



# KONGU ENGINEERING COLLEGE

## CAMPUS R&D NEWS



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### PH.D VIVA-VOCE COMPLETED

1. Mr.C.Naveen, Research Scholar, Department of Mechatronics Engineering defended his thesis entitled “ Experimental investigations on electro hydraulic servo system using iterative learning controller” on 10.08.2023 under the guidance of Dr.B.Meenakshipriya / MTS.
2. Mr.M.Sabarimuthu, Research Scholar, Department of EEE defended his thesis entitled “Design and development of MS-CCCV-CT algorithm based fast and hybrid charger for lithium-ion battery in light weight electric vehicles” on 08.08.2023 under the guidance of Dr.N.Senthilnathan / EEE.
3. Mr.D.Sarathkumar, Research Scholar, Department of EEE defended his thesis entitled “Investigations on mixed adsorbents to recover aged transformer oil for the power and distribution transformers” on 08.08.2023 under the guidance of Dr.M.Srinivasan / EEE.
4. Mr.N.Vadivel, Research Scholar, Department of Mechanical Engineering defended his thesis entitled “ Experimental investigation and exergy analysis of a homogeneous charge compression ignition engine fueled natural gas and diethyl ether and a dual fuel engine” on 10.08.2023 under the guidance of Dr.R.Rajasekar (RC) / Mechanical.
5. Mr.T.Manikandan, Research Scholar, Department of EEE defended his thesis entitled “ Certain investigations on detection of emphysema using multi scale residual network classifier” on 08.08.2023 under the guidance of Dr.S.Maheswari / EEE.
6. Mr.R.R.Thirrunavukkarasu, Research Scholar, Department of ECE defended his thesis entitled “ Certain investigations on ECG signal denoising arrhythmia detection and classification using hybrid classifiers” on 09.08.2023 under the guidance of Dr.T.Meeradevi /ECE.
7. Ms.T.Shanmugapriya, Research Scholar, Department of CSE defended her thesis entitled “Node mobility and energy management in wireless sensor network” on 25.08.2023 under the guidance of Dr.K.Kousalya / CSE.

### R&D PROJECTS SACTIONED (2023-2024)

1. Dr.S.Anandakumar/Civil, received research grant of Rs.3,00,000/- for the project entitled “Development of track maintenance model for metro rail system” under TNSCST-RFRS scheme on 27.04.2023, File No. TNSCST/RFRS/E&T/VR/05/2020-21.
2. Dr.N.Muralidharan/MTS, Dr.S.K.Thangarasu/MTS, Dr.A.Shanmugam/MTS received research grant of Rs.18,19,000/- for the project entitled “ Machinability and surface integrity investigation in CNC-wire cut electrical discharge turning (WEDT)” under CSIR-R&D scheme on 14.07.2023, File No. 22/0871/23/EMR-II.
3. Dr M Mohanasundari/MBA, Dr P Vidhya Priya/MBA, Dr P Sudhahesalingam/ MBA, Ms M Dharshne/MBA received research grant of Rs 7,50,000/- for the project entitled "Entrepreneurial Ecosystem - The Effectiveness of Stand-up India in promoting women and SC/ST owned Business in Tamil Nadu" under ICSSR – Collaborative Research Grant Scheme.
4. Dr S Padmavathy/MBA, Dr S Maheswari/EEE, Dr M Sivachitra/EEE, Mr SK Logesh/EEE received research grant of Rs 6,00,000/- for the project entitled " An Empirical Study on Jan Aushadhi Yojanas Reach and Socio Economic Impact in selected areas of Tamilnadu" under ICSSR – Collaborative Research Grant Scheme.

### REFERRED JOURNAL PUBLICATIONS

1. Eswaramoorthi Palanisamy., Sampathkumar Velusamy., Nabil Al Zaqri., and Ahmed Boshala., (2023). Characterization and energy evaluation analysis of agro biomass briquettes produced from Gloriosa superba wastes and turmeric leave wastes using cassava starch as binder. *Biomass Conversion and Biorefinery*, Vol.13(12), pp.11321-11337.
2. Ananthakumar Ayyadurai., Balaji Shanmugam., and Gobinath Ravindran., (2023). Behaviour of Steel-Concrete-Steel Sandwich Beams with Novel Enhanced C-Channels. *Buildings*, Vol.1956(13), pp.1-21.
3. Boobala Krishnan, K.V., Nirmalkumar, K., Sampathkumar, V., and Murugan. P.C., (2023). Experimental analysis of treated waste foundry and waste ceramics sand by replacement of fine aggregate in concrete. *Journal of Ceramic Processing Research*, Vol.24(4), pp.714-722.
4. Bhuvanesh Kumar, M., Parameshwaran, R., Antony, J., and Cudney, E., (2023). Framework for lean implementation through fuzzy AHP-COPRAS integrated

- approach. *IEEE Transactions on Engineering Management*, Vol.70(11), pp.3836-3848.
5. Kannan, G.R., Sathiya, P., Kannan, T.D.B., and Bhuvanesh Kumar, M., (2023). Welding Parameter Optimization by Whale Optimization Algorithm and Experimental Investigation on Microstructure and Mechanical Properties of Spin Arc Welded 15CDV6 HSLA Steel. *Metals and Materials International*, Vol.29, pp.2743–2759.
6. Gokilakrishnan, G., Meenakshi, R., Pradeep, G.M., Kamalakannan, R., and Manivelmuralidaran, V., (2023). Implementation of lean six sigma (LSS) techniques for tyre manufacturing in small and medium-sized enterprises. *International Journal of System Assurance Engineering and Management*, Vol.14, pp.1208-1217.
7. Pratheep, V.G., Tamilarasi, T., Joe Idaya Pranesh, J.S., Balachandar, D., Vimal Kumar, A., and Siva Subramanian, S., (2023). Two-Wheeler Shock Absorber Analysis with Polyurethane Insert. In: Jain, S., Marriwala, N., Tripathi, C.C., Kumar, D. (eds) Emergent Converging Technologies and Biomedical Systems. ETBS 2022. *Lecture Notes in Electrical Engineering*, Vol.1040. Springer, Singapore.
8. Suganeswaran, K., Sathiskumar, R., Gobinath, V.K., Periasamy, K., Parameshwaran, R., and Nithyavathy N., (2023). Microstructural characterization, hardness and impact behavior of AA7075/steel slag surface composites fabricated through multipass friction stir process. *Journal of Adhesion Science and Technology*, Vol.37(17), pp.2423-2439.
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10. Chavan, S., Selvaraj, M., Prabakaran, R., Dhamodharan, P., and Kim, S.C., (2023). Melting of N-eicosane-based composite phase change materials for thermal energy storage application: A computational analysis in a square cavity. *Journal of Energy Storage*, Vol.72, p.108583.
11. Surya Devarajan., Mizaj Shabil Sha., Mithra Geetha., Johaina Khalid Alahmad., Mohammed Shoaib Taufeeq Shaikh., Suresh Muthusamy., Kamal Kumar Kushwah., and Kishor Kumar Sadasivuni., (2023). A paper-based colourimetric sensor for sodium sulfite detection in beverages. *Journal of Food Measurement and Characterization*, Vol.17, pp.3973-3979.
12. Stonier, A.A., Peter, G., Srinivasan, M., and Vijayakumar, A., (2023). Design and Implementation of a Low-Cost Peanut Harvester using Advanced Electronic System. *2<sup>nd</sup> International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA)*, IEEE Xplore.
13. Usha Sengamalai., Palanisamy Ramasamy., Thamizh Thentral., Karthikeyan Balasubramani., Manjunathan Alagarsamy., Suresh Muthusamy., Hitesh Panchal., Mayurappriyan Pudupalayam Sachithanandam., and Kishor Kumar Sadasivuni., (2023). A simplified methodology for mitigating the harmonics and common mode voltage using multilevel inverters for renewable energy applications” *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*. Vol.45(4), pp.10449-10471.
14. Geetha Anbazhagan., Divya Navamani., Lavanya Anbazhagan., Suresh Muthusamy., Santhiya Pandiyan., Hitesh Panchal., Meenakumari Ramachandran., Suma Christal Mary Sundararajan., and Kishor Kumar Sadasivuni., (2023). Performance investigation of 140 kW grid connected Solar PV system installed in southern region of India - A detailed case study and analysis' *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*. Vol.45(4), pp.10472-10486.
15. Srinivasan Murugesan., Raj, R.A., Sarathi, R., and Amizhtan, S.K., (2023). Experimental Investigation of Electrical and Rheological Properties of Modified Punga Oil. *IEEE Transactions on Dielectrics and Electrical Insulation*, Vol.30(4), pp. 1422-1431.
16. Raghavendran, P.S., Ragul, S., Asokan, R., Ashok Kumar Loganathan., Suresh Muthusamy., Om Prava Mishra., Ponarun Ramamoorthi., and Suma Christal Mary Sundararajan., (2023). A new method for chest x-ray images categorization using transfer learning and CovidNet\_2020 employing convolution neural network" *Soft Computing*. Vol.27(19), pp.14241-14251.
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34. Thirunavukkarasu, G., Murugesan, G., Navin Yeshvanth, B., and Nandhitha Kalyanasundaram., (2023). Digital Video Broadcasting for 5G Handheld Devices – A New Approach. *AIP Conference Proceedings*, Vol.2788(1), p.020005.
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36. Karthik, R.P., (2023). Chapter-6: Design of Brain Computer Interface System. In Analysis and Processing of Brain Waves for Intellectual Disability Persons. *Empty real publishing house*, pp.59-75. ISBN : 978-93-93810-90-8.
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- Detection: A Review and Preliminary Result with Static Image Photogrammetry. *Drones*, Vol.7(8), p.509.
38. Kousalya, K., Dinesh, K., Krishnakumar, B., Kavyapriya, J.G., Kowsika, C., and Ponmathi, K., (2023), April. Prediction of Optimal Algorithm for Diagnosis of Chronic Obstructive Pulmonary Disease. In *2023 Second International Conference on Electrical, Electronics, Information and Communication Technologies (ICEEICT)*, pp.1-8, IEEE.
  39. Malliga, S., Sathiskumar, V.E., Deepalakshmi, G., Cho, J., and Manikandan, G., (2023). A survey on hate speech detection and sentiment analysis using machine learning and deep learning models. *Alexandria Engineering Journal*, Vol.80, pp.110-121.
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  49. Devadhasan, B. D., Vetrivel, S.C., (2023). Soft work and fiscal well-being in green work-life balance. *AIP Conference Proceedings*, Vol.2857(1).
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  52. Prakash, N., Kumar, N., Chinnaswamy, S.V., and Vadivelu, V., (2023). A review on recent developments of smart cities. *AIP Conference Proceedings*, Vol.2857(1).
  53. Vaishnavi, V., Nachimuthu, P., Ravi, A., and Thatchanamurthy, A.K., (2023). An IoT adoption in agriculture: Challenges and futuristic directions. *AIP Conference Proceedings*, Vol.2857(1).
  54. Kalaiselvi, S., Kumar, N.G., Shyam, M., and Vadivel, G., (2023). Realistic Video Analytics Implementation on a Heterogeneous Infrastructure. *4<sup>th</sup> International Conference on Electronics and Sustainable Communication Systems (ICESC)*, pp.1185-1189.
  55. Akila, T., Vasanth, P., Kalaiselvi, S., and Nalini, M., (2023). Observing and Predicting Land Slide using Three Stage Warning System in WSN. *4<sup>th</sup> International Conference on Electronics and Sustainable Communication Systems (ICESC)*, pp.683-687.



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66. Balasubramanie, P., Eswaran, M., and Deepakraj, A.L., (2023). Prediction of Stock Price by using Machine Learning & Big Data Approaches. *4<sup>th</sup> International Conference on Electronics and Sustainable Communication Systems (ICESC)*, pp.1253-1258.
67. Malathi Eswaran., Balasubramanie, P., and Mohammed Salman, J., (2023). Deep Learning Algorithms for Timelapse Image Sequence-Based Automated Blastocyst Quality Detection. *4<sup>th</sup> International Conference on Electronics and Sustainable Communication Systems (ICESC)*, pp.1246-1252.
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70. Hamsanandhini, S., Balasubramanie, P., and Abinaya, A.B., (2023). Securing Data in the Image using SHA & ECC. *2<sup>nd</sup> International Conference on Edge Computing and Applications (ICECAA)*, pp.268-274.
71. Arumugam, M., and Jayanthi, C., (2023). Machine Learning for Sentiment Analysis Utilizing Social Media. *2<sup>nd</sup> International Conference on Edge Computing and Applications (ICECAA)*, pp.523-530.

#### ADDRESS FOR COMMUNICATION

Research & Development Cell  
Kongu Engineering College  
Perundurai 638060, TamilNadu, INDIA  
rnd@kongu.ac.in