JEPPIAAR
ENGINEERING COLLEGE

(A CHRISTIAN MINORITY INSTITUTION)

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI – 600119

Curricular Details

Faculty

AY – (2023-2024)

PRINCIPAL
JEPPIAAR ENGINEERING COLLEGE
JEPPIAAR NAGAR,
RAJIV GANDHI SALAI,
CHENNAI - 600119

Faculty Achievement Curricular

Academic Year -select-*	*2023-24*
Number of Research papers published in Journals*	**38**
Number of patents granted*	**17**
Number of papers published in National Conferences*	**05**
Number of papers published in International Conferences*	**29**
***Number of Books Authored **	**03**
Number of book chapters authored*	**03**
***Number of new externally funded research projects received **	**03**
Fund received during this academic year*	**Rs.1,57,395**

List of Journal Articles Published 2023-24

1.Padmanabhan, S., Punitha, N., Poyyamozhi, N., Sampath, S., Dillikannan, D., & Sakunthala, K. (2024). Sustainability improvement of spark-ignition engine performance enhanced with nanoparticles and hydroxy gas. *International Journal of Hydrogen Energy, 96*, 1171–1185. https://doi.org/10.1016/j.ijhydene.2024.11.342

2. Vettriselvan, R., Velmurugan, P. R., Deepan, A., Jaiswani, G., & Durgarani, M. (2024). Transforming virtual education: Advanced strategies for quality assurance in online and distance learning. In *Handbook of Research on Emerging Trends and Technologies in Library and Information Science* (pp. 563–580). https://doi.org/10.4018/979-8-3693-6915-9.ch024

3. Selvam, L., & Renjit, J. A. (2024). RETRACTED ARTICLE: On developing dynamic and efficient cryptosystem for safeguarding healthcare data in public clouds. *Journal of Ambient Intelligence and Humanized Computing, 15*(Suppl 1), 215. https://doi.org/10.1007/s12652-024-04906-8

4. Shalini Priya, S., Ganesan, K., Uma Maheswari, P., & Aakash, M. (2024). Evaluating the risk of malaria transmission within the Central African Republic with the goal of stabilising

and eliminating the infection. *Physica Scripta, 99*(12), 125226. https://doi.org/10.1088/1402-4896/ad70fe

5. Kaliyappan, K., Dhamodharan, A., & Gao, Y. (2024). A novel bromeliad flower-like visible-light photocatalyst of CdS and its photocatalytic activity for industrial dye treatment towards environmental remediation: Active species, mechanism, and stability. *Journal of Electronic Materials, 53*(12), 7687–7698. https://doi.org/10.1007/s11664-024-11407-z

6. Vennila, M., Senthil, A., Bharanidharan, T., Shahidha, R., Wezhli, M. M., Manikandan, A., Al-Dossary, O. M., & Noureddine, N. (2024). Structural characterization, electronic properties in solvents, Hirshfeld, topological and biological investigation on Imiquimod – An immunomodulator agent. *Journal of Photochemistry and Photobiology A: Chemistry, 457*, 115917. https://doi.org/10.1016/j.jphotochem.2024.115917

7. Venkatachalam, J., Jeyadoss, V. S., Bose, K. S. C., & Subramanian, R. (2024). Marine seaweed endophytic fungi-derived active metabolites promote reactive oxygen species-induced cell cycle arrest and apoptosis in human breast cancer cells. *Molecular Biology Reports, 51*(1), 611–616. https://doi.org/10.1007/s11033-024-09511-8

8. Adithya Pothan Raj, V., & Mohan Kumar, P. (2024). RETRACTED ARTICLE: Defective tissue identification from crowded tissue cluster of 3D images. *Journal of Ambient Intelligence and Humanized Computing, 15*(Suppl 1), 83. https://doi.org/10.1007/s12652-019-01590-x

9. Dhamodharan, A., Kaliyappan, K., Gao, Y., & Pang, H. (2024). Sensitive detection of theophylline using a modified glassy carbon electrode with g-C3N4. *Chemistry Africa, 7*(9), 5087–5096. https://doi.org/10.1007/s42250-024-01094-y

10. Veeraraghavan, S. M., De Poures, M. V., & Kaliyaperumal, G., Dillikannan, D. (2024). Waste-recovered quaternary blends: Enhancing engine performance through hydrogen induction by varied injection timing and pressure for sustainable practices. *International Journal of Hydrogen Energy, 87*, 227–237. https://doi.org/10.1016/j.ijhydene.2024.08.393

11. Sasikala, R., & Akila, R. (2024). Determinants of work life balance among employees and its impact on their work performance. *AIP Conference Proceedings, 2965*(1), 60009. https://doi.org/10.1063/5.0211968

12. Xavier, J. F., Rajendran, C., Sivamaran, V., & Kumar Mandal, T. K. (2024). Characterization of material flow behavior in friction stir welded AA2014 aluminum alloy joints. *Materialpruefung/Materials Testing, 66*(7), 1053–1062. https://doi.org/10.1515/mt-2023-0370

13. Veeraraghavan, S. M., Kaliyaperumal, G., Dillikannan, D., & De Poures, M. V. (2024). Influence of hydrogen induction on performance and emission characteristics of an agricultural diesel engine fuelled with cultured Scenedesmus obliquus from industrial waste. *Process Safety and Environmental Protection, 187*, 1576–1585. https://doi.org/10.1016/j.psep.2024.05.042

14. Kumar, H. A., Asad Ahmed, R. A., Gunasekaran, J., & Venkatesh, R. (2024). Synthetic/natural fiber combining action on mechanical performance of polypropylene composite made via compression mould route. *Journal of Polymer Research, 31*(6), 179. https://doi.org/10.1007/s10965-024-04035-y

15. Thiruselvam, K., Sampath, S., Murugapoopathi, S., Vengadesan, E., & Dillikannan, D. (2024). Combined influence of thermal barrier coating and nanoparticle on performance and emissions of DI diesel engine fueled with neat palm oil biodiesel: An experimental, statistical and energy and exergy analysis. *Process Safety and Environmental Protection, 186*, 274–288. https://doi.org/10.1016/j.psep.2024.03.108

16. Gnanasagaran, C. L., Ramachandran, K., Kumar, V. H., Ramachandran, V., & Rangarajan, M. (2024). Influence of infill patterns on mechanical properties of 3D printed Al2O3 ceramics via fused filament fabrication. *Ceramics International, 50*(10), 17796–17806. https://doi.org/10.1016/j.ceramint.2024.02.269

17. Senthil, A., Bharanidharan, T., Vennila, M., K., E., & Muthu, S. (2024). Crystal growth, Hirshfeld analysis, optical, thermal, mechanical, and third-order non-linear optical properties of Cyclohexylammonium picrate (CHAP) single crystal. *Heliyon, 10*(7), e28002. https://doi.org/10.1016/j.heliyon.2024.e28002

18. Jebastine, J. (2024). Detection and classification of brain tumor using convolution extreme gradient boosting model and an enhanced salp swarm optimization. *Neural Processing Letters, 56*(2), 135–142. https://doi.org/10.1007/s11063-024-11590-4

19. Narayanasamy, S., Mohan Kumar, M., Lakshmanan, S., & Jerald, A. (2024). Achieving better resource utilization by implementing a high-performance intelligent framework in a distributed environment. *International Arab Journal of Information Technology, 21*(2), 292–298. https://doi.org/10.34028/iajit/21/2/11

20. Dhilip, M., Rameshkumar, S., Raji, R. K., Ramachandran, T., Punitha, J. S., Sundar Raj, F. R. M., Kumar, K. S., Anbarasu, V., Sekar, N., & Rajivganthi, R., Ghfar, A. A. (2024). Combined experimental and theoretical investigation on the structural, electronic, magnetic and optical properties of Pr2CoFeO6 double perovskite. *Materials Today Communications, 38*, 108120. https://doi.org/10.1016/j.mtcomm.2024.108120

21. Ramesh, S., Amir, M., Ranjith, S., Prabakar, D., Giri, J., Balachandran, G., & Ahmad, F. (2024). Spectral energy balancing system with massive MIMO based hybrid beam forming for wireless 6G communication using dual deep learning model. *Heliyon, 10*(4), e26085. https://doi.org/10.1016/j.heliyon.2024.e26085

22. Velmurugan, M., Nirmala, D., Samuthira Pandi, V. S., Jeyanthi, P., Monisha, T., & Bhagyalakshmi, T. (2024). The implementation of blockchain technology to manage data in a secure and transparent manner for biomedical applications. 965–970. https://doi.org/10.1109/ICCES63552.2024.10859540

23. Senthilvadivu, S., Ramesh, P. S., Narang, S., Narayanan, N., Shakila, J., & Sudha, I. (2024). Impact of Random Forest and XGBoost algorithms on improving patient outcomes compared to standard decision-making methods in healthcare predictive analytics. 694–699. https://doi.org/10.1109/CYBERCOM63683.2024.10803246

24. Devika, R. S., Immanuel, S. A., Vengatesh, V., Thankaraj Salammal, S., & Hussain, S. (2024). High performance quaternary chalcogenides for solar energy conversion. 2, 547–566. https://doi.org/10.1016/B978-0-323-93940-9.00112-2

25. Titus, S., L., L., Kiruba, S., Srithar, A., Kumar, H., & Karuna, M. S. (2024). Activated biochar from gracilaria edulis seaweeds: A novel biosorbent for efficient uranium ion removal in wastewater treatment. *Global Nest Journal, 26*(8), 5914. https://doi.org/10.30955/gnj.005914

26. Bhuvaneswari, J., Gireesh, N., Srimathy, G., Nandigam, S., & Nanammal, V. (2024). A novel deep learning based IoT enabled computerized vehicle number plate recognition system using OCR principles. https://doi.org/10.1109/ACCAI61061.2024.10602304

27. Vijayalakshmi, S., Bharaneedharan, M., Kalaivani, K. P., Saranya, G., & Ravi, S. (2024). Robust modelling of an artificial intelligence assisted brainwaves based robotic motion control system using Internet of Things and EEG signals. https://doi.org/10.1109/ACCAI61061.2024.10601673

28. Rajeshwari, R., Gireesh, N., Pooja, E., Soundharya, K., & Nanammal, V. (2024). INCL: A robust design of artificial intelligence assisted learning based cardiovascular disease detection using improved neural classification logic. https://doi.org/10.1109/ACCAI61061.2024.10602080

29. Adithya Pothan Raj, V., Patil, Y. D., Madhurikkha, S., Srithar, V., & Vidhya. (2024). DCT-CNN hybrid model for high-capacity and secure data concealment in encrypted images. https://doi.org/10.1109/ACCAI61061.2024.10602311

30. Sheeba, R. G., & Elizabeth, N. E. (2024). Analysis of different categories of prediction methods in intelligent transport VANET system. 429–435. https://doi.org/10.1201/9781032644752-80

31. Akila, R. (2024). Evaluation of EI and its impact in management of stress. https://doi.org/10.1109/ICONSTEM60960.2024.10568648

32. Renugadevi, G., Rani, K., Manoj, S., Saranya, N., & Goudhaman, M. (2024). Early diabetics prediction using multi model approaches in machine learning. https://doi.org/10.1109/ICONSTEM60960.2024.10568714

33. Gokila, S., Rajeswari, S., Helen, D., & Lakshna, A. (2024). Embedded deep NN with convolution NN-ID to binominal sentiment prediction. https://doi.org/10.1109/ICONSTEM60960.2024.10568712

34. Akila, R., & Sasikala, R. (2024). Building relationship between IoT devices and consumer. https://doi.org/10.1109/ICONSTEM60960.2024.10568593

35. Jebastine, J., Nanammal, V., & Balaji Vasan, R. J. (2024). Enhancing wireless surveillance robot with real-time feedback with AI & IoT integration. https://doi.org/10.1109/ICONSTEM60960.2024.10568769

36. Chenthil, T. R., Jagan, G. C., Balachandran, G., & Ranjith, S. (2024). IoT based door unlocking system using facial recognition. https://doi.org/10.1109/ICONSTEM60960.2024.10568754

37. Yamini, S., Sivakami Sundari, M., S., S., Senthil Kumar, K., & Divya, S. (2024). Artificial neural network prediction of tribological properties of nano lubricants with eco-friendly refrigerant. https://doi.org/10.1109/ICONSTEM60960.2024.10568618

38. Venkatesh, S., Jeevitha, D., & Gnanaselvi, J. A. (2024). Calligraphy alphabet perception using artificial intelligence. https://doi.org/10.1109/ICONSTEM60960.2024.10568897

39. Gokilavani, R., Durgarani, M., & Manoj Kumar, J. (2024). Green finance: A roadmap to sustainable investment in India. https://doi.org/10.1109/ICONSTEM60960.2024.10568820

40. Kumar, R. S. A. S., Dhanapriya, P., & Stanley, S. A. (2024). Formulation, evaluation and comparison of the anti-malassezia shampoo with the commercial shampoos. https://doi.org/10.1109/ICONSTEM60960.2024.10568782

41. Gopi, E. (2024). Organizational role and stress level of employees in software companies. https://doi.org/10.1109/ICONSTEM60960.2024.10568666

42. Muthulakshmi, A., Indhumathi, M., Monisha, B., & Krithika, S. (2024). A comparative study on the use of various adsorbents for the removal of chromium from industrial effluent. https://doi.org/10.1109/ICONSTEM60960.2024.10568794

43. Anitha, C., Gracelinsheeba, R., & Nansy, K. (2024). A novel systematic approach for spectrum utilization CRN. https://doi.org/10.1109/ICONSTEM60960.2024.10568616

44. Nirmala, P., Swarna, M., Rubesh Kumar, T., Nanammal, V., & Selvarani, P. (2024). LALP: Experimental analysis of an intrusion detection system over wireless sensor network using learning assisted logical protocols. https://doi.org/10.1109/ICONSTEM60960.2024.10568625

45. Nanammal, V., Jebastine, J., & Balaji Vasan, R. J. (2024). NNXG: Privacy based image processing in pneumonia detection from chest X-ray using modified neural network architecture and XGBoost. https://doi.org/10.1109/ICONSTEM60960.2024.10568581

46. Jagadeeswari, P., Rashmi, J., & Arthy, J. (2024). Some special graphs for cube difference and square difference labeling. https://doi.org/10.1109/ICONSTEM60960.2024.10568863

47. Titus, S., Viswanathan, V., Thandlam, A. K., Muthiah, C., Nagaveni, N. G., Jayanthi, A., Rani, K. U., & Sudhakar, M. (2024). Production of bioenergy molecules from waste spent coffee grounds – A green chemistry approach. *Oxidation Communications, 47*(1), 28–34.

48. Venkatesh, R., Dillikannan, D., N., N., Kamatchi, R. M., Daniel Das, A. D., Ammaiappan, M., ArunKumar, G., & Kaliyaperumal, G. (2024). An approach of nano-SiC-filled epoxy nanocomposite tensile and flexural strength enriched by the addition of sisal fiber. *Journal of The Institution of Engineers (India): Series D, 28*. https://doi.org/10.1007/s40033-024-00680-1

49. Rajesh, R., Ramakrishnan, A., Kaliyaperumal, G., De Poures, M. V., Babu, R. K., & Dillikannan, D. (2024). Comparative analysis on the effect of 1-decanol and di-n-butyl ether as additive with diesel/LDPE blends in compression ignition engine. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 46*(1), 9211–9228. https://doi.org/10.1080/15567036.2020.1773967

50. Sivagami, S., Shakila, J., & Vijaya Lakshmi, R. (2024). Enhanced dental caries diagnosis model using level-set active contouring and UNET in odontology. https://doi.org/10.1109/ICCCSMD63546.2024.11015169

51. Jeevitha, D., Jose, D., Mohanty, S. N., & Latha, A. (2024). Energy management in Industry 4.0 using AI. 349–363. https://doi.org/10.1201/9781003432319-20

52. Tamilselvi, M., Venkata Siva Prasad, C. H., Kumari, M. V., Lavanya, R. S., Nandurkar, Y., & Al-Mousa, M. R. (2024). A novel human face expression recognition based on image processing assisted convoluted deep learning methodology. https://doi.org/10.1109/ICSES63760.2024.10910401

53. Ramkumar, G., Sunitha, B. V., Venkata Siva Prasad, C. H., Lavanya, V., Bodkhe, R. G., & Amer, A. (2024). A robust development of IoT powered smart women tracking system to protect from harassments using artificial intelligence. https://doi.org/10.1109/ICSES63760.2024.10910582

54. Krishnakumar, S., Sakthivel, E., Shine, H., Geetha, C., Pallavi, G., & Alqawasmi, K. (2024). An improved poultry farm health prediction system based on artificial intelligence assisted hybrid deep learning model. https://doi.org/10.1109/ICSES63760.2024.10910805

55. Bhavani, N. P. G., Bhanu, Ch., Sakthivel, E., Bujji, S. K. C. K., Adkane, R. V., & Abbas, N. (2024). Experimental procedure to design a smart shopping trolley for supermarkets by using Internet of Things (IoT) association. https://doi.org/10.1109/ICSES63760.2024.10910503

56. Venkata Siva Prasad, C. H., Malarvizhi, C., Porkodi, M., Vaikash, K. G., Sunheriya, N., & Al-Mousa, M. R. (2024). A deep learning assisted crop pest classification model by using enhanced light gradient boost machine (ELGBM) logics. https://doi.org/10.1109/ICSES63760.2024.10910912

57. Ramkumar, G., Ahamed, S. F., Nanammal, V., Rao, K. U. M., Shahare, D. Y., & Al-Sherideh, A. (2024). A cost effective methodology to control robotic movements based on mobile application and IoT enabled controller. https://doi.org/10.1109/ICSES63760.2024.10910738

58. Sheela, D., Sagar, M. V., Rao, S. K., Ranjith, S., & Shahare, D. Y., Al-Sherideh, A. (2024). An improved clone node detection system based on enhanced neural optimization strategy over wireless sensor network environment. https://doi.org/10.1109/ICSES63760.2024.10910512

59. Nagababu, K., Ananthi, S., Sunheriya, N., Venkata Siva Prasad, C. H., & Jayanthi, J., Fawareh, H. (2024). Experimental evaluation of cross-platform recognition of identical and unknown users over social networking environment. https://doi.org/10.1109/ICSES63760.2024.10910542

60. Balaji, C. G., Balachandran, G., Imran, M., Ujwala, S. V., Edlabadkar, A. P., & Fawareh, H. (2024). An improved neural classification logic to predict kidney disease identification using medical image processing principles. https://doi.org/10.1109/ICSES63760.2024.10910605

61. Aroulanandam, V. V., Krishna, K. J., Babu, A. V., Balachandran, G., Tufail, M. S., & Odeh, M. (2024). An efficient methodology to audit data in cloud storage to ensure reliability and integrity using secured crypto schemes. https://doi.org/10.1109/ICSES63760.2024.10910432

62. Malar, R. J., Devanandam, K., Nanammal, V., Kumar, C. H., Bonde, A., & Afaneh, S. (2024). DNCP: A robust artificial intelligence based Alzheimer's disease detection methodology by using deep neural classification principle. https://doi.org/10.1109/ICSES63760.2024.10910729

63. Ramachandran, T. P., Shalini, K., Ranjith, S., Tejaswi, L. L., Bonde, A., & Abbas, N. (2024). A robust fuzzy based multi-keyword similarity search model on cloud computing platform using cipher data security principles. https://doi.org/10.1109/ICSES63760.2024.10910578

64. Ramkumar, G., Ranjith, S., Deepthi, K., Kishore Babu, K. K., Bodkhe, R. G., & Amer, A. (2024). Developing an electroencephalogram based robotic motion control system using brainwaves enabled signal processing technique. https://doi.org/10.1109/ICSES63760.2024.10910554

65. Ranjith, S., VanithaLakshmi, M., Sujatha, V., Suresh, S., Giri, P., & Alqawasmi, K. (2024). Experimental analysis of an efficient dental carries prediction system based on improved convolutional neural network (iCNN) principle. https://doi.org/10.1109/ICSES63760.2024.10910345

66. Ranjithkumar, J., Malarvizhi, C., Porkodi, M., Vidhyasree, V., Neeraj, S., & Al-Mousa, M. R. (2024). Experimental evaluation of an improved air quality prediction approach based on AI powered deep learning mechanism. https://doi.org/10.1109/ICSES63760.2024.10910707

67. Nasrin, H., Chandramouli, V., Balachandran, G., Zahada, S., Bonde, A., & Abbas, N. (2024). A novel proxy based reencryption scheme for secured data communication by using Internet of Things (IoT) and blockchain technologies. https://doi.org/10.1109/ICSES63760.2024.10910794

68. Ramkumar, G., Rao, N. J., Nanammal, V., Shaphiya, S. K., Giri, J., & Samhan, A. A. A. (2024). Empirical assessment of identifying human blood group based on image processing assisted deep learning principles. https://doi.org/10.1109/ICSES63760.2024.10910647

69. Gururai, D., Kantha, M. R., Sharada Mani, D. S., Ranjith Kumar, J., Nandurkar, Y., & Samhan, A. A. A. (2024). A novel blockchain enabled methodology to perform secure banking transactions using cybersecurity principles. https://doi.org/10.1109/ICSES63760.2024.10910706

70. Balachandran, G., Suresh, S., Sankar, R., Vidhyasree, V., Sunheriya, N., & Attar, H. (2024). An Internet of Things (IoT) assisted forest fire detection mechanism using hybrid classification and learning model. https://doi.org/10.1109/ICSES63760.2024.10910732

71. Bharathi, A. U., Manikandan, S., Dhanushya, M., & Krithika, C. (2023). Numerical analysis on the effect of wedge and diamond injector in a cavity based scramjet combustor. *International Journal of Vehicle Structures and Systems, 15*(7), 924–931. https://doi.org/10.4273/ijvss.15.7.10