



KONGU ENGINEERING COLLEGE

CAMPUS R&D NEWS



VOL 03

FEBRUARY 2022

ISSUE 02

PH.D VIVA-VOCE COMPLETED

1. A.S.Ramya, Research Scholar, Department of Food Technology defended her thesis entitled “Treatment of dairy industry wastewater by applying thermal plasma experimental studies and statistical optimization” on 11.02.2022 under the guidance of Dr.R.Baskar / Food Technology

R&D PROJECTS SACTIONED (2021-2022)

1. Dr.S.Albert Alexander / EEE, Dr.S.Shankar / MTS, Dr.M.Srinivasan / EEE and Mr.D.Sarathkumar / EEE received research grant of Rs. 28,65,200/- for the project entitled “Design and development of solar photovoltaic assisted micro-grid architecture with improved performance parameters intended for rural areas” under DST- TMD-WCE scheme on 03.06.2021, Ref. No.DST/TMD/CERI/RES/2020/32/(G).
2. Dr.V.Chitra Devi / FT, Mr.S.Mothil / Chemical and Mr.R.Sathish Raam / Chemical received research grant of Rs. 1,07,09,518/- for the project entitled “Design and development of continuous high pressure screw reactor for Alkali catalyzed hydrothermal co-liquefaction of plastic wastes with lignocellulosic biomass” under DST-TDT-WMT scheme on 01.07.2021, Ref. No. DST/TDT/WMT/Plastic Waste/2021/08[G].
3. Dr.G.S.Rampradheep / Civil received travel grant of Rs.2,00,000/- for the project “Grant for study tour of ATAL tunnel under the AICTE youth undertaking visit for acquiring knowledge (Yuvak) scheme” with students under AICTE scheme on 19.08.2021, Ref. No. STDC-AICTE-ST-AT/266/2020-2021/37.
4. Dr.S.Shankar / MTS, Dr.S.Albert Alexander / EEE, Dr.R.Naveenkumar / Mechanical received research grant of Rs.18,00,000/- for the project entitled “Investigation of cotton dust exposure and indoor air quality on the pulmonary health among the textile workers of Tamilnadu” under ICMR Adhoc R&D Project scheme on 22.12.2021, Ref No 5/8-4/30/Env/2020-NCD-II.
5. Dr.V.K.Gobinath / MTS received research grant of Rs.18,30,000/- for the project entitled “Development of long term sustainable 3D printed gahnite - glass cover sheet to attain efficient polycrystalline solar cell performance” under SERB TARE scheme on 21.12.2021, Ref. No. TAR/2021/000173.

6. Dr.A.Mohankumar / Mechanical received research grant of Rs.18,30,000/- for the project entitled “Study of Self-powered one piece wearable Tribo-Electric Nano Generator with different contact modes” under SERB TARE scheme on 04.01.2022, Ref. No.TAR/2021/000235.
7. Dr.S.M.Senthil / Mechanical received research grant of Rs. 39,89,708/- for the project entitled “Development of automated fixture for friction stir welding of defence grade AA5083/AA7075 pipes” under DST_TDT-AMT scheme on 09.02.2022, Ref.No.DST/TDT/AMT/2021/008(G), DST/TDT/AMT/2021/008(C)
8. Dr.S.Shanthi / CSE, Dr.K.Nirmaladevi / CSE, Dr.N.Krishnamoorthy / CSE received research grant of Rs. 9,14,333/- for the project entitled “Design and development of AI powered deep learning model for COVID-19 identification, diagnosis and prediction of outbreak management” under AICTE-RPS scheme on 18.02.2022, Ref. No. 8-80/FDC/RPS/POLICY-1/2021-22.

REFERRED JOURNAL PUBLICATIONS

1. Anandraj, M.K., Rathanasamy, R., Rathinasamy, P., and Palaniappan, S.K., (2022). Effect of Cloisite 15A on the mechanical properties of an abaca-based composite. *Materials Testing*, Vol.64(1), pp.125-131.
2. Dharmaraj, M., and Sridhar, C., (2022). Crashworthiness unit cell design investigation for energy absorption analysis. *Materials Today: Proceedings*, Vol.50, pp.1282-1290.
3. Senthil, S.M., Sradeep, M., Sharan, K., and Selvapravin, P.A., (2022). Flexural and crashworthiness studies of friction stir welded aluminum alloy pipes. *Materials Today: Proceedings*, Vol.50, pp.977-980.
4. Kamalakannan, R., Pradeep, G.M., Naveenkumar, T., and Elango, M., (2022). Machining parameters in WEDM of EN31 steel using Taguchi technique optimization. *Materials Today: Proceedings*, Vol.50, pp.1781-1785.
5. Kamalakannan, R., Dineshkumar, K., and NarenRaj, K., (2022). The sliding wear behavior of CrCuFeNi alloyed with various combinations of cobalt. *Materials Today: Proceedings*, Vol.50, pp.1814-1817.
6. Kalavathi Devi, T., Priyanka, E.B., Sakthivel, P., and Stephen Sagayaraj, A., (2022). Low complexity modified viterbi decoder with convolution codes for power efficient wireless communication. *Wireless Personal Communications*, Vol.122(1), pp.685-700.
7. Manickam, B.K., and Parameshwaran. R., (2022). A fuzzy GRA-based decision-making approach on the selection of lean tools: a case study of Indian apparel industry. *International Journal of Industrial Engineering: Theory, Applications, and Practice*, Vol. 29(1).

8. Priyanka, E.B., Thangavel, S., Gao, X.Z., and Sivakumar, N.S., (2022). Digital twin for oil pipeline risk estimation using prognostic and machine learning techniques. *Journal of Industrial Information Integration*, Vol.26, p.100272.
9. Sidney, S., Prabakaran, R., Kim, S.C., and Dhasan, M.L., (2022). A novel solar-powered milk cooling refrigeration unit with cold thermal energy storage for rural application. *Environmental Science and Pollution Research*, Vol.29, pp.16346–16370.
10. Vedanarayanan, V., Chirag Vibhakar, Sujaatha, A., Jiten K. Chavda., Karthik, M., Pramila, P.V., and Ishwarya Komalnu Raghavan., (2022). Utilization of Sustainable Resources for Promoting Energy Efficiency in Environment using Smart Technologies. *International Journal of Photoenergy*, pp.1-9.
11. Karthik, M., Usha, S., Ramakrishnan, S., Sowmik Raja, S., and Vaishnavi, P., (2022). Design and Development of a Portable Diagnostic System for the Detection of Adulteration in Food Supplements. *Innovations in Power and Advanced Computing Technologies (i-PACT)*. IEEE Digital Library. 1-5.
12. Sabarimuthu, M., Senthilnathan, N., Sundari, P.M., Krishna, M., Aarthi, L., and Yogeshwaran, S., (2022). Battery Monitoring System for Lithium Ion Batteries using IoT. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, IEEE Digital Library, pp.1-6.
13. Sabarimuthu, M., Kamalesh, M.S., Vennila, R., Anupriya, R., Deepana, M., and Kishore, M., (2022). Contactless Temperature Detector with Alarm and Sanitizer Sprayer for COVID Safety. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, IEEE Digital Library, pp.1-5.
14. Priyadharshini, N., Kumar, S.H., Gomathy, S., Krithik, S., Elakiya, V., and Shubhashree, S., (2022). A Review on Solar Panel Monitoring and Enhancing the Performance by Temperature and Dust Maintenance. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, IEEE Digital Library, pp.1-6.
15. Sarathkumar, D., Albert Alexander, S., Srinivasan, M., and Senthamil, L.S., (2022). Review on Power Restoration Techniques for Smart Power Distribution Systems. *Lecture Notes in Electrical Engineering (Renewable Energy towards Smart Grid)*, 823.
16. Durairaj, D., Wroblewski, L., Sheela, A., Hariharasudan, A., and Urbanski, M., (2022). Random forest based power sustainability and cost optimization in smart grid. *Production Engineering Archives*, Vol.28(1), pp.82–92.
17. Kalavathi Devi, T., Priyanka, E.B, Sakthivel, P., and Stephen Sagayaraj, A., (2022). Sleepy keeper style based Low Power VLSI Architecture of a Viterbi Decoder applying for the Wireless LAN Operation sustainability. *Analog Integrated Circuits and Signal Processing*, Vol.109(3), pp.487- 499.
18. Bhaskaran, R., Karuppathal, R., Prakash, N.B., and Rajkumar, R., (2022). Satellite Image Analysis using Contextual Data Retrieval Technique for Environmental Monitoring Condition. *Journal of Environmental Protection and Ecology*, Vol.23(1), pp.301–313.
19. Sasikala, S., Ramesh, S., Gomathi, S., Balambigai, S and Anbumani, V., (2022). Transfer learning based recurrent neural network algorithm for linguistic analysis. *Concurrency and Computation: Practice and Experience*, Vol.34(5), pp.1-13.
20. Gowri, P., Sivapriya, G., Pavithra, R., Ragulraj, S and Nikkethan, R., (2022). Automated detection of Surface defects using Saliient Region detection. *Natural Volatiles and Essential Oils*, Vol.8(5), pp.213-220.
21. Preethi, S., Arun Prakash, A., Ramyea, R., Rahul, K.P., Ramnath, K., and Pravenkumar, C.J., (2022). CNN Based Automated Land use Classification from Remotely Sensed Image. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, ISBN:978-1-6654-2692-3.
22. Ramyea, R., Preethi, S., Keerthana, K, and Kavivarman, J., (2022). An Intellectual Supervised Machine Learning Algorithm for the Early Prediction of Hyperglycemia. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, ISBN:978-1-6654-2692-3.
23. Vivek, B., Maheswaran, S., Prabhuram, N., Janani, L., Naveen, V., and Kavipriya, S., (2022). Artificial Conversational Entity with Regional Language. *International Conference on Computer Communication and Informatics (ICCCI)*, ISBN: 978-1-6654-8035-2.
24. Saikiran, N., Arun Vignesh, N., Kanithan, S., Shobhana, E., Kumareshan, N., Madhusudhanan, S., Balambigai, S., and Prajith Prakash Nair., (2022). Cross Coupled Power Effective Quick Level Shifter. *International Conference on Computer Communication and Informatics (ICCCI)*, ISBN: 978-1-6654-8035-2.
25. Anbumani, V., Soviya, S., Sneha, S and Saran, L., (2022). Speed and Power Efficient Vedic Multiplier using Adders with MUX. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, ISBN:978-1-6654-2692-3.
26. Anbumani, V., Gowshikan, P., Devika, C and Gowtham, N., (2022). Movable Smartbin by WIFI Node. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, ISBN:978-1-6654-2692-3.
27. Geetha, V., Anbumani, V., Ramachandran, M., Kumar, A., and Subramanian, M., (2022). Internet of Health Things (IoHT) Against COVID-19: A Review of

- Recent Development. *Computational Intelligence for COVID-19 and Future Pandemics*, pp.267-279.
28. Nanthiya, D., Keerthika, P., Gopal, S.B., Kayalvizhi, S.B., Raja, T and Snega Priya, R., (2022). SVM Based DDoS Attack Detection in IoT Using IOT-23 Botnet Dataset. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, ISBN:978-1-6654-2692-3.
 29. Sangeetha, K., Vishnuraja, P., Dinesh, S., Gokul Anandh, V.S., and Hariprakash, K., (2022). Intravenous Fluid Monitoring System using IoT. *Mobile Computing and Sustainable Informatics*, pp.863-871, Springer, Singapore.
 30. Rajasekar, V., Premalatha, J., and Saracevic, M., (2022). Cyber security in 5G and IoT Networks. *Secure Communication for 5G and IoT Networks*, pp.29-46, Springer, Cham.
 31. Kogilavani, S.V., Prabhu, J., Sandhiya, R., Kumar, M.S., Subramaniam, U., Karthick, A., Muhibbullah, M., and Imam, S.B.S., (2022). COVID-19 Detection Based on Lung Ct Scan using Deep Learning Techniques. *Computational and Mathematical Methods in Medicine*, Vol.2022. Article ID: 7672196.
 32. Prakash, S., Vishnu Raja, P., Baseera, A., Mansoor Hussain, D., Balaji, V.R., and Venkatachalam, K., (2022). Ensemble Nonlinear Support Vector Machine Approach for Predicting Chronic Kidney Diseases. *Computer Systems Science and Engineering*, Vol.42(3), pp.1273-1287.
 33. Sagana, C., Keerthika, P., Devi, R.M., Sangeetha, M., Abhilash, R., Kumar, M.D., and Hariharasudhan, M., (2022). Object Recognition System for Visually Impaired People. *IEEE International Conference on Distributed Computing, VLSI, Electrical Circuits and Robotics (DISCOVER)*, pp.318-321.
 34. Shanthi, N., Suganthe, R.C., Sanmuhapriya, S., Rajharini, R., and Nivashini, K., (2022). Video-Based Dynamic Authentication System. *International Conference on Advancements in Electrical, Electronics, Communication, Computing and Automation (ICAECA)*, pp.1-5.
 35. Anandamurugan, S., Deenadhayalan, R., Venkatesan, B., Sakthivel, S., and Rajesh, S., (2022). An Efficient Method of Predicting the Average Fuel Consumption in Automobiles using Ensemble Stacking in Python. *Advances in Data Science and Management*, pp.197-209.
 36. Muhammad, N.A., Bin Tajuddin, M.F.N., Boukenoui, R., Nalini, C., Azmi, S.A., and Aziz, A.S., (2022). Investigation on Perturbation Step-Size and Frequency of P&O Algorithm for MPPT under Dynamic Weather Conditions. *Fourth International Conference on Electrical, Computer and Communication Technologies*, pp.1-8, IEEE.
 37. Rahim, M.S.B.A., Tajuddin, M.F.N.B., Saad, M.S., Nalini, C., Edaris, Z.L.B., and Hasanuzzaman, M., (2022). Power Generation Improvement using Active Water Cooling for Photovoltaic (PV) Panel. *Fourth International Conference on Electrical, Computer and Communication Technologies (ICECCT)*, pp.1-6, IEEE.
 38. Manoharan, H., Haleem, S.L.A., Shitharth, S., Kshirsagar, P.R., Tirth, V., Thangamani, M., and Chandan, R.R., (2022). A machine learning algorithm for classification of mental tasks. *Computers & Electrical Engineering*, Vol.99, p.107785.
 39. Pachamuthu, P., Pricilla Jeyakumari, A., Srinivasan, N., Chandrasekaran, R., Revathi, K., Karuppanan, P., (2022). Structure, surface analysis and bioactivity of Mn doped zinc oxide nanoparticles. *Journal of the Indian Chemical Society*, Vol.99(2), p.100342.
 40. Eswaran Kavithaa., Devarajan Ramarajan., Aleksandra Rakić., Dušan Dimić., Shanmugam Sudha., and Putta Narasimhan Nirmala., (2022). Structural, spectroscopic, quantum chemical, and molecular docking investigation of (E)-N'-(2,5-dimethoxybenzylidene) picolinohydrazide. *Journal of Molecular Structure*, Vol.1253, p.132259.
 41. Praveenchandar, J., and Tamilarasi, A., (2022). An Enhanced Load Balancing Approach for Dynamic Resource Allocation in Cloud Environments. *Wireless Personal Communications*, Vol.122(4), pp.3757-3776.
 42. Sivabalaselvamani, D., Selvakarthy, D., Rahunathan, L., Munish, M., and Selvakumar, R., (2022). Forest Fire and Landmines Identification with the Support of Drones Surveillance for Better Environmental Protection: A Survey. *4th International conference on Smart systems and inventive Technology*, DOI: 10.1109/ICSSIT53264.2022.9716479.
 43. Sivabalaselvamani, D., Selvakarthy, D., Rahunathan, L., Anupam Kumar Rao., and Vishal Kumar., (2022). Survey on IoT Enabled Motion Detector Camera in Smart Industry. *4th International Conference on Smart Systems and Inventive Technology*, DOI: 10.1109/ICSSIT53264.2022.9716231.
 44. Ganesh Kumar, R., Srilatha Toomula., Paulraj, D., Jebin Bose., Thulsi Bikku., and Sivabalaselvamani, D., (2022). IoT and wearables for detection of COVID-19 diagnosis using fusion-based extraction with multikernel extreme learning machine. *Wearable Telemedicine Technology for the Healthcare Industry, Product Design and Development, Science Direct*, Vol.2022, pp.137-152.

45. Renukadevi, N.T., Saraswathi, K., Vigneshwaran, N., Pradeep, V., and Arulsanthosh, T.B., (2022). Performance of CNN Architectures in the Detection of Covid-19 Disease. *Innovations in Power and Advanced Computing Technologies (i-PACT)*, pp.1-5, doi: 10.1109/i-PACT52855.2021.9696954.
46. Anakath, A.S., Kannadasan, R., Joseph, N.P., Boominathan, P., and Sreekanth, G.R., (2022). Insider Attack Detection using Deep Belief Neural Network in Cloud Computing. *Computer Systems Science and Engineering*, Vol.41(2), pp.479-492.
47. Sreekanth, G.R., Ahmed, S., Sarac, M., Strumberger, I., Bacanin, N., and Zivkovic, M., (2022). Mobile Fog Computing by using SDN/NFV on 5G Edge Nodes. *Computer Systems Science and Engineering*, Vol.41(2), pp.751-765.
48. Malathi Eswaran., Jamunadevi, C., Renukadevi, B., Rayavel, P., Varniha, B., (2022). The Essential Technique for Farm Controlling using Cloud-Based Wireless Communication IoT System. *4th International Conference on Computing and Communications Technologies (ICCCT)*, IEEE Xplore.
49. Renukadevi, B., Malathi Eswaran., Prasathkumar, S., Keerthana, S., and Karthika, B., (2022). Face recognition based locker and gesture based home appliance control system. *4th International Conference on Computing and Communications Technologies (ICCCT)*, IEEE Xplore.

EDITOR(S)

Dr.S.Shankar
Dr.C.Maheswari

ADDRESS FOR COMMUNICATION

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