<ol style="list-style-type: none"> 1. Confederation of Elite Academicians of IICDC –India Innovation Challenge Design Contest – 2019, AICTE,DST and Texas Instruments Inc.,India, 2019-2020. 2. IICDC – Fund of 400 USD is received 3. Received Elite Models in NPTEL Courses <ul style="list-style-type: none"> • Digital Image Processing • Medical Image Analysis • Deep Learning • Mathematical Aspects of Biomedical Electronic System Design 						