


## FACULTY PROFILE

<b>Name of Teaching Staff / RMK ID</b>	<b>S D LALITHA / T0264</b>			
<b>Designation</b>	ASSOCIATE PROFESSOR			
<b>Department</b>	COMPUTER SCIENCE AND ENGINEERING			
<b>Date of Joining the Institution</b>	21.6.2004			
<b>Qualifications</b>	B.E.(C.S.E)	M.Tech (C.S.E)	Ph.D	
<b>Total Experience</b>	Overall : 23 Years		in RMK : 21 Years	
<b>Papers Published in Journal</b>	Overall : 32		After Joining RMK : 32	
<b>List of Papers Published</b>	<p>1. Micro-Facial Expression Recognition Based on Deep-Rooted Learning Algorithm, S. D. Lalitha, K. K. Thyagarajan, International Journal of Computational Intelligence Systems, 2019, Vol. 12, Issue. 2, Atlantis Press, 903 - 913.</p> <p>2. Agro based crop and fertilizer recommendation system using machine learning, Lalitha S D, Vijaya Bindhu B, Preethi G, Rathi Priya V, Sanjula S M, European Journal of Molecular &amp; Clinical Medicine, 2020, Vol. 7, Issue. 4, 2043-2051.</p> <p>3. A Study on Lip Localization Techniques used for Lip reading from a Video, S.D. Lalitha, K. K. Thyagarajan, International Journal of Applied Engineering Research, Vol. 11, Issue. 1, 611-615.</p> <p>4. Micro-Facial Expression Recognition in Video Based on Optimal Convolutional Neural Network (MFEOCNN) Algorithm, S.D. Lalitha, Dr. K. K. Thyagarajan, International Journal of Engineering and Advanced Technology, 2019, Vol. 9, Issue. 1, 2832-2841.</p> <p>5. Prediction of Crime Rate Analysis using Supervised Classification Machine Learning Approach, S D Lalitha Kirthika V, Krithika Padmanabhan A, Lavanya M, International Research Journal of Engineering and Technology, 2019, Vol. 6, Issue. 3, 671-6775.</p> <p>6. Human Attributes Quantification From a 2D Image Using Hale Canvas App, International Journal of Innovate Research in Science, Engineering and Technology, 2016, Vol. 5, Issue. 3, 4101-4105.</p> <p>7. Improved Information for Endoscopy Diseases Using K-Mean and Super-Pixel Segmentation in Wireless Endoscopy Dataset, Lalitha S.D, Vinita M.K, Vishalini S, Sushmitha.L, International Journal for Research in Applied Science &amp; Engineering Technology, 2016.</p> <p>8. Hybrid Model for Emotion Recognition Based on Multiple Features in Video Sequences, S.D. Lalitha &amp; K.K. Thyagarajan, Solid State Technology, 2020, Vol.63, Issue 6, 14364-14394.</p> <p>9. Emotion Detection Using Convolution Neural Networks, Lalitha S D, D.Gerald Moses, B. Dinesh Kumar, J. Ajay Krishna, International Journal of Advanced Science and Technology, 2020, Vol. 29, Issue 3, 10670–10679.</p>			

10. Quantum Image Scrambling, S.D. Lalitha, Deborah Adeline George, Jeevitha, Kalpana, Int. Journal of Advanced Networking & Applications (IJANA), 2019.
11. IOT Based Soil irrigation App, Lalitha S.D. Thejeshwar AB, Vignesh S, International Journal Of Advanced Networking & Applications, 2019.
12. Emotion Recognition System Using Open Web Platform, International Journal Of Advanced Networking & Applications, 2019.
13. Efficient Bandwidth Aware Routing Scheme in Manets, S.D.Lalitha, Yerabolu Keerthika, Solleti Harshitha, Tanguturu Indrani, Turkish Online Journal of Qualitative Inquiry (TOJQI), Volume 12, Issue 04, April 2021: 2219-2232.
14. Artificial Intelligence driven security model for Internet of Medical Things (IoMT), Cuddapah Anitha, Komala C R, Chettiyar Vani Vivekanand, S D Lalitha, Sampath Boopathi, Revathi. R, 2023, IEEE Xplore, ICIPTM 2023, 979-8-3503-3623-8.
15. UNCA: A Neutrosophic-Based Framework for Robust Clustering and Enhanced Data Interpretation, S. D. Lalitha D. Dhinakaran, S. Edwin Raja, S. Gopalakrishnan, D. Selvaraj, International Journal of Neutrosophic Science, Vol.25, Issue: 4, American Scientific Publishing Group, 176-192, December 2024.
16. Ant Colony Optimization Algorithm For Feature Selection In Sentiment Analysis Of Social Media Data, P Kavitha, S. D. Lalitha, ICTACT Journal on Soft Computing, Vol.14, Issue:4, April 2024.
17. Advanced AI-based System for Precision Oil Spill Detection in Marine Environments, S. D. Lalitha, S Senthilkumar, B Praveen Kumar, Umamageswaran Jambulingam, TP Anish, AV Kalpana, Maintaining a Sustainable World in the Nexus of Environmental Science and AI, IGI Global, 131-160, 2024.
18. Verified of leakage loss, birefringence, nonlinear parameters and total number of modes in silica/silica doped and plastic fibers for fiber system efficiency improvement, Ramachandran Thandaiah Prabu, Dhilipkumar Santhakumar, Ata Kishore Kumar, Sangeetham Dharuman Lalitha, Jeneetha Jebanazer, Salem Balamurugan Mohan, Aisha abd Rahman Ahmed, Journal of Optical Communications, Vol. 46, Issue: 2, 281-288, De Gruyter, April 2025.
19. Liver Tumor Prediction using Attention-Guided Convolutional Neural Networks and Genomic Feature Analysis, S Edwin Raja, J Sutha, P Elamparithi, K Jaya Deepthi, S D Lalitha, MethodsX, Vol. 14, 103276, ELSEVIER, March 2025.
20. Enhancing Cybersecurity by Deep Learning Models for QR Code Image-Based Attack Detection Using Lion Optimization Algorithm, Umamageswaran Jambulingam, Indumathi Ganesan, T Chandrasekar, J Shobana, S Nalini, S.D. Lalitha, Nature-Inspired Optimization Algorithms for Cyber-Physical Systems, IGI Global, 75-104, 2025.
21. AI-driven control strategies for power electronics converters, S.D. Lalitha, Chaitanya Danamaraju, M Prabhu Raj, Dinesh Kumar, R Sethuraman, ICONSTEM 2024, IEEE Xplore, 1-6, April 2024.
22. Reliability and QoS Aware Intelligent UAV Communication with Throughput Maximization in Wireless Networks, S. D. Lalitha, K. Suresh Kumar, M. Ramya, J. Harirajkumar, S. Ravi, ICSES 2023, IEEE Xplore, March 2024.

23. Real-Time Event Detection and Predictive Analytics Using IoT and Deep Learning, Indumathi Ganesan, NP Ponnuraji, A Siva Kumar, M Nithya, Umamageswaran Jambulingam, S.D. Lalitha, Industry Applications of Thrust Manufacturing: Convergence with Real-Time Data and AI, IGI Global, 1-41, 2024.
24. Efficient Detection of QR Code Image-Based Attacks in Industries Through Lightweight Deep Learning Models and Monarch Butterfly Optimization Algorithm, P Sathyaraj, A Siva Kumar, R Sabitha, R Dhanalakshmi, T Chandrasekar, S.D. Lalitha, Industry Applications of Thrust Manufacturing: Convergence with Real-Time Data and AI, IGI Global, 280-313, 2024.
25. Random Forest-Based Retail Management To Improve The Recognition Rates Of Employees, K K Thyagarajan, S.D. Lalitha, N Bindu Madhavi, Sudeshna Seal, B Senthilnathan, RMKMATE 2023, IEEE Xplore, 1-6, November 2023.
26. Semantic-Based Classification of Toxic Comments Using Ensemble Learning, A Thilagavathy, R Deepa, S.D. Lalitha, D Naveen Raju, R Ramya, M Ramya, L Rithika, K Karpoora Sundari, ICONNECT-2023, E3S Web of Conferences, EDP Sciences, Vol. 399, July 2023.
27. Enhancing Lung Cancer Detection Using Radial Deep Belief and Particle Swarm Optimization, R Gayathri, S Rajakumari, Priyanka Sharma, K Manickam, K Uma, S.D. Lalitha, AUTOCOM 2025, 1556-1561, IEEE Xplore, March 2025.
28. Advancing animal recognition through transfer learning: A novel approach to robust detection and classification, KK Thyagarajan, G Kalaiarasi, SD Lalitha, T Vignesh, T Nivedha, Nellore Adi Narayana, Advances in Electrical and Computer Technologies, CRC Press, 509-514, 2025.
29. Exploring the Convergence of Artificial Intelligence and Sustainable Computing, C Geetha, K Sujatha, A Siva Kumar, T Chandrasekar, S.D. Lalitha, S Nithi Ravva, Ethical Impacts of Using AI for Sustainable Development, IGI Global, 155-186, 2025.
30. Intelligent Control Systems for Smart Industrial Automation and Robotics, SV Shri Bharathi, K Sujatha, S.D. Lalitha, S Karthick Murugan, S Vaitheeshwari, S Sajithra, Integrating Intelligent Control Systems With Sensor Technologies, IGI Global, 2025.
31. Optimized AI System for Precision Oil Spill Detection Using Lion Optimization Algorithms, A Siva Kumar, PC Karthik, G Indumathi, G Indra, R Dhanalakshmi, S.D. Lalitha, Revolutionizing AI and Robotics in the Oil and Gas Industry, IGI Global, 113-144, 2025.
32. Emerging Artificial Intelligence Tools, Advancements, and Opportunities for Protecting Wild Animals, PC Karthik, SV Shri Bharathi, A Sivakumar, Chandrasekar Thangavelu, S Nalini, S.D. Lalitha, AI and Machine Learning Techniques for Wildlife Conservation, IGI Global, 213-246, 2025.
33. AI and Machine Learning-Driven Model for Assessing Financial Risk Networks, J Shobana, Chandrasekar Thangavelu, TP Anish, Umamageswaran Jambulingam, Y Sukhi, S.D. Lalitha, Utilizing AI and Machine Learning in Financial Analysis, IGI Global, 337-350, 2025.
34. Cluster-Based Bayesian Networks for Functional Gene Annotation through Multisource Data Integration, S.D. Lalitha, Mohd Ashraf, R

- Bhuvaneswari, J Suji Priya, Padmaja Nimmagadda, Bhasker Pant, SSRN 5110957, ICOFE – 2024, November 2024.
35. J. U. Mageswaran, G. Indumathi, A. V. Kalpana, G. Elangovan, S. D. Lalitha, S. Nalini, and Mayank Kumar Sohanda, "Revolutionizing Public Transport: RFID-Enabled Occupancy Monitoring and Frequency Analysis System," in 2024 International Conference on Communication, Computing and Internet of Things (IC3IoT), Apr. 2024, doi:10.1109/IC3IoT60841.2024.10550367.
36. R. Annamalai, S. Sudha Mercy, J. M. Mathana, N. Banupriya, S. Rajalakshmi, and S. D. Lalitha, "Autonomous Car Driver Assistance System," in Artificial Intelligence for Autonomous Vehicles, S. Rajendran, M. Sabharwal, Y.-C. Hu, R. K. Dhanaraj, and B. Balusamy, Eds. Hoboken, NJ, USA: Wiley, 2024, ch. 5. doi: 10.1002/9781119847656.ch5.
37. S. D. Lalitha and P. Kavitha, "Enhanced Detection of Cancer Lesions Using Convolutional Neural Networks and Feature Fusion," ICTACT Journal on Image and Video Processing, vol. 14, no. 4, pp. 3237–3244, 2024. doi: 10.21917/ijivp.2024.0461.
38. S. D. Lalitha, C. Danamaraju, M. Prabhu Raj Manickam, D. Kumar, R. Sethuraman, and M. Mohanapriya, "AI-Driven Control Strategies for Power Electronics Converters," in 2024 Ninth International Conference on Science Technology Engineering and Mathematics (ICONSTEM), Jul. 2024. doi:10.1109/ICONSTEM60960.2024.10568766.
39. B. Gopinathan, P. Mukherjee, N. K. Naveen, R. Nandhini, S. Shanmugapriya, and S. D. Lalitha, "An Innovation Development of Bandwidth Management in 4G Wireless Local Area Network (4G-WLAN) Using Smart Machine Learning Algorithm," in 2023 International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering (RMKMATE), Nov. 2023. doi:10.1109/RMKMATE59243.2023.10369597.
40. K. G. Shanthi, M. S. Kavitha, P. Rajeswari, and Jayanthi, "Latency Reduction in mmWave VLSI Circuits through Gravitational Learning," in Proceedings of the 2023 International Conference on Advances in Computing, Communications and Information Technology (ICAICCIT), 2023. doi:10.1109/ICAICCIT60255.2023.10466077.
41. Lalitha Sangeetham Dharuman, Anitha G., Parimala V., Muthukrishnan A.N., Enhanced Power Transformer Fault Diagnosis using Key Chemical Gases with DGA, integrating Machine Learning and Traditional Methods, Iranian Journal of Chemistry and Chemical Engineering (IJCCE), 44(05): 1458-1481 (2025). doi:10.30492/ijcce.2025.2039619.6766.
42. T. D. Subha, T. D. Subash, S. D. Lalitha, and J. Shobana, "Optimizing the Efficiency of Perovskite Solar Cells for Improved Performance and Energy Conversion Using Temporal Dynamic Graph Neural Network," Journal of Computational Electronics, vol. 24, no. 5, Springer, 2025. doi:10.1007/s10825-025-02373-8.
43. S. D. Lalitha, G. V. Shree, M. Sruthi, and B. Suvathy, "Driver Drowsiness Detection and Alert System Using Deep Learning Efficient Model With Computer Vision," in Physical Health, Mental Health, and Human Well-Being in the Age of AI, IGI Global, Oct. 2024, pp. 571–594. doi:10.4018/979-8-3693-6190-0.ch024.
44. N. P. Ponnuviji, G. Elangovan, K. Sujatha, Umamageswaran Jambulingam, I. Ganesan, and S. D. Lalitha, "IoT-Enabled Assistive

	Technologies Approach for Personalized Geriatric Health Monitoring and Safety," in Future of AI in Biomedicine and Biotechnology, IGI Global, 2024, pp. 125–146. doi:10.4018/979-8-3693-3629-8.ch007.	
<b>Papers Presented in Conferences</b> (Scopus / WoS indexed only)	Overall : 12	After Joining RMK : 12
<b>Ph.Ds / Projects Guided</b>	Ph.Ds Guided : -	Student Projects Guided : 46
<b>Books Published :</b>	Count : 3	
	List : 1. Security in Computing , 978-93-5625-692-7, Scientific International Publishing House, February 2023. 2. Essentials of Cloud Computing, 978-93-6132-146-7, Scientific International Publishing House, January 2024. 3. Image Processing Essentials: A Digital Perspective, 978-93-6674-645-6, Scientific International Publishing House, April 2025.	
<b>Patents</b>	Published Count : 5	Granted Count : -
	List : 1. Iris Based And Fingerprint Based Voting System Via IoT Monitoring, 2021. 2. Multiple Sensor Data Fusion Enabled AI Based Emotion Identification System, 2021. 3. A New IoT Eco System Security Model with its Supporting Architectural Framework, 2023. 4. An Artificial Intelligence and Machine learning based User Behaviour Analysis System, 2023. 5. A Collaborative Learning System using Social Media and Cloud Technology, 2023. 6. A Method For Identifying Hidden Patterns In Large Datasets Using Deep Learning Techniques, 2024. 7. An Event Management System With Enhanced Communication To Guests According To Venue Using Artificial Intelligence, 2024. 8. Workflow Scheduling In Fog-Cloud Computing Using A Quantum Genetic Algorithm, 2024. 9. lot-Controlled Smart Farming System Utilizing Silicon-Based Led Lamps, 2025. 10. lot-Enabled Automated Oxygen Supply System For Real-Time Monitoring And Adaptive Delivery, 2025. 11. Electronic Health Record Storage Solution With Blockchain Technology,2025.	
<b>Professional Memberships</b>	Count : 5	
	List : 1. ISTE (The Indian Society for Technical Education) 2. IEI (The Institution of Engineers) 3. IACSIT ( International Association of Computer Science and Information Technology) 4. IAENG (International Association of Engineers) 5. Internet Society	

<b>Consultancy Projects Completed</b>	Count : 5
<b>Awards Received</b>	Count : 3
	List : <ol style="list-style-type: none"> <li>1. IEI Best Faculty Advisor Award 2023.</li> <li>2. IEI Academic Excellence Award 2024.</li> <li>3. Best Faculty Advisor 2025.</li> </ol>
<b>Research grants Received</b>	-
<b>Orchid Link / ID</b>	ID : 0000-0003-3712-8254
<b>Google Scholar Link / ID</b>	ID : iDg0ZtYAAAAJ
<b>Vidwan Link / ID</b>	ID : 305595
<b>Research Gate Link / ID</b>	LINK: <a href="https://www.researchgate.net/profile/Lalitha-S-D">https://www.researchgate.net/profile/Lalitha-S-D</a>
<b>Scopus Link / ID</b>	LINK: <a href="https://www.scopus.com/authid/detail.uri?authorId=58510382900">https://www.scopus.com/authid/detail.uri?authorId=58510382900</a>