

Government Engineering College Kozhikode

List of Recent Publications of Faculty Members

2023-24

International Journal

1. Sabarish Radoor, Aswathy Jayakumar, **Jasila Karayil**, Jun Tae Kim, Suchart Siengchin, Biodegradable polymeric green adsorbent for the highly efficient removal of crystal violet dye from aqueous solution, Chemical Engineering Research and Design, 2023
2. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Dharma Raj Kandel, Jun Tae Kim, Suchart Siengchin Jaewoo Lee, Recent advances in cellulose- and alginate-based hydrogels for water and wastewater treatment: A review, Carbohydrate Polymers, 323, 2023
3. **E. Rahmathulla Noufal**, In-depth Assessment of structural and mechanical properties of copper slag as an Eco-friendly alternative construction material, Journal of structural Engineering, 2023
4. Po-Chih Kuo, **Biju Illathukandy**, Zhuang Sun, Muhammad Aziz, Efficient conversion of waste-to-SNG via hybrid renewable energy systems for circular economy: Process design, energy, and environmental analysis, Waste Management <https://doi.org/10.1016/j.wasman.2023.04.041> Volume 166, 1 July 2023, 2023, Pages 1-12
5. Tinku Casper D' Silva, Sameer Ahmad Khan,.....**Biju Illathukandy**, Ram Chandra, Virendra Kumar Vijay, Paruchuri M.V. Subbarao, Zoltán Bagi, Kornél L. Kovács, Liang Yu, Bhushan P. Gandhi, Kirk T. Semple, Biohydrogen production through dark fermentation from waste biomass: Current status and future perspectives on biorefinery development, Fuel <https://doi.org/10.1016/j.fuel.2023.128842> Volume 350, 15 October 2023, 128842
6. Thambi SV, **Reghu Raj PC**. A novel technique using graph neural networks and relevance scoring to improve the performance of knowledge graph-based question answering systems. Journal of Intelligent Information Systems. 2024 Jan 22:1-24. online at <https://doi.org/10.1007/s10844-023-00839-4> (Springer Nature)
7. **Sailesh R**, Doddamani M, Mailan Chinnapandi LB, Yuvaraj L, Pitchaimani J. Sound absorption and transmission loss of 3D printed wood fibre reinforced poly lactic acid with functionally graded perforations. Wood Material Science & Engineering. 2023 Dec 9:1-2.

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1. **Vijayalakshmi Menon R.** , Numerical Instability, Jetir, Vol9/Issue4, 2022, 404-406
2. **CS Anoop**, AG Ramakrishnan, Meta-learning for Indian languages: Performance analysis and improvements with linguistic similarity measures, IEEE Access, 2023

3. **CS Anoop**, AG Ramakrishnan, Suitability of syllable-based modeling units for end-to-end speech recognition in Sanskrit and other Indian languages, *Expert Systems with Applications*, 220, 2023, 119722
4. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Jyotishkumar Parameswara Pillai, Jaewoo Lee & Suchart Siengchin, Eco-friendly and low-cost bio adsorbent for efficient removal of methylene blue from aqueous solution, *Scientific Reports*, 12, 2022, 20580
5. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Jaewoo Lee, Debabrata Nandi, Jyotishkumar Parameswara Pillai, Suchart Siengchin, Polyvinyl alcohol/guar gum-based bio adsorbent for the removal of cationic and anionic dyes from aqueous solution, *Polymer Bulletin*, 80, 2022, 10165–10191
6. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Jaewoo Lee, Debabrata Nandi, Jyotishkumar Parameswara Pillai, Bishweshwar Pant, Suchart Siengchin, Efficient Removal of Organic Dye from Aqueous Solution Using Hierarchical Zeolite-Based Biomembrane: Isotherm, Kinetics, Thermodynamics and Recycling Studies, *Catalysts*, 12(8), 2022, 886
7. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Debabrata Nandi, Jyotishkumar Parameswara Pillai, Jaewoo Lee, Jyothi Mannekote Shivanna, Rajarathinam Nithya & Suchart Siengchin, Adsorption of Cationic Dye onto ZSM-5 Zeolite-Based Bio Membrane: Characterizations, Kinetics and Adsorption Isotherm, *Journal of Polymers and the Environment*, 30, 2022, 3279–3292
8. Rahamath K R, **Reghu Raj P C**, and Rafeeqe PC, Malayalam Question Answering System Using Deep Learning Approaches. , *IETE Journal of Research*. , DOI: 10.1080/03772063.2022.2077846, 2022, 44939
9. P Lasin, VV Panicker, **FJ Emmatty**, Assessment of mental workload in a sorting task: a game-based approach, *International Journal of Industrial and Systems Engineering*, 43 (4), 2023, 529-554
10. Francis, Jobin; **Madathil, Baburaj**; George, Sudhish N; George, Sony;, A Nonconvex Low Rank and Sparse Constrained Multiview Subspace Clustering via l-1,2 induced Tensor Nuclear Norm, *IEEE Transactions on Signal and Information Processing over Networks*, 9(1), 2023, 612-625
11. **Ansu, V.**, Anjaneyulu, M. V. L. R. , The optimum strategy for mode choice modelling of interregional fish transport considering shippers' heterogeneity, *Archives of Transport*, 64, 2022, 45133
12. **E.Rahmathulla Noufal**, Experimental evaluation of the effect of infill in the dynamic responses of multi-storied structures, *Materials Today* ,Elsevier, vol.64,Part 2, 2022, pg:1137-1146
13. **T V Binu** and S Jayanti, Non-Isothermal Mass Transfer in Fluid Drops with Internal Circulation, *Chemical Engineering & Technology*, 46, 2023, pp. 1-7
14. Ranjana Ramath , Akshay Madappilly Sukumaran, **Anjana Ramachandran**, Methyl orange dye adsorption and degradation at low temperature using iron oxide-incorporated biochar derived from industrial by-products, *Bioresource Technology Reports*, 22 (2023) 101470, 2023
15. Ansab N.P, Ranjana R. and **Anjana R.**, Molecular Modelling & Characterization of Metal Incorporated Biochar from Industrial Wastes, *Advanced Materials Research*, ISSN: 1662-8985, Vol. 1178, pp 171-184, 2023
16. Ranjana R, **Anjana R** and Beula C., A Review on Biochar as Catalyst/Catalyst Support for Oxidation/Reduction/Redox Reactions, *European Chemical Bulletin*, *Eur. Chem. Bull.* 2023,12(4), 3255-3279, 2023
17. Kandi, R.P., Sudharmini, M.M. (**Manju M.S.**), Suryan, A., Nižetić, S, State of the art and future prospects for TEG-PCM Systems: A review, *Energy for Sustainable Development*, 74, 2023, pp. 328–348, <https://doi.org/10.1016/j.esd.2023.04.012>

18. Sivakala, S., **Manju, M.S.**, Sudha, J.D., Surfactant Assisted One-Pot Method for Preparation of Polyethylene-Clay Nanocomposites (PECN) and Study of their Viscoelastic Behaviour, Asian Journal of Chemistry, 35(2), 2023, pp. 389–396, <https://doi.org/10.14233/ajchem.2023.26892>
19. Remya PK, **Manju M.S.**, Abith Sunil, Athulya KS, Jerome Joseph, Jyothsna TU, Synthesis and characterization of nanocellulose from watermelon rinds and water hyacinth, Polymers from Renewable Resources, 14(3), 2023, pp. 157-172, <https://doi.org/10.1177/20412479231174443>
20. **Sindhu Nangarthody**, Sivasubramanian V, “Kinetic and Thermodynamic Analysis of Pyrolysis of Coconut Wood Residue” Asian Journal of Chemistry
21. P. V. Aravind, Vipin Champatan, Girigan Gopi, Vandit Vijay, C. Smit, S. Pande, L. J. P. van den Broeke, T. D. John, **Biju Illathukandy**, A. Suresh, Sowmya Shreedhar, T. M. Nandakishor, Sachin J. Purushothaman, R. E. F. Lindeboom, John Posada and K. U. K. Nampoothiri, Negative emissions at negative cost-an opportunity for a scalable niche, Frontiers in Energy Research <https://doi.org/10.3389/fenrg.2022.806435>, Vol 10 - 2022, 26 Aug 2022
22. Po-Chih Kuo, **Biju Illathukandy**, Faruk Ozdemir, Theo Woudstra, P.V. Aravind, Thermodynamic analysis of a novel integrated biomass pyrolysis-solid oxide fuel cells-combined heat and power system for co-generation of biochar and power, Frontiers in Energy Research <https://doi.org/10.3389/fenrg.2022.731191>, Vol 10 - 2022, 13 Sep 2022
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International/National conference

1. Amal Salam, Swadima Prasad, Theertha P P, Archa Kumar, **Nasma Noor N V**, Study on Effectiveness of TetraPOT as Coastal Protection Structure, , 10-12 April, 2023,
2. ARYA P, DEVIKA P, CHAITHANYA K K, FAIZ ASHRAF, **RAJI KARUNA**, A STEP TOWARDS POLLUTION ABATEMENT OF KALLAI RIVER BASIN, , 10-12 April, 2023
3. **Subhija EN**, VG Reju, Computer Assisted Recognition of Oral Squamous Cell Carcinoma Using GLCM Features in Haar Wavelet Transformed Space and Random Forest Classifier, 2022 Second International Conference on Next Generation Intelligent Systems (ICNGIS), 29-31 July 2022
4. **Subhija EN**, VG Reju, A Feature Fusion Based Detection of Oral Squamous Cell Carcinoma with Morphological and Textural Features in Haar Wavelet Transform Space, International Conference on Systems, Energy & Environment (ICSEE) 2022, 5-6 August , 2022
5. Agna Shaju, **Subhija EN**, Detection of Breast Cancer from Histopathological Images, 2022 Second International Conference on Next Generation Intelligent Systems (ICNGIS), 29-31 July 2022
6. Ananya, **Subhija EN**, Paddy Pest Classification Using Deep Learning Based Features, 2022 Second International Conference on Next Generation Intelligent Systems (ICNGIS), 29-31 July 2022
7. **CS Anoop**, AG Ramakrishnan, Exploring a Unified ASR for Multiple South Indian Languages Leveraging Multilingual Acoustic and Language Models, IEEE Spoken Language Technology Workshop (SLT), 2023, 830-837

8. **B. Babitha Nair**, Anjith.M, Baburaj Madathil, Efficient Unsupervised Partial Discharge Detection using Empirical Mode Decomposition and Clustering, 2022 IEEE 19th India Council International Conference (INDICON), 24-26 Nov 2022
9. Sythalakshmi C S, Arya C V, Aswathy G, **Baburaj M**, RPCA and Wavelet packet Decomposition based Network Traffic Anomaly Detection, 2022 IEEE 19th India Council International Conference (INDICON), 24-26 Nov 2022
10. Gopika A S, **Abdu Rahiman V**, Review of Text Summarization Algorithm Using Different Deep Recurrent Networks, The International Conference on Emerging Trends in Engineering Yukthi-2023, 10-12 April 2023, 2023, 108-113
11. Ahammed Fayadh P M, **Abdu Rahiman V**, A review of generative adversarial networks for text-to-image synthesis, The International Conference on Emerging Trends in Engineering Yukthi-2023, 10-12 April 2023, 2023, 114-120
12. Anjitha M P, **Abdu Rahiman V**, Performance analysis of attention mechanism in image captioning using deep learning methods, The International Conference on Emerging Trends in Engineering Yukthi-2023, 10-12 April 2023, 45155
13. Anaina P, Anaswara K , Anju Nanda Kumar, Fathimath Risvana and **Shajee Mohan B S**, Malpractice Detection in Examination Hall Using Machine Learning Algorithms, Elsevier SSRN eJournal, Proceedings of the International Conference on Emerging Trends in Signal Processing- Yukthi 2023.
14. Midhun C and **Shajee Mohan B S**, Music Information Retrieval using Hybrid Features, Elsevier SSRN eJournal, Proceedings of the International Conference on Emerging Trends in Signal Processing- Yukthi 2023.
15. Sooryadas M and **Shajee Mohan B S**, Sentiment Analysis of Social Media Text Chats using Learning -based Algorithms, Elsevier SSRN eJournal, Proceedings of the International Conference on Emerging Trends in Signal Processing- Yukthi 2023
16. Stephy J S and **Shajee Mohan B S**, Feature Reduction and Optimization using Learnt Kernel Matrix, Elsevier SSRN eJournal, Proceedings of the International Conference on Emerging Trends in Signal Processing- Yukthi 2023.
17. Gayathri, K. A., **Ansu, V.**, & Anjaneyulu, M. V. L. R. , Joint Mode and Shipment Size Choice for Interregional Transportation of Fruits and Vegetables in India, 14th International conference on Transportation Planning and Implementation Methodologies for Developing Countries (TPMDC) organized by the Transportation Systems Engineering (TSE) group at Indian Institute of Technology Bombay, 44914, 2022
18. **E. Rahmathulla Noufal**, Assessment of Copper Slag as an Eco-friendly and Sustainable Alternative construction material, 37th Indian Engineering Congress of Institution of Engineers India(IEI) on Role of Engineers for creating a Sustainable &Self Reliant India, December 16-18,2022, 2022, Pg 121-130
19. Fahmidha Sherin P, Kaviya M, Abinlal K P, **Anjana R**, Preparation And Characterisation Of Biochar From Banana Stem For Removal Of Methylene Blue, The International Conference on Emerging Trends in Engineering Yukthi-2023, 45017, 2023
20. Tija C Jaison, **Gigi Sebastian**, Steam Gasification of Municipal Solid Waste for Hydrogen Production, The International Conference on Emerging Trends in Engineering, YUKTHI 2023, 10-12 April23, 2023, 223-227
21. Hafna P, Asif Sha s, Zabina Rahim, Arthith N V, **Gigi Sebastian**, Simulation of Titanium Dioxide Production Using UniSim Design R480, The International Conference on Emerging Trends in Engineering, YUKTHI 2023, , 2023, 178-183

22. Eldho K, Dhrishya K A, Namitha V B, Athira V and **Binu T V**, MFC production and rainfastness analysis in pesticides - A review, Yukthi 2023 - THE INTERNATIONAL CONFERENCE ON EMERGING TRENDS IN ENGINEERING, 10-12 April, 2023, 262-266
23. Amrutha K and **Binu T V**, Carbon dioxide capture using ionic liquids- A simulation study, Yukthi 2023 - THE INTERNATIONAL CONFERENCE ON EMERGING TRENDS IN ENGINEERING, 10-12 April, 2023, 184-187
24. Febin Mathew, Adhil Musthafa, Anandu Hari, Vinay Thomas, **Sindhu Nangarthody**, Oil Palm Biomass as a Potential Heavy Metal Adsorbent:- a Review, The International Conference on Emerging Trends in Engineering Yukthi-2023
25. Devadas Babu, Sabida Sathyan, Misna PK, Anurag P, **Sindhu Nangarthody**, Characterization of pineapple leaf fibers and their suitability for biocomposite preparation, The International Conference on Emerging Trends in Engineering Yukthi-2023
26. P K, Remya, **M S, Manju**, Philip, Mercy Anna, Synthesis and Characterization of High Thermally Conductive Epoxy- Paraffin Phase Change Material for Thermal Energy Storage, 7th Biennial International Conference on Emerging Trends in Engineering, Science & Technology (ICETEST 2023), 10-12 July, 2023, <https://dx.doi.org/10.2139/ssrn.4507199>
27. V R, Parvathy and R H, Nayana and Anto, Joel and Chandran, Goutham and **M S Manju**, A Comprehensive Review of Experimental Investigations on Potential Antimicrobial Agents for Biofilm Reduction, Yukthi 2023 - THE INTERNATIONAL CONFERENCE ON EMERGING TRENDS IN ENGINEERING, 10-12 April, 2023, 279-286, <https://dx.doi.org/10.2139/ssrn.4553538>
28. K Siju, **P.K Jithesh**, Thermodynamic Analysis of Energy Utilization in a Passive Solar Desalination System, International Conference on Recent Advances in Modeling and Analysis of Thermal and Energy Systems (RAMA-TES-2023), National Institute of Technology Karnataka (NITK) Surathkal, Mangalore, India, 10-12 May, 2023
29. Abhinand T R, **P K Jithesh**, Investigations on Transient Characteristics of Proton Exchange Membrane Fuel Cells, international Conference on Recent Advances in Modeling and Analysis of Thermal and Energy Systems (RAMA-TES-2023), National Institute of Technology Karnataka (NITK) Surathkal, Mangalore, India, 10-12 May, 2023
30. Akhil B Nair, **Shaji. K.** and Prajeeth Kumar K P, Comparative analysis of solar dryer with and without heat recovery system, International Conference on Emerging Trends in Engineering, 45203, 2023
31. Fathima Shamna, **Subhija E N**, A REVIEW PAPER ON MACHINE LEARNING METHODS ON COVID-19 DETECTION USING COUGH SOUND ANALYSIS, The International Conference on Emerging Trends in Engineering, YUKTHI 2023, 10-12 April 2023
32. Fathima minsha, **Subhija E N**, SURVEY ON LUNG CANCER DETECTION AND CLASSIFICATION, The International Conference on Emerging Trends in Engineering, YUKTHI 2023, 10-12 April 2023
33. Namitha, **Subhija E N**, REVIEW ON MACHINE LEARNING TECHNIQUES FOR WEED DETECTION, The International Conference on Emerging Trends in Engineering, YUKTHI 2023, 10-12 April 2023

2021-22

International Journal

1. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Jyotishkumar Parameswara Pillai, Suchart Siengchin, Release of toxic methylene blue from water by mesoporous silicalite-1: Characterization, kinetics and isotherm studies, *Applied Water Science*, 11, 2021, 110
2. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Jyotishkumar Parameswara Pillai, Suchart Siengchin, An efficient removal of malachite green dye from aqueous environment using ZSM-5 zeolite/polyvinyl alcohol/carboxymethyl cellulose/sodium alginate biocomposite, *Journal of Polymers and the Environment*, 29, 2021, 2126–2139
3. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Jyotishkumar Parameswara Pillai, Suchart Siengchin, A low cost and eco-friendly membrane from polyvinyl alcohol, chitosan and honey: synthesis, characterization and antibacterial property, *Journal of Polymer Research*, 28, 2021, 82
4. Sabarish Radoor, **Jasila Karayil**, Aswathy Jayakumar, Jyotishkumar Parameswara Pillai, Suchart Siengchin, Removal of methylene blue dye from aqueous solution using PDADMAC modified ZSM-5 zeolite as a novel adsorbent, *Journal of Polymers and the Environment*, 29, 2021, 3185–3198
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7. **Abdu Rahiman V** and Sudhish N George, A Framework for Super Resolution of Color Images with Missing Samples using Low Rank Approximation, *Sensing and Imaging*, 23, 2022, 44954
8. R Raghavan, VV Panicker, **FJ Emmatty**, Ergonomic risk and physiological assessment of plogging activity, *Work*, 72 (4), 2022, 1337-1348
9. **FJ Emmatty**, VV Panicker, Workplace-based assessment and intervention design for waste sorting tasks in a developing country, *Sādhanā*, 47 (1), 2022, 40
10. Francis, Jobin; **Baburaj, M**; George, Sudhish N;,, An $l_1/2$ and Graph Regularized Subspace Clustering Method for Robust Image Segmentation, *ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM)*, 18(1), 2022, 44950
11. Francis, Jobin; Johnson, Akhil; **Madathil, Baburaj**; George, Sudhish N;,, A Tensor-Based Submodule Clustering for 2D Images Using $l_1/2$ -Induced Tensor Nuclear Norm Minimization, *Springer Intelligent Sustainable Systems: Selected Papers of WorldS4 2021, Volume 2*, 334(1), 2021, 565-577
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13. Francis, Jobin; **Madathil, Baburaj**; George, Sudhish N; George, Sony;,, A comprehensive tensor framework for the clustering of hyperspectral paper data with an application to forensic document analysis, *IEEE Access*, 10(1), 2021, 6194-6207
14. **Madathil, Baburaj**; George, Sudhish N;,, Noise robust image clustering based on reweighted low rank tensor approximation and $l_1/2$ regularization, *Springer Signal, Image and Video Processing*, 15(1), 2021, 341-349

15. **E. Rahmathulla Noufal**, A. K. Kasthurba and J. Sudhakumar, Optimization of Copper Slag for the Production of Green and Sustainable Concrete, Journal of structural Engineering CSIR INDIA, Vol.47, 2021, No.6,1-9,
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17. Sandhra Ganesh, Syam Gopal, Sourav S Anand, Premjith M P, **Sindhu N**, "Development of 100% Biodegradable Sanitary Napkin from Pineapple Leaf Fiber with Antimicrobial Properties" Journal of Thin Films, Coating Science Technology and Application, Vol 8, No 1 (2021), ISSN: 2455-3344
18. **Suma K, Ushakumari E R**, Synthesis and characterization biochar from Colocasia for pesticide removal from aqueous solution, PROCEEDINGS International Conference on Health, Energy and Materials April 28-29, April 28-29, 2022
19. **T V Binu** and S Jayanti, Influence of Internal Circulation on Absorption of Atmospheric CO₂ AND SO₂ in Rain Drop, International journal of fluid mechanics Research, 49(3), 2022
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24. Henry Wasajja, S. Ali Saadabadi, **Biju Illathukandy**, Ralph E. F. Lindeboom, Jules. B. Lier, Purushothaman Vellayani Aravind, The effect of H₂S on internal dry reforming in biogas fuelled solid oxide fuel cells, Energy Science & Engineering <https://doi.org/10.1002/ese3.1021>, Volume10, Issue2, February 2022, 2022, 374-383
25. **P.K. Jithesh**, A model based on cellular automata for investigating the impact of lockdown, migration and vaccination on COVID-19 dynamics, Computer Methods and Programs in Biomedicine, 211 (2021), 106402.
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29. Po-Chih Kuo, **Biju Illathukandy**, Chi-Hsiu Kung, Jo-Shu Chang, Wei Wu, Process simulation development of a clean waste-to-energy conversion power plant: Thermodynamic and

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 35. **Francis J. Emmatty** and Vinay V. Panicker, Workplace-based assessment and intervention design for waste sorting tasks in a developing country, Sādhanā <https://link.springer.com/article/10.1007/s12046-022-01804-7>, Vol. 47, No. 1, pp. 1-13.
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