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# 2024 CURRENT AWARENESS BULLETIN

(List of Research papers /Articles published by  
Faculty and Students of DTU)

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|----|---|--|---|
| 1. | <u><a href="#">A catalogue of low-mass X-ray binaries in the Galaxy: From the INTEGRAL to the Gaia era*</a></u><br>(Open Access)              | Fortin, F.,<br>Kalsi, A.,<br>García, F.,<br>Simaz-Bunzel, A.,<br>Chaty, S. | Astronomy and<br>Astrophysics, 684, art.<br>no. A124.   |
| 2. | <u><a href="#">A comprehensive review on methane enrichment in biogas through the purification process using biomass-based adsorbents</a></u> | Meena, P.K.,<br>Pal, A.  | Biomass Conversion and<br>Biorefinery.  |
| 3. | <u><a href="#">A deep face spoof detection framework using multi-level ELBPs and stacked LSTMs</a></u>  | Dhiman, C.,<br>Antil, A.,<br>Anand, A.,<br>Gakhar, S.                      | Signal, Image and Video<br>Processing.  |
| 4. | <u><a href="#">A logistic regression model to facilitate setting of organic waste composting policy for sustainable waste management</a></u>  | Al-Sari', M.I.,<br>Haritash, A.K.  | Environment,<br>Development and<br>Sustainability.  |
| 5. | <u><a href="#">A Survey on Blockchain for Rental Lease Management</a></u>   | Jain, A.,<br>Gangwar, A.,<br>Kumari, C.,<br>Mehra, P.S.                    | 2024 11th International<br>Conference on<br>Reliability, Infocom<br>Technologies and<br>Optimization (Trends<br>and Future Directions),<br>ICRITO 2024. |



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| 6.  | <u><b>A Survey on Blockchain for Rental Lease Management</b></u>   | Tiwari, A.,<br>Kanjolia, A.,<br>Kumar, B.,<br>Mehra, P.S. | 2024 11th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions), ICRITO 2024. |
| 7.  | <u><b>A sustainable synthesis of polyhydroxyalkanoate from stubble waste as a carbon source using Pseudomonas putida MTCC 2475 (Open Access)</b></u> | Rani, I.,<br>Warkar, S.G.,<br>Kumar, A.                   | Frontiers in Bioengineering and Biotechnology, 12, art. no. 1343579.  |
| 8.  | <u><b>A Systematic Literature Review on Maintenance of Software Containers</b></u>   | Malhotra, R.,<br>Bansal, A.,<br>Kessentini, M.            | ACM Computing Surveys, 56(8), art. no. 193.   |
| 9.  | <u><b>Analysis of Area-Controllerror in Automatic Generation Control</b></u>   | Wadhwa, J.,<br>Hayatunisha,<br>Kumar, N.                  | 2024 11th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions), ICRITO 2024. |
| 10. | <u><b>Assessment of solar-biomass hybrid power system for decarbonizing and sustainable energy transition for academic building</b></u>              | Baghel, N.,<br>Manjunath, K.,<br>Kumar, A.                | Process Safety and Environmental Protection, 187, pp. 1201-1212.  |



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| 11. | <u>Atmospheric processes and climate change</u>  | Yadav, J.,<br>Kapuganti, D.K.                       | Advanced Geospatial Practices in Natural Environment Resource Management, pp. 1-25.  |
| 12. | <u>Bio Synergize: Microbial Synergy Driving Simultaneous Bioremediation and Nanoparticle Synthesis</u>                           | Khan, A.,<br>Yadav, S.,<br>Sharma, J.G.             | African Journal of Biological Sciences (South Africa), 6(9), pp. 672-696.  |
| 13. | <u>Comparative Analysis of Bifacial and Monofacial Floating Solar Power Plants: Performance Evaluation and Economic Analysis</u> | Avasthi, A.,<br>Garg, R.,<br>Mahajan, P.            | Iranian Journal of Science and Technology - Transactions of Mechanical Engineering.  |
| 14. | <u>Cyclic Heap Permutation Based Reconfiguration of Solar PV Array for Optimal Shade Dispersion</u>                              | Jain, V.,<br>Kumar, V.,<br>Garg, S.,<br>Yadav, V.K. | Proceedings - 11th International Conference on Signal Processing and Integrated Networks, SPIN 2024, pp. 245-250.                      |
| 15. | <u>Design and analysis of Volterra Weiner Hammerstein Adaptive Controller in Shunt Compensation and PLL modes</u>                | Arora, A.,<br>Singh, A.                             | 2024 3rd International Conference on Power Electronics and IoT Applications in Renewable Energy and its Control, PARC 2024, pp. 77-81. |



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| 16. | <u>Design and Control Using an ISOGI-Q Algorithm for Grid Integration of PV-Array</u>   | Singh, A.,<br>Bansal, P.                                      | The Internet of Energy: A Pragmatic Approach Towards Sustainable Development, pp. 1-20.                                 |
| 17. | <u>Design and development of Reduced Switch Five Level Inverter for interfacing renewable energy sources and EV charger</u>                           | Mittal, S.,<br>Singh, A.,<br>Chittora, P.                     | Electrical Engineering.   |
| 18. | <u>Detection and Classification of Pulsed Doppler Radar Signals Using Deep Learning</u>   | Grover, S.,<br>Gupta, S.,<br>Mandpura, A.                     | 2024 International Conference on Global Aeronautical Engineering and Satellite Technology, GAST 2024 - Proceedings.     |
| 19. | <u>Diagnostic and comparative analysis of dark energy models with <math>q(z)</math> parametrizations</u>  | Arora, D.,<br>Chaudhary, H.,<br>Pacif, S.K.J.,<br>Mustafa, G. | European Physical Journal Plus, 139(5), art. no. 371.   |
| 20. | <u>Dielectric Modulated Gallium-Arsenide Gate-All-Around Engineered Field Effect Transistor (GaAs-GAAE-FET) Biosensor for Breast Cancer Detection</u> | Yadav, S.,<br>Rewari, S.                                      | Proceedings - International Conference on Computing, Power, and Communication Technologies, IC2PCT 2024, pp. 1553-1557. |



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| 21. | <u>EEG-Based Emotion Recognition Using Optimized Deep-Learning Techniques</u>  | Dwivedi, A.K.,<br>Verma, O.P.,<br>Taran, S.  | Proceedings - 11th International Conference on Signal Processing and Integrated Networks, SPIN 2024, pp. 372-377. |
| 22. | <u>Effect of deal size on M&amp;A outcome on HR parameters: an empirical analysis</u>  | Singh, V.,<br>Maheshwari, G.C.,<br>Yadav, R.   | International Journal of Economics and Business Research, 27(3), pp. 404-433.                                     |
| 23. | <u>Effect of friction stir processing parameters on mechanical properties of Al8011/CeO<sub>2</sub>/SiC/RHA metal matrix composite</u> | Abdul Wahed, Z.,<br>Hasan, F.,<br>Murtaza, Q., (...),<br>Faheem, A.,<br>Shamim, F.A. | Canadian Metallurgical Quarterly.   |
| 24. | <u>Elucidating the determinants of crowdsourcing adoption for organisation value creation</u>  | Mishra, D.,<br>Maheshwari, N.  | International Journal of Organizational Analysis.   |
| 25. | <u>Emotion Recognition in Speech Using MFCC and Energy Based Ratio Features</u>  | Ravi, Taran, S.  | Proceedings - 11th International Conference on Signal Processing and Integrated Networks, SPIN 2024, pp. 367-371. |



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| 26. | <u>End-to-end handwritten Ge'ez multiple numerals recognition using deep learning</u>  | Malhotra, R.,<br>Addis, M.T.  | SICE Journal of Control, Measurement, and System Integration, 17(1), pp. 122-134.  |
| 27. | <u>Energetic, exergetic, exergoeconomic, and enviroeconomic analysis of solar dish-integrated water desalination system with various nanofluids</u>  | Kant, R.,<br>Kumar, A.,<br>Dubey, M.K.                                    | Groundwater for Sustainable Development, 26, art. no. 101207.  |
| 28. | <u>Enhancing Human-Robot Interaction through PID Control and Sensor Integration</u>  | Agrawal, A.K.,<br>Kumar, J.,<br>Kumar, A.,<br>Arvind, P.                  | 2024 3rd International Conference on Power Electronics and IoT Applications in Renewable Energy and its Control, PARC 2024, pp. 540-546. |
| 29. | <u>Enhancing microstructural, tribological and corrosion responses of Al-Zn-Mg-Cu alloy via nano-/micro-Al<sub>2</sub>O<sub>3</sub> particulates</u> | Kumar, A.,<br>Singh, V.P.,<br>Singh, R.C.,<br>Chaudhary, R.,<br>Kumar, D. | Journal of Materials Science.  |
| 30. | <u>ERCU-Net: segmentation of road potholes using enhanced residual convolutional block based on U-Net for ADAS</u>                                   | Tripathi, R.,<br>Indu, S.,<br>Kumar, R.                                   | Signal, Image and Video Processing.  |



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| 31. | <u>Explicate molecular landscape of combined pulmonary fibrosis and emphysema through explainable artificial intelligence: a comprehensive analysis of ILD and COPD interactions using RNA from whole lung homogenates</u> | Tanwar, N.,<br>Hasija, Y.               | Medical and Biological Engineering and Computing.   |
| 32. | <u>Extraction of urban targets using fusion of spectral and shape features in AVIRIS-NG hyperspectral data: Use of hyperspectral data for detecting roads and roofs</u>  | Gakhar, S.,<br>Tiwari, K.C.             | Advanced Geospatial Practices in Natural Environment Resource Management, pp. 167-188.      |
| 33. | <u>Fabrication and assessment of carboxymethyl guar gum-based sustainable films for packaging application</u>  | Juikar, S.K.,<br>Warkar, S.G.           | Colloid and Polymer Science.  |
| 34. | <u>Face Detection Framework for Accelerated Analysis of High-Quality Multimedia Content</u>  | Mool, A.,<br>Panda, J.,<br>Sharma, K.   | International Journal of Pattern Recognition and Artificial Intelligence, art. no. 2456001. |
| 35. | <u>FDT - Dr2T: a unified Dense Radiology Report Generation Transformer framework for X-ray images</u>  | Sharma, D.,<br>Dhiman, C.,<br>Kumar, D. | Machine Vision and Applications, 35(4), art. no. 68.  |





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| 36. | <u>Filter based saturated controller design for a class of nonlinear singularly perturbed systems</u>                                   | Prasad, D.,<br>Valluru, S.K.,<br>Rayguru, M.M.                            | Sadhana - Academy<br>Proceedings in Engineering<br>Sciences, 49(2), art. no. 184. |
| 37. | <u>Gendered pathways to entrepreneurial success: a study on women's career choices in India</u>   | Mishra, D.,<br>Mangla, G.,<br>Maheshwari, N.                              | International Journal of<br>Sociology and Social<br>Policy.                       |
| 38. | <u>Generating Image Captions in Hindi Based on Encoder-Decoder Based Deep Learning Techniques</u>                                       | Singh, P.,<br>Raja, F.,<br>Sharma, H.                                     | Springer Series in Reliability<br>Engineering, Part F2569, pp.<br>81-94.          |
| 39. | <u>Hyper-Sharpening For Urban Feature Extraction</u>  | Sharma, K.,<br>Tiwari, K.C.   | 2023 IEEE India<br>Geoscience and Remote<br>Sensing Symposium,<br>InGARSS 2023.   |
| 40. | <u>Identification of cancer risk groups through multi-omics integration using autoencoder and tensor analysis</u><br><u>Open Access</u> | Braytee, A.,<br>He, S.,<br>Tang, S., (...),<br>Prasad, M.,<br>Anaissi, A. | Scientific Reports, 14(1),<br>art. no. 11263.                                     |



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| 41. | <u>Improved Performance of Oppositely Doped CoreShell Junctionless Nanowire FET Using Gate Material Engineering</u>                                       | Bharti, Mittal, P.   | Proceedings - 11th International Conference on Signal Processing and Integrated Networks, SPIN 2024, pp. 382-386. |
| 42. | <u>Investigating the Influence of Frequency on Piezo-dynamics of Polyvinylidene Fluoride (PVDF) Films Embedded in Confined Geomaterials (Open Access)</u> | Kumar, Y.,<br>Trivedi, A.,<br>Shukla, S.K.                               | Journal of Vibration Engineering and Technologies.  |
| 43. | <u>Literature mining discerns latent disease-gene relationships (Open Access)</u>   | Rai, P.,<br>Jain, A.,<br>Kumar, S., (...),<br>Ahuja, G.,<br>Sengupta, D. | Bioinformatics (Oxford, England), 40(4).  |
| 44. | <u>Mapping of glacial lakes and glacial lake outburst flood in Kinnaur district, Himachal Pradesh using remote sensing and GIS (Open Access)</u>          | Vishwas, P.,<br>Tiwari, K.C.,<br>Rongali, G.,<br>Vohra, R.               | Advanced Geospatial Practices in Natural Environment Resource Management, pp. 109-128.                            |
| 45. | <u>New explicit-current-output SRCO using a single CFOA and all grounded capacitors</u>   | Kumar<br>Srivastava, D.,<br>Senani, R., Raj,<br>A., Ram<br>Bhaskar, D.   | AEU - International Journal of Electronics and Communications, 178, art. no. 155297.                              |



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| 46. | <u>NOx emission reduction in low viscous low cetane (LVLC) fuel using additives in CI engine: an experimental study</u> | Sonthalia, A.,<br>Varuvel, E.G.,<br>Subramanian, T.,<br>Kumar, N.                     | Clean Technologies and Environmental Policy.  |
| 47. | <u>Optimal sizing of standalone hybrid renewable energy system based on reliability indicator: A case study</u>         | Gusain, C.,<br>Nangia, U.,<br>Tripathi, M.M.  | Energy Conversion and Management, 310, art. no. 118490.   |
| 48. | <u>Performance Analysis of Mixed FSO-UWOC DualHop Transmission System</u>   | Joshi, D.,<br>Sharma, D.,<br>Singh, H., (...),<br>Rani, R.,<br>Mohammed Shariff, A.S. | Proceedings - International Conference on Computing, Power, and Communication Technologies, IC2PCT 2024, pp. 658-662. |
| 49. | <u>Prediction of shear stress distribution in compound channel with smooth converging floodplains (Open Access)</u>     | Kaushik, V.,<br>Kumar, M.   | Journal of Hydrology and Hydromechanics, 72(2), pp. 170-184.  |
| 50. | <u>Role of herbs on mitophagy to treat neurodegenerative disorders</u>  | Kumar, K.,<br>Tiwari, A.K.,<br>Rachana  | Mitophagy and Its Role in Health and Disease, pp. 193-212.  |



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| 51. | <u>Software Defect Prediction Using Abstract Syntax Trees Features and Object–Oriented Metrics</u>  | Sethi, A.,<br>Sangalay, A.,<br>Malhotra, R.                                    | Springer Series in Reliability Engineering, Part F2569, pp. 189-201.                        |
| 52. | <u>Sparse subspace clustering incorporated deep convolutional transform learning for hyperspectral band selection</u>   | Goel, A.,<br>Majumdar, A.  | Earth Science Informatics.  |
| 53. | <u>Spirulina as neuroprotective supplement in parkinsonism; A review Authors' name</u>  | Khan, M.,<br>Srivastava, S.,<br>Sharma, J.G.                                   | African Journal of Biological Sciences (South Africa), 6(9), pp. 2055-2074.                 |
| 54. | <u>Synthesis, analysis and characterizations of Dy<sup>3+</sup> ions-doped CaBi<sub>2</sub>Nb<sub>2</sub>O<sub>9</sub> phosphors for optoelectronic device applications</u> | Kumari, S.,<br>Rohilla, P.,<br>Diwakar, S., (...),<br>Prasad, A.,<br>Rao, A.S. | Journal of Materials Science: Materials in Electronics, 35(12), art. no. 867.               |
| 55. | <u>Techno-Economic and Environmental Analysis of a Hybrid Power System Formed From Solid Oxide Fuel Cell, Gas Turbine, and Organic Rankine Cycle</u>                        | Yadav, A.K.,<br>Kumar, A.,<br>Sinha, S.  | Software Defect Prediction Using Abstract Syntax Trees Features and Object–Oriented Metrics |



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| 56. | <u>Temperature stability and improved energy storage efficiency of BaBi<sub>2</sub>Nb<sub>2</sub>O<sub>9</sub>: Er<sup>3+</sup>/Yb<sup>3+</sup> relaxor ferroelectric ceramic under moderate electric fields</u> | Banwal, A.,<br>Verma, M.,<br>Singh, B.,<br>Bokolia, R.  | Applied Physics A: Materials Science and Processing, 130(5), art. no. 334.           |
| 57. | <u>Unraveling the Synergistic Potential of Mycorrhizal Consortium in Augmenting Salinity Stress Tolerance in Wheat by Advancing Physiological, Metabolic, Nutrient, and Ultrastructural Attributes</u>           | Singh, M.,<br>Sharma, J.G.,<br>Giri, B.                 | Journal of Soil Science and Plant Nutrition.   |
| 58. | <u>Utilizing characteristics mode analysis for designing a miniaturised high-gain metasurface antenna with wideband circular polarization and reduced scattering</u>   | Rana, S.,<br>Jain, P.                                   | Journal of Electromagnetic Waves and Applications.                                   |
| 59. | <u>Water and wastewater engineering</u>  | Kumar, A.,<br>Yadav, J.,<br>Vohra, R.,<br>Sebastian, A. | Advanced Geospatial Practices in Natural Environment Resource Management, pp. 26-37. |
| 60. | <u>Water demand and quality management</u>   | Kumar, A.,<br>Kapuganti,<br>D.K., Vohra, R.             | Advanced Geospatial Practices in Natural Environment Resource Management, pp. 38-66. |