



# KONGU ENGINEERING COLLEGE

## CAMPUS R&D NEWS



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**VOL 05**

**NOVEMBER 2024**

**ISSUE 11**

### PH.D VIVA-VOCE COMPLETED

1. Ms.S.Janani, Research Scholar, Department of Civil Engineering defended her thesis entitled "Utilization of ceramic waste powder and recycled fine aggregates for sustainable concrete" on 08.11.2024 under the guidance of Dr.G.S.Rampradheep / Civil.
2. Mr.M.P.Thiyaneswaran, Research Scholar, Department of Civil Engineering defended his thesis entitled "Experimental investigation on the properties of hybrid fibre reinforced high performance concrete" on 08.11.2024 under the guidance of Dr.P.Kulanthaivel (RC) / Civil.
3. Ms.A.S.Narmadha, Research Scholar, Department of Electrical and Electronics Engineering defended her thesis entitled "Quick intrusion detection mechanism for mobile Adhoc networks using dynamic estimation of multiple metrics" on 12.11.2024 under the guidance of Dr.S.Maheswari / EEE.
4. Ms.R.Dhivya, Research Scholar, Department of Artificial Intelligence defended her thesis entitled "Certain investigations of enhancing moving object detection in data streams using machine learning models" on 22.11.2024 under the guidance of Dr.S.V.Kogilavani / AI.

### R&D PROJECTS SACTIONED (2024-2025)

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.

### REFERRED JOURNAL PUBLICATIONS

1. Sampathkumar Velusamy., Sampath Kumar Krishnamoorthy., Shanmuganathan Thiagarajan., Sarath Vijaya Sivam., Sarvesh Kumar., and Umamaheshwari., (2024). Forest waste solid biomass fuel for environmental sustainability – A Review. *Indian Journal of Environmental Protection*, Vol 44(10), pp.939-946.
2. Vinay Kumar, G., Ravi Ramadoss., and Rampradheep, G.S., (2024). Study on various properties and behaviour of lime with hemp, metakolin and carboxyl cellulose. *Journal of Building Pathology and Rehabilitation*, Vol.10, Article No.19.
3. Karthikeyan Selvarajan., Vasanthasurya Senthilkumar., Sanjana Ravikumar., Sanjithraj Mohanamanoharan., and Arunmozhi Manoharan., (2024). Flexural Behavior of Infilled Steel Concrete Composite Sections using Expanded Clay Aggregates. *Proceedings of the International Conference on Eco-friendly Fibers and Polymeric Materials*, Vol.60, pp.719-730.
4. Karthikeyan, S., Kishore, S., Manikandaprabhu, S., Kaven, R., and Manoharan Arunmozhi., (2024). Behaviour of Encased Steel Concrete Composite Beams using Lightweight Aggregate and Fibers. Springer Proceedings in Materials. *Proceedings of the International Conference on Eco-friendly Fibers and Polymeric Materials*, Vol.60, pp.355-366.
5. Jothi Lakshmi, N., Manoj, S., Sampathkumar, V., Prasath, S., Sachinkrishna, R.S., and Mughesh, P., (2024). Green Synthesis of CuO NPs using Tapioca Peel for Photocatalytic Degradation of Pharmaceutical Wastewater. *In International Conference on Eco-friendly Fibers and Polymeric Materials*, pp.475-487.
6. Lakshmi, N.J., Sampathkumar, V., Manoj, S., Kulanthaivel, P., Makhishasooravardhini, G., and Mahasivasri, M.V., (2024). Review on Various Technologies for Treatment of Textile Wastewater. *In International Conference on Eco-friendly Fibers and Polymeric Materials*, pp.379-405.

7. Navaneethan, K.S., Raja, K., Manoj, S., Gnanasundar, V.M., Mohan Gandh, C.S., Kamalesh, M., and Kathiresan, S., (2024). The Effect of Wood Incorporation on Concrete Mechanical Integrity and Structural Resilience: A Practical Investigation. *In International Conference on Eco-friendly Fibers and Polymeric Materials*, pp.601-611.
8. Navaneethan, K.S., Sampath Kumar, K., Manoj, S., Balaji, S., Naveen Srinivasan., Renganathan Ponnuraj., and Ritthik Rakesh Rakkiya Gunasekaran., (2024). Experimental Study on Mechanical Properties of Concrete using Wood Waste and Silica Fume. *In International Conference on Eco-friendly Fibers and Polymeric Materials*, pp.331-342.
9. Hari, B.S., Anandakumar, S., Prasanna, V., Rajasekar, R., Rathish, P., and Dinesh, D., (2024). Estimation of Mechanical Properties of Nylon 6 Containing Dates and Tamarind Seed Powder. *In International Conference on Eco-friendly Fibers and Polymeric Materials*, pp.259-267.
10. Shankar, S., Abbas, G., Naveenkumar, R., Nithyaprakash, R., Maheswari, C., Chander, P., and Basak, A.K., (2024). Assessment of pulmonary function and respiratory symptoms among Indian textile sizing mill workers. *Work*, Vol.79(2), pp.765-774.
11. Shanmugam, A., Mohanraj, T., Krishnamurthy, K., Gur, A.K., and Caligulu, U., (2024). Multi-response optimization on abrasive water jet machining of Aluminum 7075 alloy using Taguchi–DEAR methodology. *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, Vol.238(6), pp.2561-2567.
12. Naif Almakayeel., Gobinath Velu Kaliyannan., and Raja Gunasekaran., (2024). Enhancing power conversion efficiency of polycrystalline silicon photovoltaic cells using yttrium oxide anti-reflective coating via electro-spraying method. *Ceramics International*, Vol.50(21), pp.42392-42403.
13. Gobinath, V.K., Vinodhini, C., Kishore, N., Kamaleeswaran, M., and Giriharan, K.V., (2024). Smartphone-Controlled Solar-Powered Weed Remover: An Innovative Solution for Sustainable and Pollution-Free Agriculture. *Indian Journal of Environmental Protection*, Vol.44(8), pp.727-733.
14. Nithyavathy, N., Gobinath, V.K., Suganeswaran, K., Nagul, M.K., Nithish, M., and Rajarishi, B., (2024). Streamlining Aquaculture: A Semi-Automatic Fishing Robot for Efficient Fish Harvesting. *15<sup>th</sup> International Conference on Computing Communication and Networking Technologies (ICCCNT)*, pp.1-5, IEEE.
15. Suganeswaran, K., Vinodhini, C., Ramaprabha, A., Boopathi Raja, P., and Dhinakar, T., (2024). Development and Evaluation of Semi-Automated Pollution-Free Mulberry Plant Cutting Machine. *Indian Journal of Environmental Protection*, Vol.44, pp.817-824.
16. Kandasamy Suganeswaran., Nagarajan Nithyavathy., Palaniappan Muthukumar., Shanmugam Arunkumar., and Velu Kaliyannan Gobinath., (2024). Book Chapter Name: Equipment used During FSP, Book Title: Friction Stir Welding and Processing: Fundamentals to Advancements.
17. VijayaShanthy, S., Priyanka, E.B., Sampathkumar, V., Manoj, S., Vivek, S., Karuppanan, S., and Kathiresan, K., (2024). Analysis of air quality parameters on climate change phenomenon using Markov autoregressive model. *Cogent Engineering*, Vol.11(1), p.2421284.
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20. Mahalakshmi, S., Valarmathi, K., Mathina, P.A., Selvam, A., Nithishkumar, T., Seenivasan, T., and Sarathkumar, D., (2024). Seamless Subaquatic Connectivity: Harnessing Li-Fi for Underwater Communication. *International Conference on Electrical Electronics and Computing Technologies (ICEECT)*, pp.1-6.
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28. Kalavathi Devi, T., Baluprithviraj, K.N., Suresh, J.S., Kalaiarasi, G., Sagayaraj, A.S., and Sakthivel, P., (2024). Detection and Characterization of Thyroid Cancer Nodule using Deep Neural Networks -A Review. *15<sup>th</sup> International Conference on Computing Communication and Networking Technologies (ICCCNT)*, pp.1-6.
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35. Baluprithviraj, K.N., Kalavathi Devi, T., Madhan Mohan, M., Dharuhn, B.V., Madhusuthan, C., and Jaidharun, R., (2024). Automatic Calendering Roll Cleaning Machine in Textile Industry using IoT. *International Conference on Smart Electronics and Communication (ICOSEC)*, pp.7-14.
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37. Pavithra, M., Neelaveni, R., Palanichamy, N., and Ramesh, P.V., (2024). Automated segmentation of retinal layers in optical coherence tomography images using Xception70 feature extraction. *Applied Soft Computing*, Vol.167, p.112414.
38. Meeradevi, T., Soundarya, G., Sowmiya, G., and Viknesh, A., (2024). Enhancing Brain Disorder Diagnosis Through Multimodal CT-MRI Image Fusion: A Shearlet and DWT-Based Hybrid Transform Approach. *10<sup>th</sup> International Conference on Advanced Computing and Communication Systems (ICACCS)*, Vol.1, pp.2200-2205, IEEE.
39. Ram, N.P., Meeradevi, T., Sendhurarharish, P., Yogesh, S., and VasanthaKumar, C., (2024). Multi-Class Emotion Classification on Tamil and Tulu Code-Mixed Text. *10<sup>th</sup> International Conference on Advanced Computing and Communication Systems (ICACCS)*, Vol.1, pp.231-236, IEEE.

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41. Pavithra, M., Swetha, R., Nirmaladevi, P., Suthir, S., Vijay, V.L., Kawin, S., and Vignesh, S., (2024). Development of Automated Hybrid Fusion System for Poisson Noise Mitigation in X-Ray Images of Osteoarthritis. *10<sup>th</sup> International Conference on Advanced Computing and Communication Systems (ICACCS)*, Vol.1, pp.2206-2211, IEEE.
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45. Manimaran, V., Shanthi, N., Aravindhraj, N., Aatarsh, K.M., Adharshini, G., and Gokul, P., (2024). Advancements in Heart Disease Classification: Leveraging Deep Learning Techniques for ECG Analysis. *15<sup>th</sup> International Conference on Computing Communication and Networking Technologies (ICCCNT)*, pp.1-7, IEEE.
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47. Nandhini, P.S., Matheswaran, S., Lingala, P., and Indhumathi, N.M., (2024). Routing Security in RPL-based Internet of Things (IoT) Networks using Whale Optimisation Algorithm and Unsupervised Machine Learning. *5<sup>th</sup> International Conference on Smart Electronics and Communication (ICOSEC)*, pp.414-419, IEEE.
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49. Kavitha, S., Mahalakshmi, A., and Prakash, P., (2024). Deep Learning Based Tuberculosis Classification from Chest X-ray Images. *15<sup>th</sup> International Conference on Computing Communication and Networking Technologies (ICCCNT)*, pp.1-5, IEEE.
50. Arunkumar, T., Maheswaran, S., Dineshkumar, P., Geetha, K., Sureshkumar, A., and Praveenkumar, S., (2024). Design and Implementation of an Astute Infant Monitoring System Based on YOLO v8 Algorithm. *15<sup>th</sup> International Conference on Computing Communication and Networking Technologies (ICCCNT)*, pp.1-6, IEEE.
51. Malliga, S., Kogilavani, S.V., Gowthesh, D., Lohith, S., and Mithunajha, S., (2024). Deep Learning Based Sentiment Analysis of Tamil-English YouTube Comments. *International Conference on Computing and Machine Learning*, pp.327-342.
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55. Raguvaran, S., and Anandamurugan, S., (2024). Enhancement of energy utilization efficiency and speed control of autonomous electric vehicles (AEVs): A hybrid approach. *Energy Efficiency*, Vol.17(6).
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