



KONGU ENGINEERING COLLEGE

CAMPUS R&D NEWS



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PH.D VIVA-VOCE COMPLETED

1. Ms.N.Suganya Baby, Research Scholar, Department of Mathematics defended her thesis entitled "A study on solutions of ordinary differential equations in neutrosophic environment" on 03.09.2025 under the guidance of Dr.M.Dhavamani / Maths.
2. Mr.S.Yuvaraj, Research Scholar, Department of Civil Engineering defended his thesis entitled "Performance assessment of AMINE group corrosion inhibitors for use in reinforced concrete structures" on 04.09.2025 under the guidance of Dr.S.Balaji (RC) / Civil.

R&D PROJECTS SACTIONED (2025-2026)

1. Ms.S.Mohana Saranya/CSE, received research grant of Rs.1,50,000/- for the project entitled "Tomatix: Revolutionizing Crop Planning and Market Intelligence" under AICTE- Tomato Grand Challenge Scheme on 10.06.2024, F.No.M/954/2024-US C1/1/16.
2. Dr.N.Prakash / MBA, Dr.V.Vaishnavi / MBA, Dr.P.Sivaranjani / ECE, Dr.P.Karthikeyan / MBA received research grant of Rs.7,50,000/- for the project entitled "Implementation of Blockchain Technology to Enhance Transparency, Traceability and Quality Assurance in the Supply Chain of South Indian Agriculture Industries" under ICSSR-R&D Scheme on 20.09.2024, F.No.162/VVB@20247/2024-2802/NR&RD-A/SCD.
3. Dr.M.Joseph Auxilius Jude/ECE, received research grant of Rs.3,00,000/- for the project entitled "Robust end-to-end congestion control algorithm for vehicular internet computing" under TNSCST-RFRS Scheme on 17.06.2024, F.No.TNSCST/RFRS/06/VM2022-23/16395.
4. Dr.V.Balusamy / Principal, Dr.R.Parameshwaran / Automobile, Dr.S.Praveenkumar / MTS, received research grant of Rs.90,000/- for the project entitled " AICTE IDEA Lab" under AICTE-IDEA lab Scheme on 10.02.2025, F.No. M/676/2025-SAGB/IDEA202000136.

REFERRED JOURNAL PUBLICATIONS

1. Senthil, S.M., Bhuvanesh Kumar, M., Rajeshkumar, L., and Sampada Viraj Dravid., (2025). Effects of building parameters on mechanical and surface properties of 3D printed bioplastic (PLA) using TOPSIS: an experimental study. *International Journal of Industrial and Systems Engineering*, Vol.51(1), pp.104-124.
2. Logeswaran, S., Anusha, G., Bhuvaneshkumar, M., and Anandakumar, S., (2025). Prioritising bus station operational factors using machine learning-based principal component analysis. *In Proceedings of the Institution of Civil Engineers-Municipal Engineer*, Vol.178(3), pp.189-201.
3. Naveen Kumar, R., Saravanan, A., Shankar, S., and Ramya Suresh., (2025). Assessment of Cognitive Performance and Hearing Impairment of Indian Power Loom Employees through Electroencephalogram Signal Analysis and Audiometry. *Noise and Health*, Vol.27(127), pp.476-488.
4. Ramachandran, K., Selvakumar, P., Suresh, M., and Rajeshkumar, G., (2025). Mechanical, Corrosion, and Microstructural Characteristics of Biodegradable Magnesium based Composites synthesized by Powder Metallurgy. *Journal of Alloys and Compounds*, p.183368.
5. Karthikeyan, R., Raveendran, P.S., Thangavel, P., Prabakaran, R., and Kim, S.C., (2025). Techno-Economic Evaluation of a Screw Conveyor-Based Solar Dryer for Ivy Gourd Dehydration. *Case Studies in Thermal Engineering*, p.107056.
6. Sundhararaj, V., Meenakshipriya, B., Devi, P.N., and Vignesh, K.E., (2025). DWT-DCT-SVD: A Hybrid Image Watermarking Algorithm with FPP Resistant Enhancement. *Circuits, Systems, and Signal Processing*, Vol.44, pp.6650-6675.
7. Sellappan, S.N., Junfithrana, A.P., Priyanka, E.B., Ridha, F., Chinnappandi, M., and Subramaniam, T., (2025). Analysis of Quadrotor Design UAV Utilizing Biplane Configuration with NACA Airfoils. *Engineering Proceedings*, Vol.107(1), p.109.
8. Raghavan, H., Sarathkumar, D., Kumar, U.A., and Kraiem, H., (2025). Ultra-broadband polarization-insensitive solar absorber with tungsten-molybdenum hybrid resonators for industrial thermal applications: Design, fabrication, and machine learning analysis. *Applied Thermal Engineering*, Vol.280(2).

9. Miodrag Zivkovic., Luka Jovanovic., Vladimir Jocovic., Bosko Nikolic., Vico Zeljkovic., Mahmoud Abdel-Salam., Milos Mravik., Suresh Muthusamy., and Nebojsa Bacanin., (2025). Addressing smart city security: Machine and Deep Learning methodology combining feature selection and two-tier cooperative framework tuned by metaheuristics in Cluster Computing. *Springer*, Vol.28, Article No.705.
10. Arun Mozhi Subbukalai., Charles Raja Sathia Samuel., Vijaya Kumar Nambi Mahadevan., Arockia Edwin Xavier Santiago., Suresh Muthusamy., and Surya Kavitha Tirugatla., (2025). A novel method for energy management with optimization in plug-in electric vehicle integration into the smart grids - An experimental study” in Electrical Engineering. *Springer*, Vol.107(9), pp.14069-14083.
11. Daison Stallon Samuel Raj., Newlin Rajkumar Manokaran., Suresh Muthusamy., Kohila Jeyaraj., Logeswaran Thangamuthu., and Baseem Khan., (2025). A novel method for fault detection and diagnosis in DFIG coupled grid connected wind energy systems using spiking deep residual network. *Wind Engineering*, Vol.45(9), pp.1233-1249.
12. Kumar, S.S., Kumar, M., Gobinath, T., Karthikeyan, M.S., Sivachitra, M., and Rasu, L.A., (2025). Dual-Mode Fluorescent and Colorimetric Sensors Powered by Machine Learning for High-Security Authentication and Anti-Counterfeiting. *9th International Conference on Engineering Technologies and Applied Sciences (ICETAS)*, pp.1-7, IEEE.
13. Karthikeyan, M., and Vijayachitra, S., (2025). Optimization of Disease Detection System for Improved Arecanut Cultivation by Machine Learning. *In Proceedings of the 3rd International Conference on Futuristic Technology*, Vol.2, pp.123-134.
14. Bibhu Prasad Ganthia., Sampurna Panda., Krishna Priya Remamany., Abhay Chaturvedi., Yasmine Begum, A., Mohan, G., Suji Prasad, S.J., Ishwarya, S., (2025). Experimental techniques for enhancing PV panel efficiency through temperature reduction using water cooling and colour filters. *Electrical Engineering*, Vol.107, pp.11349-11375.
15. Anurag Shrivastava., Suji Prasad, S.J., Ajay Reddy Yeruva., Mani, P., Pooja Nagpal., and Abhay Chaturvedi., (2025). IoT Based RFID Attendance Monitoring system of students using Arduino ESP8266 & Adafruit.io on defined area. *Cybernetics and Systems*, Vol.56(1), pp.21-32.
16. Prithivi, K., Madhumathi, V., Kanishka, S., Akash, A., and Mrunalini, T., (2025). A Proposed Single Input Multiple Output DC-DC Cuk Converter using Machine Learning for Automotive Application. *International Conference on Advancements in Smart, Secure and Intelligent Computing (ASSIC)*, IEEE.
17. Alruwais, N., Hasanin, T., Burle, T., Marzouk, R., Vijayalakshmi, J., and Srinivasan, S., (2025). Integrating Remote Sensing, IoT, and Machine Learning for Tracking Saltwater Intrusion in Coastal Aquifers Due to Over-Extraction: A Geospatial Approach. *Desalination and Water Treatment*, p.101403.
18. Ramesh, M., Anbukaruppusamy, S., and Dineshkumar, P., (2025). Performance Improvement of Lung Cancer Multiclass Classification on Transformer Convolution Neural Networks using Histopathological Images. *6th International Conference for Emerging Technology (INCET)*, pp.1-6, IEEE.
19. Rajendran, R., Chintham, V.P., Jeyavathana, R.B., Chidipothu, V.K., Venu, K., and Jegajothi, B., (2025). AI-Driven Threat Intelligence using Graph Neural Networks for Advanced Cybersecurity Defense. *8th International Conference on Computing Methodologies and Communication (ICCMC)*, pp.752-758, IEEE.
20. Subramanian, J.A., Asirvadam, V.S., Zulkifli, S.A., Shanthi, N., and Lagisetty, R., (2025). Adaptive Multi-Layered Trajectory Planning for Autonomous Aerial Vehicles. *International Conference on Next Generation Computing Systems (ICNGCS)*, pp.1-8, IEEE.
21. Subramanian, J.A., Asirvadam, V.S., Zulkifli, S.A., Shanthi, N., and Lagisetty, R.K., (2025). Integration of ORB with ROS for Hazard Detection and Avoidance in AAV’S. *International Conference on E-Mobility*, pp.43-55.
22. Kavitha, S., Sasipriya, N., Keerthana, K., Presanna Wenkatesan, K., Rajdeepak, S., and Ramana, K., (2025). Classification of Chest X-Ray Images with Pre-trained Models and Machine Learning Classifiers. *International Conference on Innovative Computing and Communication*, pp.525-536.
23. Kavitha, S., Kavitha, K., Prakash, P., Sundar, G.P., Raghul, L., and Rajdhilip, G., (2025). Optimizing the Hyperparameters for Classification of Lung Diseases from Chest X-Ray Images. *International Conference on Computational Intelligence in Data Science*, pp.102-111.
24. Mohana Saranya, S., Komarasamy, D., Mohanapriya, S., and Raaju, M.P., (2025). Introduction to Industry 4.0: Practical Issues and Challenges. *Distributed Deep Learning and Explainable AI (XAI) in Industry 4.0*, pp.1-26.

25. Mohana Saranya, S., Sowmiya, S., Vinieth, S.S., Savitha, S., Mohanapriya, S., and Dinesh, K., (2025). Optimizing Brain Tumor Segmentation using Attention U-NET and ASPP U-NET. *3rd International Conference on Futuristic Technologies*, Vol.2, pp.223-228.
26. Roopa, C., Latha, R.S., Dhavamani, M., Bommisrilekhaa, G., Shalini, P.A., and Dhanyajothi, R., (2025). Comparative Analysis of Machine Learning Algorithms for Disease Prediction using Medical Datasets. *3rd International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT)*, pp.1201-1206, IEEE.
27. Malliga, S., Veerappampalayam Easwaramoorthy, S., Subbarayan, N., and Moorthy, U., (2025). Empowering sentiment analysis in social media: a comprehensive approach to enhance the classification of abusive Tamil comments using transformer models. *Journal of Big Data*, Vol.12(1), p.208.
28. Muthuraja, M., Natesan, S., Thangavel, S., and Krishnan, A., (2025). Modelling a Deep Network Model for Diabetic Foot Ulcer Prediction using Learning Approaches. *Traitement du Signal*, Vol.42(4).
29. Kumaravel, T., Nallusamy, C., Natesan, P., Kalpanadevi, G., Karthick, P., and Indra, B., (2025). Evaluating Machine Learning Techniques for Identifying Misinformation Online. *7th International Conference on Intelligent Sustainable Systems (ICISS)*, pp.778-784, IEEE.
30. Gayathri, S., Akilesh, S., Dharshan, P., and Karthick, S., (2025). Enhanced Sugarcane Leaf Disease Prediction using Deep Learning Models. *5th International Conference on Expert Clouds and Applications (ICOECA)*, pp.987-992, IEEE.
31. Bizu, B., Suvalakshmi, K., Bharathi, G., Gowtham, S., and Gowtham, K., (2025). Analysis of Mixing of Pseudo-Random Number Generators with Statistical Tests. *5th International Conference on Expert Clouds and Applications (ICOECA)*, pp.483-488, IEEE.
32. Gowthami, J., Gayathri, S., Shanthi, N., Suwetha, R.N., Vishnu Prasad, S., and Pradeep, S., (2025). Ensemble Based Approach for Bitcoin Price Prediction. *Second International Conference on Cognitive Robotics and Intelligent Systems (ICC - ROBINS)*, pp.303-310.
33. Ramana, S., Prathiksha, V.S., and Ragul, M., (2025). Enhanced Tomato Leaf Disease Detection using DenseNet201 with Channel and Spatial Attention Mechanisms. *3rd International Conference on Futuristic Technology*, Vol.3, pp.749-756.
34. Thamilselvan, R., Kalpana, T., Natesan, P., Prasath, S.S., and Balaji, B.S., (2025). Enhancing Low-Resource Machine Transliteration Through Three-Way Transfer Learning. *International Conference on Computing Technologies (ICOCT)*, pp.1-5, IEEE.
35. Dharani Jaganathan., Vadivel A., Jansi Rani S., and Vaishnavi, T., (2025). Federated learning for predictive modeling of disease prevention in metaverse. *Federated Learning in Metaverse Healthcare. Academic Press*, pp. 241-264.
36. Monisha, R., Tamilselvan, K.S., Vaishnavi, T., and Sharmila, A., (2025). Exploring Novel CNN Architectures for Weed Seedling Recognition in Precision Agriculture. *International Journal of Computing and Digital Systems*, Vol.17(1), pp.1-12.
37. Nalla Bhanu Teja., Thirunavukkarasu, M., Rajalakshmi, C., Jeevanantham Arumugam., and Senthil Kumar, K.R., (2025). Strategic Implementation of CO-PO Mapping in NBA Assessments for Enhancing Higher Education: Planning Tools for Policy, Leadership, and Management of Education Systems, IGI Global.
38. Suganya, Y., Sree, C.S., Kayalvili, S., Jebadurai, D.J., Vani, M.S., Dhivya, S., and Reddy, R.V.K., (2025). Enhancing Cryptocurrency Market Predictability using Artificial Intelligence: A Platform for Predicting Prices and Trends of Bitcoin, Ethereum, and Cardano. *International Journal of Basic and Applied Sciences*, Vol.14(2), pp.504-519.
39. Annadurai, K., Saravanan, A., Kayalvili, S., Muniyandy, E., Aswani, I., and El-Ebiary, Y.A.B., (2025). Early Detection and Forecasting of Influenza Epidemics using a Hybrid ARIMA-GRU Model. *International Journal of Advanced Computer Science & Applications*, Vol.16(5).
40. Nageswari, D., Md Zubair Rahman, A.M.J., Vimaladevi, M., and Satheesh Kumar, N., (2025). Core-Shell Nanoparticles Based Optical Cross-Section Determination for Enhanced Sensing and Surface Plasmon Resonance Applications in Wireless Sensor Networks. *Journal of Nanoelectronics and Optoelectronics*, Vol.20(4), pp.437-448.
41. Dinesh, R., Venkata Srihari Babu, D., Antony, V.A., and Reddy, U., (2025). Efficient cluster head selection and routing in wireless sensor networks using CPSO and Attention-based RNN. *Peer-to-Peer Networking and Applications*, Vol.18(6), pp.1-27.
42. Charanya, J., Kumaresan, T., Kavitha, V., Dhamu Pradeep, S., and Ajay, C., (2025). Depression Detection System from Textual Data using Recurrent Neural Network. In: Kanhe, A., Balanethiram, S., Hsiung, P.A., Jayakody, D.N.K. (eds) *Advances in VLSI*,

- Signal Processing and Wireless Communication. IEdTC 2023. *Lecture Notes in Electrical Engineering*, Vol.1323.
43. Kalaivani, K.S., Kayalvili, S., and Mohamed Bilal, Z.H., (2025). A Comparative Study of Time Series Models for Real Estate Market Forecasting. *8th International Conference on Computing Methodologies and Communication (ICCMC)*, IEEE.
 44. Priyanka, S., Vinothini, B., Thanigaivelan, P., Pranav Raja, M., and Sudhakaran, S., (2025). Lung Cancer Prediction using Machine Learning. *3rd International Conference on Communication, Security, and Artificial Intelligence (ICCSAI)*, Vol.3, pp.1604-1608, IEEE.
 45. Jothimani, K., Hemalatha, S., Selvaraj, S., and Thangarajan, R., (2025). History of Smart Textiles and Wearables. *Smart Textiles and Wearables for Health and Fitness*, John Wiley & Sons.
 46. Hemalatha, S., Selvaraj, S., and Thangarajan, R., (2025). Human-Computer Interaction in Wearable Health Technologies. *Smart Textiles and Wearables for Health and Fitness*. John Wiley & Sons, pp.183-217.
 47. Meenalochini, M., and Amudha, P., (2025). Capsule Network for Pioneering Disease Detection in Cauliflower Cultivation with Mobile Application Development. *Journal of machine and Computing*, Vol.5(4), pp.2196-2210.
 48. Revathi, A., Kalaivani, K., Sriram, K., and Venkatagiri, M., (2025). Sustainable Synthesis of Iron Oxide using Plumeria alba Flowers: Enhanced Dye Removal and its Antimicrobial Activity. *Journal of Environmental Nanotechnology*, Vol.14(3), pp.29-38.
 49. Chitradevi, V., Bhuvaneshwaran, P., Sengottian, M., and Ravichandran, S.R., (2025). Hydrothermal co-liquefaction of prosopis juliflora and polypropylene in continuous high pressure screw reactor: A computational and experimental analysis. *Studia Universitatis Babes-Bolyai, Chemia*, Vol.70(3), pp.243-263.
 50. Satheesh Kumar, P., Kiruthika, S., Sakthivel, P., Vasudevan, V., Ramachandran, K., and Wilson Jeyaraj., (2025). ZIF-7@ sodium alginate-derived porous carbon: A sustainable and efficient material for ultrasensitive monitoring of Rhodamine B. *Ionics*, Vol.31, pp.9773-9784.
 51. Manimegalai, S., Ananthi, S., Tamilselvi, D., Prabhakaran, K., Rathinam, R., Gowtham, S., Roniboss, A., Arul, S., and Jeevanantham, V., (2025). Green synthesis of Zero-valent Tellurium Nanoparticles via Acalypha indica Leaf Extracts and its Application for Photocatalytic Degradation of Safranin O Dye in Aqueous System. *Chemistry Select*, Vol.10(34), p.e00910.
 52. Vetrivel, S.C., Vidhyapriya, P., and Arun, V.P., (2025). Creating Supportive Environment for Students in Universities: Mental Health Matters. In *Psychological Patterns and Lifestyle Influences in Academia Experience*, pp.19-50, IGI Global.
 53. Vetrivel, S.C., Vidhyapriya, P., and Arun, V.P., (2025). The role of AI in transforming assessment practices in education. In *AI Applications and Strategies in Teacher Education*, pp.43-70, IGI Global.
 54. Vijayakumar, P., Pyngkodi, M., Megashri, N., Nivash, C.M., Selyavarsnee, M., and Nisanth, G., (2025). Analysing the Influential Factors Affecting Students Placement Outcomes using Machine Learning. *8th International Conference on Computing Methodologies and Communication (ICCMC)*, pp.1621-1628.
 55. Menaka, A., Sakthivel, K., Amirthayogam, G., Prabavathi, S., Vijayakumar, P., and Vedhashree, M., (2025). Hybrid Deep Reinforcement Learning and Federated Convolutional Networks for Energy-Aware Data Transmission in Wireless Sensor Networks. *6th International Conference on Data Intelligence and Cognitive Informatics (ICDICI)*, pp.1-9.
 56. Vijayakumar, P., Pyngkodi, M., Devi, S., Thulasidharan, P., Santhosh, S., and Samyuktha, K., (2025). Comparative Analysis of AI Chatbot for Assessing Gemini AI, DeepSeek AI, and Qwen AI via OpenRouter API Integration. *6th International Conference on Data Intelligence and Cognitive Informatics (ICDICI)*.
 57. Rahunathan Loganathan., Sivabalaselvamani Dhandapani., Suhana Nafais Azeem., Deepanchakaravarthi Subbrathinam., Kavya Thilagavathi Murugesan., and Keerthana Shanmugam., (2025). Deep learning based approach for Cassava leaf disease classification. *AIP Conference Proceedings*, Vol.3279, p.020193.
 58. Sivabalaselvamani Dhandapani., Hemalatha Somasundaram., and Tamilarasi Angamuthu., (2025). Hybrid deep learning framework for heart disease prediction using ECG signal images. *Scientific Reports*, Vol.15, p.33922.
 59. Sivabalaselvamani, D., Ranjit Singh Sarban Singh., Hemalatha, S., Prabhu, A., and Nanthini Kempaiyan., (2025). Enhancing Bone Cancer Detection using AI-Based Multi-Model Ensemble Deep Learning Techniques. *Advanced AI and Data Science Applications*, pp.166-179.

60. Arunkumar, M.S., Deepa, S., Suguna, R., Kanimozhi, T., Chandru, M., and Vignesh, L., (2025). An Improved Spam Detection Technique using Deep and Recurrent Neural Networks. *8th International Conference on Computing Methodologies and Communication (ICCMC)*, pp.1672-1678.
61. Deepa, S., Arun, G., Chandru, M., Alamelu, M., Balamurugan Eswaran., and Ranjithkumar, S., (2025). A Deep Learning-Driven Lung Disease Classification using CCRBM Algorithm for Future Prognosis and Forecasting. *International Conference on Next Generation Computing Systems (ICNGCS)*, pp.1-6.
62. Dharshani, R., Jamunadevi, C., Arun, G., Shaheena, K.V., and Sathishkumar, V.E., (2025). Early Prediction of Parkinson's Disease using XGBoost on Multidimensional Clinical and Voice Biomarkers. *International Conference on Next Generation Computing Systems (ICNGCS)*, pp.1-7.

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