

## Research Papers Published: 194+1

- **International Journals:** 58 [SCI: 34 (Q1:13, Q2: 6, Q3: 5, Q4: 10); Scopus: 14; Others: 10]
1. Suvanjan Bhattacharyya, Arpan K Sharma; Devendra K Vishwakarma; Karuna Saini; **Akshoy Ranjan Paul**, Zhongjie Huan, "Thermo-Hydraulic Performance of Magnetic Baffles for Cooling using Magnetic Nanofluid in a Mini Channel", *Sustainable Energy Technologies and Assessments* (Elsevier, Q1, SCI, IF=8), vol. 57, 103194, April 2023. <https://doi.org/10.1016/j.seta.2023.103194>
  2. Yagya Dutta Dwivedi, Prasanta Kumar Mohanta, **Akshoy Ranjan Paul**, Xilang Tang, "3-D CFD analysis of bio-inspired corrugated wings for MAVs", *Materials Today: Proceedings* (Elsevier, Scopus, CiteScore: 2.3), Published online on 28th March 2023. <https://doi.org/10.1016/j.matpr.2023.03.213>
  3. KrishnaKumar Rajnath Yadav, Anuj Jain and **Akshoy Ranjan Paul**, "Flow Characteristics and Separation Control in a Transitional Twin Air-Intake", *Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering* (IMEchE, Q2, SCI, IF=2.242), vol. 237, no. 3, pp. 516–526, 2023. <https://doi.org/10.1177/09544100221103652>
  4. Abhishek Gupta, **Akshoy Ranjan Paul**, Nawshad Haque, "Life Cycle Assessment of a CCS in Saline Aquifers for Coal-Fired Power Generation: An Indian Scenario", *Greenhouse Gases: Science and Technology* (Wiley, Q3, SCI, IF=2.518), vol. 13, pp. 81–98, 2023. <https://doi.org/10.1002/ghg.2198>
  5. Suvanjan Bhattacharyya, Arpan K Sharma, Devendra K Vishwakarma, Varun Goel, **A.R. Paul**, "Influence of Magnetic Baffle and Magnetic Nanofluid on Heat Transfer in a Wavy Minichannel", *Sustainable Energy Technologies and Assessments* (Elsevier, Q1, SCI, IF=8), vol. 53, 102954, 2023. <https://doi.org/10.1016/j.seta.2022.102954>
  6. **Akshoy Ranjan Paul**, Anuj Jain, Suvash C Saha, "Exposure Assessment of Air Pollution in Lungs", *Atmosphere* (MDPI, Q3, SCI, IF=3.1), vol. 13, 1767, pp. 1-22. Oct. 2022. <https://doi.org/10.3390/atmos13111767>
  7. Suvanjan Bhattacharyya, Arpan K. Sharma; Devendra K. Vishwakarma, **Akshoy Ranjan Paul**, "Thermo-hydraulic Characteristics of Magnetic Nanofluid in Opposing and Assisting Minichannel under the Influence of External Magnetic Field", *Physics of Fluids* (AIP, Q1, SCI, IF=4.98), vol. 34, 103609 (2022); published online on 19th Oct. 2022. <https://doi.org/10.1063/5.0104710>
  8. Abhishek Gupta and **Akshoy Ranjan Paul**, "Influence of Relative Permeability, Capillary Pressure, and Well Orientation in the Geological Carbon Sequestration in a Saline Aquifer", *International Journal of Oil, Gas and Coal Technology* (Inderscience, Q4, SCI, IF=0.723), vol. 31, no. 3, pp.263-279, August 2022. <https://doi.org/10.1504/IJOGCT.2022.10045886>
  9. Suvanjan Bhattacharyya, Arpan K Sharma, Devendra K Vishwakarma, **Akshoy Ranjan Paul**, "Thermo-Hydraulic Performance of Magnetic Baffles for Removal of Concentrated Heat Fluxes in a Heated Mini Channel", *Applied Thermal Engineering* (Elsevier, Q1, SCI, IF=6.465) available online on 23<sup>rd</sup> July 2022. <https://doi.org/10.1016/j.applthermaleng.2022.118992>
  10. Ashutosh Kumar Jaiswal, Md. Hamid Siddique, **Akshoy Ranjan Paul**, Abdus Samad, "Surrogate based design optimization of a centrifugal pump impeller", *Engineering Optimization journal* (Taylor & Francis, Q2, SCI, IF=2.7), vol. 54, no. 8, pp. 1395-1412, pp. 1-18, 2022; <https://doi.org/10.1080/0305215X.2021.1932867>
  11. Shalini Verma, **Akshoy Ranjan Paul**, Nawshad Haque, "Selected Environmental Impact Indicators Assessment of Wind Energy in India using a Life Cycle Assessment Methodology", *Energies journal* (MDPI, Q3, SCI, IF=3.252), vol. 15, 3944, pp. 1-16, 2022, published online on 26<sup>th</sup> May 2022. <https://doi.org/10.3390/en15113944>
  12. Ritesh Singh, Abhishek Gupta, Devesh Singh, **Akshoy Ranjan Paul**, "Design and Assessment of an Electric Vehicle Charging Station using Hybrid Renewable Energy",

- International Journal of Energy for a Clean Environment (Begell House, Scopus, CiteScore=2.6), vol. 23, no. 6, pp. 31–47, July 2022. <https://doi.org/10.1615/InterJEnerCleanEnv.2022042580>
13. Suvash C Saha, Isabella Francis, Xinlei Huang, **Akshoy Ranjan Paul**, "Heat Transfer and Fluid Flow Analysis of Realistic 16-Generation Lung", *Physics of Fluids (AIP, Q1, SCI, IF=4.98)*, vol. 34, 061906, pp. 1-12, June 2022. <https://doi.org/10.1063/5.0093912>
  14. Shalini Verma, **Akshoy Ranjan Paul**, Nawshad Haque, "Assessment of Materials and Rare Earth Metals Demand for Sustainable Wind Energy Growth in India", *Minerals journal (MDPI, Q2, SCI, IF=2.818)*, vol. 12, no. 647, pp. 1-15, 2022, published online on 20<sup>th</sup> May 2022. <https://doi.org/10.3390/min12050647>
  15. Shalini Verma, **Akshoy Ranjan Paul**, Anuj Jain, "Performance Investigation and Energy Production of a Novel Horizontal Axis Wind Turbine with Winglet", *International Journal of Energy Research (Wiley, Q1, SCI, IF=4.672)*, vol. 48, issue 4, pp. 4947-4964. 25<sup>th</sup> March 2022. <http://doi.org/10.1002/er.7488>
  16. Deepak Kumar Singh, Anuj Jain and **Akshoy Ranjan Paul**, "Active Flow Control over a NACA23012 Airfoil using Hybrid Jets", *Defence Science Journal (SCI, Q4, IF=0.667, DRDO)*, vol. 71, no. 1, pp. 721-729, Nov. 2021. <https://doi.org/10.14429/dsj.71.16468>
  17. **Akshoy Ranjan Paul**, Abdulaziz Aldiab, Somnath Chattopadhyaya, Altab Hossain, Zinat Tasneem, Nawshad Haque, Anupam Basu, Tashi Gyeltshen, Yangdon, Reza Jazar and Firoz Alam, "Impact of COVID-19 on Online Education in Developing Countries – An Overview", *International Journal of Engineering Education (SCI, Q4, IF=0.971, Tempus)*, Vol. 37, No. 6, pp. 1–22, 2021.
  18. KrishnaKumar Rajnath Yadav, **Akshoy Ranjan Paul** and Anuj Jain, "Performance Evaluation of a Twin Air-Intake: Effects of Geometry, Reynolds Number and Jet Momentum Coefficient", *The European Physical Journal (EPJ) Plus (SCI, Q2, IF=3.758, Springer)*, 136:988, pp. 1-21, Oct. 2021. <https://doi.org/10.1140/epjp/s13360-021-01959-y>
  19. Vivek Kumar Srivastav, Rakesh Kumar Shukla, **Akshoy Ranjan Paul**, Anuj Jain, "Computational study on the effect of human respiratory wall elasticity", *International Journal of Biomedical Engineering and Technology (ESCI, Scopus, CiteScore=1.3, Inderscience)*, vol. 37, no. 1, pp. 46-64, Sept. 2021. <https://dx.doi.org/10.1504/IJBET.2021.117514>
  20. Mohammad S. Islam, Puchanee Larpruenrudee, Suvash C. Saha, Oveis Pourmehran, **Akshoy Ranjan Paul**, Tevfik Gemci, Richard Collins, Gunther Paul, and Yuantong Gu, "How severe acute respiratory syndrome coronavirus-2 aerosol propagates through the age-specific upper airways", *Physics of Fluids (AIP Publishing, Q1, SCI, IF=4.98)*, vol. 33, issue 8, 081911 (Aug. 2021);. <https://doi.org/10.1063/5.0061627>
  21. **Akshoy Ranjan Paul**, Firoz Khan, Anuj Jain, Suvash Chandra Saha, "Deposition of smoke particles in human airways with realistic waveform", Special issue on 'Heat Wave, Bush Fire and Air-Quality: Impacts on Respiratory Health' in *Atmosphere Journal (MDPI, Q3, SCI, IF=3.1)*, July 2021, vol. 12, issue 7, 912, pp. 1-22. <https://doi.org/10.3390/atmos12070912>. Published online on 15<sup>th</sup> July 2021.
  22. Anurag Tiwari, Anuj Jain, **Akshoy R. Paul** and and Suvash C. Saha, "Computational Evaluation of Drug Delivery in Human Respiratory Tract under Realistic Inhalation", *Physics of Fluids (AIP, Q1, SCI, IF=4.98)*, vol. 33, issue 7, 083311 (July 2021); <https://doi.org/10.1063/5.0053980>
  23. Mohammad S. Islam, Puchanee Larpruenrudee, **Akshoy R. Paul**, Gunther Paul, Tevfik Gemci, Yuantong Gu and Suvash C.Saha. "SARS CoV2 Aerosol: How far it can travel to the lower airways?", *Physics of Fluids (AIP, Q1, SCI, IF=4.98)*, vol. 33, issue 6, 061903 (June 2021); <https://doi.org/10.1063/5.0053351>
  24. Anurag Tiwari, Siddharth Sharma, Vivek Kumar Srivastav, Anuj Jain and **Akshoy Ranjan Paul**, "Computational Study of Atomization Models and Optimal Design of a Pressurized Inhaler", *Journal of Biomimetics, Biomaterials and Biomedical Engineering (ESCI, Scopus,*

- CiteScore=1.4, Trans Tech), vol. 50, pp. 123-134, published online on 8<sup>th</sup> April 2021. <https://doi.org/10.4028/www.scientific.net/JBBBE.50.123>
25. **Akshoy Ranjan Paul**, Suvanjan Bhattacharyya, "Analysis and Design for a Hydraulic Pipeline Carrying Capsule Train", Journal of Pipeline Systems Engineering and Practice (SCI, Q3, IF=1.916, ASCE), vol. 12, no. 2, 04021003, pp. 1-12, May 2021, *available online on* 12 Jan. 2021. DOI: 10.1061/(ASCE)PS.1949-1204.0000536
  26. Suvanjan Bhattacharyya, Hari Raghavendran B, **Akshoy Ranjan Paul**, "The effect of circular hole spring tape on the turbulent heat transfer and entropy analysis in a heat exchanger tube: An experimental study", Experimental Heat Transfer (SCI, Q2, IF=3.272, Taylor & Francis), vol. 36, no. 6, pp. 493-512, 2021. <https://doi.org/10.1080/08916152.2020.1787560>
  27. Suvanjan Bhattacharyya, Kunal Dey, **Akshoy Ranjan Paul**, Ranjib Biswas, "A Novel CFD Analysis to Minimize the Spread of COVID-19 Virus in Hospital Isolation Room", Chaos, Solitons & Fractals (SCI, Q1, IF=9.922, Elsevier), vol. 139, Oct. 2020. 110294. DOI: 10.1016/j.chaos.2020.110294
  28. **Akshoy Ranjan Paul**, Firoz Alam, Anuj Jain, Mohammad Sharafat Ali, "Boiler Safety in South Asia", Journal of The Institution of Engineers (India): Series-C (Scopus, CiteScore=1.8, Springer), vol. 101, no. 5, pp. 761-769. pp. 1-9, October 2020. DOI: <https://doi.org/10.1007/s40032-020-00597-0>
  29. Shikhar Singh, Suvanjan Bhattacharyya, **A. R. Paul**, M. Sharifpur, Josua Petrus Meyer, "Augmentation of Heat Transfer in a Microtube and a Wavy Microchannel using Hybrid Nanofluid: A Numerical Investigation", Mathematical Methods in the Applied Sciences (SCI, Q1, IF=3.007, Wiley), Special issue paper, pp. 1-22, 13 October 2020. DOI: <https://doi.org/10.1002/mma.6849>
  30. Rakesh kumar Shukla, Vivek Kumar Srivastav, **Akshoy Ranjan Paul**, Anuj Jain, "Fluid Structure Interaction Studies of Human Airways", Sādhanā Journal (SCI, Q4, IF=1.6, Springer), vol. 45, article number 229, Sept. 2020, pp. 1-6, DOI: <https://doi.org/10.1007/s12046-020-01460-9>
  31. Ram Sumukh Shukla, Krishnakumar R. Yadav, **Akshoy R. Paul**, Anuj Jain, "Development of Air-Intakes in Combat Aircrafts: A Comprehensive Review", Seybold Report (Scopus), issue 8, July 2020, sl. no. 11.
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  36. Firoz Alam, Harun Chowdhury, Anirban Basu, Rashid Sarkar, **Akshoy Ranjan Paul**, Somnath Chattopadhyaya, "Effect of South Asian road trucks on energy efficiency and safety", Journal of Mechanical Engineering, vol. ME 49, no. 2, pp. 33-41, 2019.
  37. Atiq Ur Rehman, **Akshoy Ranjan Paul**, Anuj Jain, "Performance Analysis and Cavitation Prediction of Centrifugal Pump using Various Working Fluids", Recent Patents on

- Mechanical Engineering (Scopus, IF=0.8, Bentham), June 2019, vol. 12, issue 3, pp. 227-239, <https://doi.org/10.2174/2212797612666190619161711>.
38. Yadav KrishnaKumar Rajnath, **Akshoy Ranjan Paul**, Anuj Jain, "Flow Management in a Double-Offset Transitional Twin Air-Intake at Different Inflow Conditions", *Recent Patents on Mechanical Engineering* (Scopus, IF=0.8, Bentham), April 2019, vol. 12, issue 2, pp. 168-179, <https://doi.org/10.2174/2212797612666190422145940>
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- **International Conferences:** 102+1

1. Abdus Samad, Prashant Kumar, Suman kumar, Devesh Singh, Saket Kapse, Sohorab Hossain, TVS Kalyan Chakravarthi, **Akshoy Ranjan Paul**, Abhijit Chaudhuri, Surajit Chattopadhyay, Sunkara Sai Arun Kiran Karthik, "Open Sea Trial of a Wave-Energy Converter at Tuticorin Port – Challenges", *accepted for presentation* in the 15<sup>th</sup> European Wave and Tidal Energy Conference(EWTEC2023), 3-7 September 2023, Bilbao (Spain).
2. Dwarkesh Parmar, Devesh Singh, **Akshoy Ranjan Paul**, "Influence of Building Wake on Particulate Matter Dispersion using Discrete Phase Modelling", presented in the 3<sup>rd</sup> International Conference on Sustainable Energy, Environment and Green Technologies (ICSEEGT 2023), 27-28 June 2023, Purnima College of Engineering, Jaipur (Rajasthan), India, Paper ID-72. *Received Best Paper Award*.
3. Roopak Baliyan, Shalini Verma, **Akshoy Ranjan Paul**, "Cooling Tower Plume and Drift Concentration in presence of Urban Canyon", presented in the 3<sup>rd</sup> International Conference on Sustainable Energy, Environment and Green Technologies (ICSEEGT 2023), 27-28 June 2023, Purnima College of Engineering, Jaipur (Rajasthan), India, Paper ID-73.
4. Adithya Ajay, Aditya Yadav, **Akshoy Ranjan Paul**, "Dispersion of Particulate Matters from Separated Plume Stacks using Discrete Phase Modelling", presented in the 3<sup>rd</sup> International Conference on Sustainable Energy, Environment and Green Technologies (ICSEEGT 2023), 27-28 June 2023, Purnima College of Engineering, Jaipur (Rajasthan), India, Paper ID-74.

5. Biri Singh, Devesh Singh, **Akshoy Ranjan Paul**, "Pollutant Dispersion in Atmospheric Boundary Layer Emitted by Thermal Power Plant" presented in the 3<sup>rd</sup> International Conference on Sustainable Energy, Environment and Green Technologies (ICSEEGT 2023), 27-28 June 2023, Purnima College of Engineering, Jaipur (Rajasthan), India, Paper ID-75.
6. Chandrakala, Anupma Gupta, **Akshoy Rajan Paul**, "DPM Modelling of Airflow and Cooking Particle Distribution in Kitchen" presented in the 3<sup>rd</sup> International Conference on Sustainable Energy, Environment and Green Technologies (ICSEEGT 2023), 27-28 June 2023, Purnima College of Engineering, Jaipur (Rajasthan), India, Paper ID-77.
7. Satyendra Dayalu, Shalini Verma, **Akshoy Ranjan Paul**, and Nawshad Haque, "Analysis of Environmental Impact of Vertical Axis Wind Turbine using Circular Economy Approach", presented in the Symposium on Energy Technologies and CO<sub>2</sub> Management at the 2023 TMS Annual Meeting & Exhibition, San Diego, California (USA) during 19–23 March 2023.
8. Firoz Alam, Khondkar Saleque, Saifuddin Ahsan, Quamrul Alam, Akshoy Ranjan Paul, Somnath Chattopadhyaya, Harun Chowdhury, and Nawshad Haque, "Economic Development in Bangladesh and Northeast India: The Role of Natural Gas and LPG" *presented* at the 4<sup>th</sup> International Conference on Energy & Power (ICEP-2022) held at Dhaka (Bangladesh) during 12-14 Dec. 2022.
9. Abhishek Gupta, Ritesh Singh and **Akshoy Ranjan Paul**, "Heat Transfer Enhancement in a Parabolic Trough Solar Collector using Magnetic Nanofluids" *presented* at the 4<sup>th</sup> International Conference on Energy & Power (ICEP-2022) held at Dhaka (Bangladesh) during 12-14 Dec. 2022.
10. Devesh Singh, Upendra Singh, and **Akshoy Ranjan Paul**, "Heat Transfer Augmentation of a Cylinder using Metalfoam" *presented* at the 4<sup>th</sup> International Conference on Energy & Power (ICEP-2022) held at Dhaka (Bangladesh) during 12-14 Dec. 2022.
11. Sanjeev Kumar Arya, Abhishek Gupta, **Akshoy Ranjan Paul** and Nawshad Haque, "Water Footprint Assessment of Coal-Fired Thermal Power Plants in India" *presented* at the 4<sup>th</sup> International Conference on Energy & Power (ICEP-2022) held at Dhaka (Bangladesh) during 12-14 Dec. 2022.
12. Shalini Verma, Devanur Sairam Bharadwaj and **Akshoy Ranjan Paul**, "Computational Analysis of Aerodynamic Performance of a Split Winglet" *presented* at the 4<sup>th</sup> International Conference on Energy & Power (ICEP-2022) held at Dhaka (Bangladesh) during 12-14 Dec. 2022.
13. Anil Kumar Maurya, Shakti Kumar, **Akshoy Ranjan Paul**, Somnath Chattopadhyaya, Suvanjan Bhattacharyya and Anuj Jain, "Computational Investigation of Mechanical Properties for Friction Stirred Welded joint" *presented* at the 4<sup>th</sup> International Conference on Energy & Power (ICEP-2022) held at Dhaka (Bangladesh) during 12-14 Dec. 2022.
14. Suvanjan Bhattacharyya, Devendra K Vishwakarma, Kunal Dey, **A. R. Paul** and Varun Goel, "Computational Fluid Dynamics in Sports: A Review", *presented* in the 2nd International Conference on Sports Engineering (ICSE 2021), Paper ID-52, Organized by BITS Pilani at Jodhpur, Rajasthan (India) during 3-5 March 2022.
15. Anurag Tiwari, **Akshoy Ranjan Paul**, Anuj Jain, "Challenges in Drug Delivery through Intranasal Route: A CFD Perspective", *presented* in Biosangam-2022, 10-12 March 2022, MNNIT Allahabad (India) and published in Advances in Biological Sciences Research, Atlantis Press.
16. Abhishek Gupta and **Akshoy Ranjan Paul**, "Optimization of Source-sink Matching for Carbon Capture and Storage (CCS) ready Ultra-mega Indian Power Plants" presented in the 3rd International Conference on Energy and Power (ICEP2021) held at Chiang Mai University (Thailand) during 18-20 November 2021, Paper ID-123.
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