

List of publications in SCI/SCI-E journals during 2016-2019

Department of Mechanical Engineering

1. Sangita, M.K. Sinha and **R.V. Sharma (2016)**, Numerical Studies of Natural Convection in a Spherical Porous Annulus, Journal of Porous Media, Volume 19, Issue 3, pp.277-286.
2. A.K. Mishra, S. Kumar and **Ram Vinoy Sharma (2016)**, Non-Darcy Effects on Three-Dimensional Natural Convection in a Rectangular Box Containing a Heat Generating Porous Medium, Journal of Porous Media, Volume 19, Issue 12, pp. 1033-1043, 2016.
3. Chordia, J.S. and **Sharma, R.V.(2019)**, Numerical study on effect of corrugated diathermal partition on natural convection in a square porous cavity, Journal of Mechanical Science and Technology, 33(5):2481-2491, 2019. DOI: 10.1007/s12206-019-0445-4.
4. Chordia, J.S. and **Sharma, R.V.(2019)**, Natural convection in fluid-saturated porous enclosure with a pair of vertical diathermal partition, International Journal of Thermal Sciences, 144:42-49, 2019. DOI: 10.1016/j.ijthermalsci.2019.05.020.
5. Anup Kumar Rajak, Malay Niraj, **Shalendra Kumar (2016)**, Designing of MCDM Heuristic Model based on MATLAB Fuzzy Approach for Evaluating prioritization problems of the Alternatives”, Journal of Scientific & Industrial Research, Vol. 75, No. 10, pp. 604-608.
6. Anup Kumar Rajak, Malay Niraj, **Shalendra Kumar (2016)**, Designing of Fuzzy expert heuristic models with cost management toward coordinating AHP, Fuzzy TOPSIS and FIS Approaches, Sadhana - Academy Proceedings in Engineering Science Vol. 41, No. 10, pp. 1209-1218.
7. Mohapatra A.K., **Sanjay (2018)** Exergetic evaluation of gas-turbine based combined cycle system with vapor absorption inlet cooling, Applied Thermal Engineering, Volume 136, PP. 431-443.
8. Mishra S., **Sanjay (2018)**, Energy and exergy analysis of air-film cooled gas turbine cycle: Effect of radiative heat transfer on blade coolant requirement, Applied Thermal Engineering, volume 129, pp.1403-1413.
9. Sahu M.K., **Sanjay (2018)**, Thermo-economic investigation of basic and intercooled gas turbine based power utilities incorporating air-film blade cooling, Journal of Cleaner Production, Volume 170, pp.842-856.

10. Choudhary T., **Sanjay (2017)**, Novel and optimal integration of SOFC-ICGT hybrid cycle: Energy analysis and entropy generation minimization, International Journal of Hydrogen Energy, volume 42, pp. 15597-15612.
11. Choudhary T., **Sanjay (2017)**, Thermodynamic assessment of advanced SOFC-blade cooled gas turbine hybrid cycle, International Journal of Hydrogen Energy, volume 42, pp. 10248-10263.
12. Sahu M.K., **Sanjay (2017)**, Comparative exergoeconomics of power utilities: Air-cooled gas turbine cycle and combined cycle configurations, Energy, volume 139, pp.42-51.
13. Choudhary T., **Sanjay (2017)**, Thermodynamic assessment of SOFC-ICGT hybrid cycle: Energy analysis and entropy generation minimization, Energy, volume 134, pp. 1013.
14. Sahu M.K., **Sanjay (2017)**, Comparative exergoeconomic analysis of basic and reheat gas turbine with air film blade cooling, Energy, volume 132, pp.160-170.
15. Sahu M.K., **Sanjay (2017)**, Exergoeconomic investigation of power utility based on air film blade cooled gas turbine cycle, Applied Thermal Engineering, volume 122, pp.738-746.
16. Sahu M.K., **Sanjay (2016)**, Investigation of the effect of air film blade cooling on thermoeconomics of gas turbine based power plant cycle, Energy, volume 115, pp. 1320-1330.
17. Choudhary T., **Sanjay (2016)**, Computational analysis of IR-SOFC: Transient, thermal stress, carbon deposition and flow dependency, International Journal of Hydrogen Energy, volume 41, pp. 10212-10227.
18. Kumari A., **Sanjay (2016)**, Thermo-environmental Analysis of Recuperated Gas Turbine-Based Cogeneration Power Plant Cycle, Arabian Journal for Science and Engineering, volume 41, pp.691-709.
19. Choudhary T., **Sanjay (2016)**, Computational analysis of IR-SOFC: Thermodynamic, electrochemical process and flow configuration dependency, International Journal of Hydrogen Energy , volume 41, pp. 1259-1271.
20. Abhishek Priyam, **Prabha Chand (2019)**, “Experimental investigations on thermal performance of solar air heater with wavy fin absorbers”. Heat and Mass Transfer, 1-16.9. <https://doi.org/10.1007/s00231-019-02605-1>
21. Subhash Chand, **Prabha Chand, (2018)** “Parametric study on the performance of solar air heater equipped with louvered fins” Journal of Mechanical Science and Technology. 32(8): 1-9 <https://doi.org/10.1007/s12206-018-0747-y>

22. Rajesh Kumar, **Prabha Chand**, (2018) "Performance prediction of extended surface absorber solar air collector with twisted tape inserts". *Solar Energy*. 125: 49–54.
<https://doi.org/10.1016/j.solener.2018.04.021>
23. Shalini Rai, **Prabha Chand**, S.P. Sharma, (2018) "Evaluation of thermohydraulic effect on offset fin absorber solar air heater". *Renewable Energy*. 125: 39–54.
<https://doi.org/10.1016/j.renene.2018.01.110>
24. Abhishek Priyam, **Prabha Chand** (2018), Effect of wavelength and amplitude on the performance of wavy finned absorber solar air heater. *Renewable Energy* 119; 690-702.
<https://doi.org/10.1016/j.renene.2017.12.010>
25. Shalini Rai, **Prabha Chand**, S.P. Sharma, (2017) "An analytical investigation on thermal and thermohydraulic performance of offset finned absorber solar air heater". *Solar Energy*. 153: 25–40.<https://doi.org/10.1016/j.solener.2017.05.039>
26. Kumar R. **Chand P.** (2017) "Performance enhancement of solar air heater using herringbone corrugated fins". *Energy* 127: 271-279.
<https://doi.org/10.1016/j.energy.2017.03.128>
27. Priyam A., **Chand P.**, (2016) "Thermal and thermohydraulic performance of wavy finned absorber solar air heater" *Solar Energy*; 1;30:250-259.
<https://doi.org/10.1016/j.solener.2016.02.030>
28. **Kumar Satish**, Kishore Chandan, Sharma Summet and Kumar Anil (2019), Effective Utilization of F type Bottom Ash by Enhancement of Pozzolanic Properties, **Journal of Energy Sources, Part A: Recovery, Utilization, and Environmental Effects**, (Accepted). <https://doi.org/10.1080/15567036.2019.1587072>
29. Singh Varinder, **Kumar Satish** and Rath Dwarikanath. (2019), Synergistic effect of the addition of TiO₂ feedstock on solid particle erosion of Ni/Al₂O₃ and Ni/Cr₂O₃ coatings, **Wear**, vol.426,-427, pp.250-257.
30. Singh Mani Kanwar, **Kumar Satish**, Rath Dwarikanath and Sandhu Harkirat (2019), Improvement in head loss characteristics of fine particulate coal-water suspension with addition of coarser particulate, **International Journal of Coal Preparation and Utilization**, <https://doi.org/10.1080/19392699.2019.1600512>.
31. Singh Jatinder, **Kumar Satish** and Mohapatra Saroj Kumar (2019), An experimental study on head loss characteristics of pipe bends for flow of coal–water slurry at high solid concentration, *Proc IMechE Part E: Journal of Process Mechanical Engineering*, DOI: 10.1177/0954408919844928.

32. Karakoti A, **Kar V R (2019)**, Deformation characteristics of sinusoidally-corrugated composite panel- A higher-order finite element approach, *Composite Structures*, 216:151–158. <https://doi.org/10.1016/j.compstruct.2019.02.097>
33. Chandra Mouli B, Ramji K, **Kar V R**, Panda S K, Anil K, and Pandey H K (2018), Numerical study of temperature dependent eigenfrequency responses of tilted functionally graded shallow shell structures, *Structural Engineering and Mechanics* 68(5):527-536. <http://dx.doi.org/10.12989/sem.2018.68.5.527>.
34. **Vijay Kumar Dalla**, Pushparaj Mani Pathak, “Power Optimized Motion Planning of Reconfigured Redundant Space Robot”, Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering, 23-10-2018, *Sage Journal*. (online), <https://doi.org/10.1177/0959651818814133>,
35. **Vijay Kumar Dalla** and Pushparaj Mani Pathak, Impedance Control in Multiple Cooperative Space Robots Pulling a Flexible Wire, The Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 27 June, 2018, *Sage Journal*, 233.6 (2019): 2190-2205.

Department of Physics

1. **Y.P. Yadav** and A.K.Singh (2017), Experimental and Theoretical Investigations on a Double Exposure Single Basin Solar Still, *Journal of Desalination and Water Treatment*, Volume 61 PP. 257-261.
2. J. Bhoi and **U. Laha (2016)**, *Nucleon-nucleon scattering phase shifts via supersymmetry and the phase function method*, *Braz. J Phys.* **46**, 129. DOI 10.1007/s13538-015-0388-x.
3. J. Bhoi and **U. Laha (2016)**, *On and off-shell Jost functions and their integral representations”* *Pramana Journal of Physics*, **86**, 947. DOI: 10.1007/s12043-015-1130-5.
4. **U. Laha** and J. Bhoi (2016), *Parameterization of nuclear Hulthen potentials*, *Phys. of Atomic Nuclei* **79**, 62. DOI: 10.1134/S1063778816010129.
5. J. Bhoi and **U. Laha (2016)**, *Elastic scattering of light nuclei through a simple potential model*, *Phys. of Atomic Nuclei* **79**, 210. DOI: 10.1134/S1063778816030054.
6. J. Bhoi and **U. Laha (2017)**, *Supersymmetry inspired low energy α -p elastic scattering phases*, *Theoretical and mathematical phys.* **190**(1): 69–76. DOI: 10.1134/S0040577917010056.
7. J. Bhoi and **U. Laha (2017)**, *Hulthen potential model for α - α and α -He³ elastic scattering*, *Pramana-J of Physics* **88**: 42. DOI 10.1007/s12043-016-1352-1.

8. **U. Laha**, S. Ray, S. Panda, J. Bhoi (2017), *Laplace transforms of the Hulthén Green's function and their applications to potential scattering*, Theoretical and mathematical physics, **193**, 1498-1507 (2017) DOI: 10.1134/S0040577917100075.
9. **U. Laha** M. Majumder and J. Bhoi (2018), *Volterra integral equation-factorization method and nucleus-nucleus elastic scattering*, PRAMANA-J of Physics, **90**: 48 (2018) <https://doi.org/10.1007/s12043-018-1537-x>.
10. **U. Laha** (2018), Off-shell Jost solution for the Hulthén potential, Few-body systems, **59**: 68. <https://doi.org/10.1007/s00601-018-1380-0>.
11. A. Ghosh, A.K. Nirala and **H.L. Yadav** (2018), “ Analysis of Fringe Field Formed Inside LDA Measurement Volume Using Compact Two Holographic Imaging Systems,” Optics and Spectroscopy, vol. 124, no. 3 , pp. 437-449.
12. A. Ghosh, A.K. Nirala and **H.L. Yadav** (2018), “Optical design and characterization of holographic solar concentrators for Photovoltaic application”, Optik 168, 625-649.
13. **Neha Agnihotri** (2019), Strong, Near-infrared Absorbing Porphyrins: A DFT Study, Can. J. Chem. 97: 451–456. [dx.doi.org/10.1139/cjc-2018-0416](https://doi.org/10.1139/cjc-2018-0416).
14. D. N. Patel, **Shail Pandey** and S. Bhattacharjee (2018), Size-controlled growth of nanoparticles and clusters during pulsed laser ablation into an ambient wave induced plasma, Applied Surface Science, 462, 373, DOI: 10.1016/j.apsusc.2018.08.051

Department of Electronics and Communication Engineering

1. P. K. Singya, **N. Kumar**, V. Bhatia, and M. S. Alouini, On Performance of Hexagonal, Cross and Rectangular QAM for Multi-relay Systems, IEEE Access, vol. 7, no. 1, pp. 60602-60616, Dec. 2019, DOI: 10.1109/ACCESS.2019.2915375
2. P. K. Singya, **N. Kumar**, V. Bhatia, and Faheem Khan, Performance Analysis of OFDM Based 3-hop AF Relaying Network over Mixed Rician/Rayleigh Fading Channels,” Elsevier Int. J. Electron. Commun., (AEU), vol. 93, pp. 337-347, Sep. 2018, <https://doi.org/10.1016/j.aeue.2018.06.026>.
3. **B Bhowmik**, K Dutta, P Bhattacharyya, An Efficient Room Temperature Ethanol Sensor Device Based on pn Homojunction of TiO₂ Nanostructures, IEEE Transactions on Electron Devices vol. 66 (2), pp. 1063-1068, 2019 DOI: 10.1109/TED.2018.2885360
4. C. P. Gupta, S. K. Sharma, **B. Bhowmik**, K. T. Sampath, C. Periasamy, S. Sancheti, Development of Highly Sensitive and Selective Ethanol Sensors Based on RF Sputtered

- ZnO Nanoplates, *Journal of Electronic Materials*, vol. pp. 1-6, 2019 DOI: 10.1007/s11664-019-07127-4
5. **Amit Prakash**, Dilip Kumar Yadav, “Design and Reliability Analysis of Fault-Tolerant Shuffle Exchange Gamma Logical Neighborhood Interconnection Network”, *The Journal of Supercomputing*, Springer, 2019. doi.org/10.1007/s11227-019-02929-z.
 6. Prakash Ranjan, Arvind Choubey, Santosh Kumar Mahto, **Rashmi Sinha (2018)**, A six – band ultra-thin polarization-insensitive pixilated metamaterial absorber using a novel binary wind driven optimization algorithm, *Journal of Electromagnetic Waves and Applications*, Volume 32, Issue-18, Pages 2367-2385. <https://doi.org/10.1080/09205071.2018.1510344>
 7. **Ajay Kumar**, Manish Kumar, Sumit Kumar Jindal, Sanjeev Kumar Raghuwanshi (2019), Implementation of All-Optical Active low/high Tri-state Buffer logic using the Micro-Ring Resonator Structures, *Optical and Quantum Electronics (Springer Nature)*, Vol. 51, pp: 191-208, <https://doi.org/10.1007/s11082-019-1898-5>.
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 9. **Ajay Kumar (2016)**, Application of micro-ring resonator as high speed optical gray code converter,” *Optical and Quantum Electronics (Springer)*, Vol. 48, pp: 460 – 474. DOI 10.1007/s11082-016-0737-1.
 10. Sumit Kumar Jindal, Yogesh Kumar Agarwal, Shrishti Priya, **Ajay Kumar**, Sanjeev Kumar Raghuwanshi (2018), Design and Analysis of MEMS Pressure Transmitter using Mach-Zehnder Interferometer Artificial Neural Networks, *IEEE Sensor Journal*, Vol. 18, no. 17, pp. 7150 – 7157.

Department of Mathematics

1. A. Kumar, **R. Tripathi**, R. Singh and G. S. Seth (2019), Three-dimensional magnetohydrodynamic flow of micropolar CNT-based nanofluid through a horizontal rotating channel: OHAM analysis, *Indian Journal of Physics*, <https://doi.org/10.1007/s12648-019-01460-4>.
2. A. Kumar, **R. Tripathi** and R. Singh (2019), Entropy generation and regression analysis on stagnation point flow of Casson nanofluid with Arrhenius activation energy, *Journal of the Brazilian Society of Mechanical Sciences and Engineering* (Accepted for Publication) (2019).

3. Prashu, **R. Nandkeolyar (2018)**, A Numerical Treatment of Unsteady Three-Dimensional Hydromagnetic Flow of a Casson Fluid with Hall and Radiation Effects, *Results in Physics*, 11, 966-974, 2018, DOI: doi.org/10.1016/j.rinp.2018.10.041.
4. **Snehasis Kundu (2019)**, Modeling stratified suspension concentration distribution in turbulent flow using fractional advection-diffusion equation, *Environmental Fluid Mechanics*, 2019, DOI: 10.1007/s10652-019-09679-9
5. **Snehasis Kundu (2019)**: Analytical Solutions of One-Dimensional Space Fractional Advection-Diffusion Equation for Sediment Suspension using Homotopy Analysis Method - *Journal of Engineering Mechanics, ACSE, vol. 145, no. 7, (2019)*, doi: [https://doi.org/10.1061/\(ASCE\)EM.1943-7889.0001625](https://doi.org/10.1061/(ASCE)EM.1943-7889.0001625)
6. **M.K. Gupta**, N.K. Tomar, M. Darouach, Unknown inputs observer design for descriptor systems with monotone nonlinearities, *Int. J. Robust Nonlinear Control*, Wiley, IF: 3.856, Vol: 28(17), Page: 5481–5494, 2018. DOI:10.1002/rnc.4331

Department of Civil Engineering

1. S. Jeeva Chithambaram, **Dr. Sanjay Kumar**, Dr. M.M. Pd (2019), Thermo-Mechanical Characteristics of Geopolymer Mortar, *Construction and Building Materials*, Elsevier, V. 213, pp. 100-108.
2. S. Jeeva Chithambaram, **Dr. Sanjay Kumar**, Dr. M.M. Pd and Dr. Dibyendu Adak (2018), Effect of Parameters on the Compressive Strength of Fly ash based Geopolymer Concrete, *Structural Concrete*, Wiley, V. 19: Ppp. 1202–1209.
3. S. Jeeva Chithambaram and **Dr. Sanjay Kumar (2017)**, Flexural Behaviour of Bamboo Based Ferrocement Slab Panels with Fly ash", *Construction and Building Materials*, Elsevier, V. 134, pp. 641-648.
4. **Choudhary, A. K.**, Pandit, B. and Babu, G.L.S. (2019), Uplift capacity of horizontal anchor plate in geocell reinforced sand." *Geotextiles and Geomembranes*, 47, 203-216. doi.org/10.1016/j.geotexmem.2018.12.009.
5. Dash, S. K. and **Choudhary, A. K. (2019)**, Pullout Behavior of Geocell-Reinforced Vertical Plate Anchors under Lateral Loading." *Int. J. of Geomech.*, ASCE, 19, 04019082-13, 2019. doi.org/10.1061/(ASCE)GM.1943-5622.0001452.

Department of Computer Applications

1. **Alekha Kumar Mishra**, Asis Kumar Tripathy, Deepak Puthal, and Laurence T. Yang, “Analytical Model for Sybil Attack Phases in Internet of Things”, IEEE Internet of Things Journal, Volume 6, Issue 1, February 2019, Pages 379 - 387.
2. **Chandrashekhara Azad**, Vijay Kumar Jha : **Fuzzy Min-Max Neural Network and Particle Swarm Optimization based Intrusion Detection System** - Microsystem Technologies, Springer. ISSN: 0946-7076 (Print) 1432-1858 (Online).

Department of Chemistry

1. **M. Mondal**, J. Joji, J. Choudhury, Coordination-polymer Anchored Single-site ‘Pd-NHC’ Catalyst for Suzuki-Miyaura Coupling in Water, J. Chem. Sci., 130, 83, 2018, <https://doi.org/10.1007/s12039-018-1487-3>
2. **Naveen Kumar Veldurthi***, Neerugatti Krishna Rao Eswar, Satyapaul A. Singh, Giridhar Madras, Cooperative effect between BaTiO₃ and CaFe₂O₄ in a cocatalyst-free heterojunction composite for improved photochemical H₂ generation, International journal of hydrogen energy (IF – 4.22) Volume: 43, Page: 22929-22941, 2018. DOI: [10.1016/j.ijhydene.2018.10.166](https://doi.org/10.1016/j.ijhydene.2018.10.166)

Department of Production and Industrial Engineering

1. Hulas Raj Tonday and **Anand Mukut Tigga (2019)**, An empirical evaluation and optimization of performance parameters of wire electrical discharge machining in cutting of Inconel 718, Measurement, volume 140 pp.185-196. <https://doi.org/10.1016/j.measurement.2019.04.003>

Department of Electrical Engineering

1. **O.H. Gupta** and M. Tripathy, EPE-based Robust Pilot Relaying Scheme Immune to SIR Variations, IETE Journal of Research, PP.1-11, 2018.

Department of Metallurgical and Materials Engineering

1. Sanjeev Kumar Das, **Ranjit Prasad**, R.P. Singh and Abhilash (2017); Physical, Mechanical and Metallurgical Characteristics of Banded Hematite Jasper of Ghatkuri (Gua), Jharkhand. Journal Geological Society of India (Springer), Vol.90, pp. 623-627.
2. Sanjeev Kumar Das, **Ranjit Prasad** and Rajendra Prasad Singh (2018); Characterisation-Assisted Reduction Roasting of BHJ, West Singhbhum, Jharkhand, India, Transactions of

the Indian Institute of Metals (Springer), Vol.71, No.6, pp 1357-1362.
<https://doi.org/10.1007/s12666-017-1270-z>;

3. Raman Raj, Aarti Kumari, Deepika Kumai Sahu, **Ranjit Prasad**, S. Ranganathan (2018); Carbothermic Reduction of Iron Oxide Waste Generated During the Processing of Ilmenite, Transactions of the Indian Institute of Metals (Springer). <https://doi.org/10.1007/s12666-018-1451-4>.