Papers Published in 2024

1) A paper titled “Optimization and Scaling of OpenFOAM-based Urban Modelling Simulations for High-Performance Computing Platforms is presented at IEEE CONECCT 2024. “Saurav, Sumit Kumar, et al. "Optimization and Scaling of OpenFOAM-based Urban Modeling Simulations." 2024 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT). IEEE, 2024.
2) Divya, B., Nair, R.P., Prakashini, K., Menon, G., Litvak, P., Mandava, P. and Vijayasenan, D., 2025. "Generalizable DNN Model for Brain Tumor Substructure Segmentation from Low-Resolution 2D Multimodal MR Images." Biomedical Signal Processing and Control, 100, p.106916.
3) Acharya, D.B., Divya, B. and Kuppan, K., 2024. "Explainable and Fair AI: Balancing Performance in Financial and Real Estate Machine Learning Models." IEEE Access.
4) Kuppan, K., Acharya, D.B. and Divya, B., 2024. "Foundational AI in Insurance and Real Estate: A Survey of Applications, Challenges, and Future Directions." IEEE Access.
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6) Kanabur, V.R., Vijayasenan, D., S, S.D., Govindan, S. (2024). A Deep Learning Approach to Enhance Semantic Segmentation of Bacteria and Pus Cells from Microscopic Urine Smear Images Using Synthetic Data. In: Kaur, H., Jakhetiya, V., Goyal, P., Khanna, P., Raman, B., Kumar, S. (eds) Computer Vision and Image Processing. CVIP 2023. Communications in Computer and Information Science, vol 2009. Springer, Cham. https://doi.org/10.1007/978-3-031-58181-6_21
7) T. Chowdhury, S. Chatterjee, D. Das, I. Timokhin, P. D. Nunez, Gokul M. A., S. Chatterjee, K. Majumdar, P. Ghosh, A. Mishchenko and A. Rahman, Brightening of dark excitons in WS2 via tensile strain-induced excitonic valley convergence, Physical Review B, 110, L081405-1 –L081405-8 (2024). DOI: 10.1103/PhysRevB. 110.L081405.

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9) B. Mondal, A. Shinde, P. K. Rajput, H. Arfin, R. Tanwar, P. Ghosh, and A. Nag, Vibronically Coupled Near-Infrared Emission and Excitation from d−d Transitions of Cs2MX6 (M = Mo/W, X = Cl/Br), ACS Energy Letters, 9, 819 - 828 (2024). DOI: 10.1021/acsenergylett.3c02613

10) Debashree Chakraborty, Omkar Singh and Divya Parameswaran "Study of correlated motion to detect the conformational transitions of the intrinsically disordered sheep prion peptide", Journal of Chemical Information and Modeling 2024 64 (24),5590-5603, DOI: 10.1021/acs.jcim.4c00300

11) Anjana V. Mathath, Bratin Kumar Das, and Debashree Chakraborty, "Designing Reaction Coordinate for Ion-Induced Pore-Assisted Mechanism of Halide Ions Permeation through Lipid Bilayer by Umbrella Sampling", Journal of Chemical Information and Modeling 2023 63 (24), 7778-7790, DOI: 10.1021/acs.jcim.3c01683 (IF: 5.6)

12) Anjana V. Mathath, and Debashree Chakraborty, "Effect of peptide hydrophilicity on membrane curvature and permeation". J. Chem. Phys. 28 October 2024; 161 (16): 164105. https://doi.org/10.1063/5.0226869 (IF: 3.1)

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14) A paper titled "Optimization and Scaling of OpenFOAM-based Urban Modelling Simulations for High-Performance Computing Platforms is presented at IEEE CONECCT 2024. "

15) Vibronically Coupled Near-Infrared Emission and Excitation from d−d Transitions of Cs2MX6 (M = Mo/W, X = Cl/Br), B. Mondal, A. Shinde, P. K. Rajput, H. Arfin, R. Tanwar, P. Ghosh, and A. Nag, ACS Energy Lett, 9, 819 (2024)'CFD investigation of Flow Transition Effect on Aerodynamic Characteristics of UAV with High Aspect Ratio Wing and Two-element Airfoil.' M Vijayakumar$, Sankar G#, and Sathish T&, Akash H. SAROD 2024 Paper ID (253)

16) ‘Numerical study on effect of ground on the lateral and Directional Aerodynamic characteristics of Tailless Aircraft.’ Saravanan B, Dhanbal K, N Balakrishnan, Tarun Uppal. SAROD 2024 Paper ID (131).

17) ‘Dynamic Ground Effects of a Tailless Aircraft.’ Saravanan B, Dhanbal K, N Balakrishnan, Tarun Uppal. SAROD 2024 Paper ID (129).