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List of Publications: (last few years)

Books authored:

1. Paul A.R., Roy P. and Mukherjee S. (2004). “Mechanical Sciences - Engineering Mechanics & Strength of Materials”, Prentice-Hall of India (PHI Learning), New Delhi.
2. Paul A.R., Mukherjee S. and Roy P. (2005). “Mechanical Sciences - Engineering Thermodynamics & Fluid Mechanics”, Prentice-Hall of India (PHI Learning), New Delhi.
3. Mukherjee S. and Paul A.R. (2009). “Fundamentals of Mechanical Sciences - Engineering Thermodynamics & Fluid Mechanics”, PHI Learning, New Delhi.
4. Mukherjee S. (2009). “Refrigeration & Air conditioning – Theory & Practice”, Bharati Book Stall, Kolkata.
5. Mukherjee S. and Paul A.R. (2011). “Elements of Engineering Mechanics”, PHI Learning, New Delhi.

Edited Conference Proceedings:

1. Das S. and Mukherjee S. (2007). “*Trends and Advances in Computer Aided Design and Engineering (TACADE 2007)*”.
2. Das S. and Mukherjee S. (2019). “*Trends and Advances in Mechanical Engineering (TAME 2019)*”.

Research papers/Articles:

(International)

1. Ghosh, A., Roy, M. B., Roy, P. K. & Mukherjee, S. (2021). “Assessing the Nature of Sediment Transport with Bridge Scour by 1D Sediment Transport Model in the Sub-Catchment Basin of Bhagirathi-Hooghly River”, *Modeling Earth Systems and Environment* (Springer) (ISSN 2363-6211), Published online on 11th January 2021, (DOI: <https://doi.org/10.1007/s40808-020-01058-4>).

2. Mondal, S., Mukherjee, S. & Das, S. (2020). “Experimental Study of Thermal Effect on Oscillating Hydraulic Jump”, *Indian Science Cruiser* (ISSN 0970-4256), 34 (4), 15-19. (DOI: 10.24906/isc/2020/v34/i4/205477)
3. Biswas, D., Dutta, A., Mukherjee, S. and Mazumdar, A. (2020). “Effect of Cohesive and Seepage Force on A Bank Sediment Particle”, *Indian Science Cruiser* (ISSN 0970-4256), 34 (1), 21-26. (DOI: 10.24906/isc/2020/v34/i1/195949).
4. Dutta, A., Mukherjee, S. & Mazumdar, A. (2017). “Effect of the variation of inter-particle separation distance and separation time on separation speed of sediment particles of a river bank under the action of cohesive and viscous forces”, *Indian Science Cruiser* (UGC approved journal) (ISSN 0970-4256), Vol. 31, No. 4, July 2017, 36-49.
5. Mukherjee, S., Pal, B., Mandi, D., Panja, S. K. & Dutta, A. (2016). “An Analytical Approach for Determination of Riverbank Erosion under Action of Capillary Cohesion, Viscous Force and Force due to Pore Pressure”, *International Journal of Innovative Research in Science, Engineering & Technology* (ISSN (Online): 2319-8753 and (Print) 2347-6710), Vol. 5, Oct 2016, 111-117.
4. Mondal P.K., Mukherjee, S., Kundu, B & Wongwises, S. (2015). “Investigation of the Crosswind-Influenced Thermal Performance of a Natural Draft Counterflow Cooling Tower”, *International Journal of Heat and Mass Transfer*, Elsevier (ISSN: 0017-9310), Elsevier, Vol. 85, June 2015, 1049-1057. (<http://dx.doi.org/10.1016/j.ijheatmasstransfer.2015.02.048>), (**Impact Factor: 2.522**)
5. Mondal P.K., Mukherjee, S. (2014). “Thermodynamically Consistent Limiting Nusselt Number in the Viscous Dissipative Non-Newtonian Couette Flows”, *Industrial & Engineering Chemistry Research*, American Chemical Society, Vol. 53, 402-414. (DOI: 10.1021/ie401925c) (**Impact Factor: 2.206**)
6. Mondal P.K., Mukherjee, S. (2013). “Towards the Investigation of Heat Transfer Characteristics in a Viscous Dissipative Shear Driven Flow through an Annulus: An Analytical Study”, *Heat Transfer-Asian Research*, Wiley, (ISSN 1523-1496), Vol. 42, No. 7, November 2013, 569-588. (DOI: 10.1002/htj.21057). (**Impact Factor: 0.23**)
7. Dutta, A., Mukherjee, S. & Mazumdar, A. (2013). “Influence of Viscosity on Sediment Transport along a Riverbank”, *Indian Science Cruiser* (UGC approved journal), (ISSN 0970-4256), Vol. 27, No. 4, July 2013, 13-17.
8. Mondal P.K., Mukherjee, S. (2013). “An Analytical Approach to the Effect of Viscous Dissipation on Shear-Driven Flow between Two Parallel Plates with Constant Heat Flux Boundary Conditions”, *International Journal of Engineering, Transactions B*, Iran, (ISSN 1025-2495), Vol. 26, No. 5, May 2013, 533-542. (DOI: 10.5829/idosi.ije.2013.26.05b.10). (**Impact Factor: 0.17**)
9. Mukherjee, S. (2012). “Effect of Purity of Water on Riverbank Erosion under Variable Operating Conditions”, *Current Trends in Technology and Sciences* (ISSN 2279 – 0535), Vol. 1, No. 1, July 2012, 32-37.
10. Mondal P.K., Mukherjee, S. (2012). “Viscous Dissipation Effects on the Limiting Value of Nusselt Numbers for a Shear Driven Flow between Two Asymmetrically Heated Parallel Plates”, *Frontiers in Heat and Mass Transfer* (ISSN 2151-8629), Vol. 3, No. 033004, 1-6. (DOI: 10.5098/hmt.v3.3.3004). (**Impact Factor: 0.625**)
11. Mondal P.K., Mukherjee, S. (2012). “Viscous Dissipation Effects on the Limiting Value of Nusselt Numbers for a Shear Driven Flow through Asymmetrically Heated Annulus”, *Proceedings of the Institution of Mechanical Engineers, Part C, Journal of Mechanical Engineering Science*, UK,

December 2012, Vol. 226, No.12, 2941-2949. (DOI: 10.1177/0954406212440671). (**Impact Factor: 0.451**)

12. Mondal P.K., Mukherjee, S. (2012). “A New Analytical Approach to Predict the Operating Point of a Pumping System Having Groups of Different Types of Radial-flow Pumps in Parallel and the Resulting Flow Division in the Piping Network”, *Journal of The Institution of Engineers (India): Series C*, Springer, Vol. 93, No. 1, 83-91, (DOI: 10.1007/s40032-011-0013-x).
13. Mukherjee, S. (2011). “Application of Truncated Pyramid Model in Determination of Escape Velocity of Particles of Different Diameters in Varying Conditions”, *International Journal of Soft Computing and Engineering* (ISSN 2231-2307), Vol. 1, No. 5.
14. Mukherjee, S., Mazumdar, A. (2011), “Influence of Inter-Particle Distance, Entrapped Water Volume and Salinity of Water on the Escape Velocity of Particles on a Riverbank”, *Engineering* (ISSN 1947-3931 (Print) 1947-394X (Online)), Vol. 3, No. 7, 763-770. (DOI:10.4236/eng.2011.37092).
15. Mukherjee, S., Mazumdar, A. (2010), “Study of Effect of the Variation of Inter-Particle Distance on the Erodibility of a Riverbank under Cohesion with a New Model”, *Journal of Hydro-environment Research*, Elsevier, Vol. 4, No. 3, 235-242. (DOI:10.1016/j.jher.2010.01.001). (**Impact Factor: 2.943**)
16. Mukherjee, S. and Mazumdar, A. (2010). “Determination of the Escape Velocity of Particles on a Riverbank Using the Truncated Pyramid Model”, *Indian Science Cruiser* (UGC approved journal) (ISSN 0970-4256), 24 (5), 38-46.
17. Biswas, D., Dutta, A., Mukherjee, S. & Mazumdar, A. (2021). “Stability Analysis of a Riverbank for Different Microstructural Arrangements of the Particles”, *Advances in Water Resources Management for Sustainable Use*, Lecture Notes in Civil Engineering (Springer Nature), 11-21. (DOI: 10.1007/978-981-33-6412-7_2)
18. Biswas, D., Dutta, A., Mukherjee, S. & Mazumdar, A. (2021). “Micro analysis of Riverbank Sediment Stability under Different Wetted Surface Conditions”, *IOP Conference Series: Materials Science and Engineering (ICAMEI 2021)*, 1080 (2021) 012042, 1-5 (DOI: 10.1088/1757-899X/1080/1/012042).
19. Biswas, D., Dutta, A., Mukherjee, S. & Mazumdar, A. (2020). “Computational Analysis of Effect of Water Impurity on a Riverbank Particle”, *Contemporary Issues in Computing*, (ISBN: 978-1-948012-16-4), 2 (1), 64-66 (DOI: <http://doi.org/10.26480/cic.01.2020.64.66>).
20. Mondal, S., Mukherjee, S. and Das, S. (2020). “Experimental Study of Thermal Effect of Oscillating Hydraulic Jump”, *International Conference on Advancements in Mechanical Engineering (ICAME 2020)*, Aliah University, Kolkata, 16-18 January 2020, 24.
21. Biswas, D., Dutta, A., Mukherjee, S. & Mazumdar, A. (2019). “A Dynamic Analysis of Riverbank Erosion”, *1st International Conference on Innovation in Modern Science and Technology (ICIMSAT 2019)* (Springer), SIT, Siliguri, September 20-21 2019, 20.

22. Mondal, A., Debnath, B., Vidyarthi, V., Mula, A. & Mukherjee, S. (2017), "Design of a Low-Cost Air Cooling System with Humidity Control by Refrigerated Water", *2nd International Conference on Construction, Real Estate, Infrastructure & Project Management (ICCRIP 2017)*, NICMAR, Pune, 10-11 Nov 2017, 257-267.
23. Mukherjee, S. (2016). "Air Conditioning vis-à-vis Efficiency, Economy and Environment", *Thematic Talk, Proceedings of 6th International & 43rd National Conference on Fluid Mechanics and Fluid Power (FMFP 2016)*, MNNIT, Allahabad, 15-17 Dec 2016, 1-4.
24. Das, S, Ahamed, S.I.A., Rakshit, S., Dey, S. K. & Mukherjee, S. (2016). "Simulation of the Flow Pattern around Triangularly Arranged Cylindrical Piers", *Proceedings of 6th International & 43rd National Conference on Fluid Mechanics and Fluid Power (FMFP 2016)*, MNNIT, Allahabad, 15-17 Dec 2016, 1-3.
25. Mukherjee, S., Pal, B., Mandi, D., Panja, S. K. & Dutta, A. (2015). "An Analytical Approach for Determination of Riverbank Erosion under Action of Capillary Cohesion, Viscous Force and Force due to Pore Pressure", *Proceedings of Emerging Trends in Computer Science & Information Technology (ETCSIT 2015)*, Kalyani Govt. Engg. College, Kalyani, India, 5-7 Jan 2015, 59.
26. Dutta, A., Mukherjee, S. & Mazumdar, A. (2013). "The Effect of Variation of Separation Parameters of Sediment Particles on Separation Speed under the Influence of Pore pressure, Cohesive and Viscous Forces", *Proceedings of HYDRO 2013 INTERNATIONAL (XVIII Conference on Hydraulics, Water Resources, Coastal and Environmental Engineering)*, IIT Madras, Chennai, India, 4-6 Dec 2013, 707-713.
27. Mukherjee, S., Mazumdar, A. (2010), "Effect of Inter-Particle Distance, Mean Particle Size and Entrapped Water Volume on the Escape Velocity of Particles on a Cohesive Riverbank", *Ninth International Conference on Hydro-Science and Engineering (ICHE 2010)*, IIT Madras, Chennai, India. 2 - 5 August 2010.
28. Mondal P.K., Mukherjee S., Misra P., Pal A. and Panda S. (2008). "A Graphical Case-Based Approach for Determination of Optimum Design Parameters of a Cooling Tower", *International Conference on Recent Developments of Mechanical Engineering (ICRDME-2008)*, India, 59-62.
29. Mukherjee S., Mondal P.K., Misra P., Pal A. and Panda S. (2008). "A Case-Based Technique for Determination of Feasible Design Parameters of a Cooling Tower in Different Climatic Conditions", *15th ISME International Conference on New Horizons of Mechanical Engineering*, India, 107-112.

(National)

1. Mukherjee, S. (2018), "Engineering Education in India – Problems and Challenges", *Journal of the Association of Engineers, India* (ISSN 0368-1106), 88 (3&4), 12-15.
2. Mondal, A., Debnath, B., Vidyarthi, V., Mula, A. & Mukherjee, S. (2018), "Design of a Low-Cost Air Cooling System with Humidity Control by Refrigerated Water", *Journal of Construction Management, National Institute of Construction Management and Research* (ISSN 0970-3675), VOL. XXXIII, No. IV, October-December 2018, 85-91.
3. Saha, R., Mukherjee, S., Das, A.K., Jena, K.K., Mandal, M. & Gorh, P.K. (2016). "Simulation of Supercritical Bend Flow through an Open Channel", *Reason – A Technical Journal* (ISSN 2277-1654), XV, 22-31. (DOI:10.21843/reas/2016/22-31/158773).

4. Mukherjee, S. (2016). "Escape Velocity of a Particle on a Riverbank with Partially Saturated Soil under Cohesion", *Global Journal of Advancement in Engineering and Science* (ISSN 2395-1001), 2 (1), March 2016, 144-148.
5. Mondal, P.K., & Mukherjee, S. (2013). "Study of Shear-driven Flow between Two Infinitely Long Parallel Plates", *Journal of the Association of Engineers, India* (ISSN 0368 – 1106), 83 (3 & 4), 35-44.
6. Ghosh D., Kar S., Chakravorty S., Sinha S. & Mukherjee S. (2012). "Effect of Variation of Inter-particle Distance on the Erodibility of a Riverbank under Cohesive and Viscous Forces", *Journal of the Association of Engineers, India* (ISSN 0368 – 1106), 82 (1 & 2), 25-34.
7. Mukherjee, S., Mazumdar, A. (2011). "Study of the Mechanism of Bank Erosion under Cohesion for Different Volumes of Entrapped Water and Different Inter-Particle Distances", *Journal of Indian Association for Environmental Management* (ISSN 0970 – 8480), 38(2), 108-112.
8. Mukherjee S. (2011). "Water in the Perspective of Global Economic Scenario", *Reason – A Technical Magazine* (ISSN 2277 – 1654), X, 1-6.
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10. Mukherjee S. (2006), "Dependence of Cooling Tower Performance on Climatic Variation", *The Innovative ACR*, 15(2), 44-48.
11. Mitra D. and Mukherjee S. (2004). "Air Pollution in Kolkata and Its Abatement", *Journal of Pradushan Nirmulan* (ISSN 0972 - 8902), 1(4), 25-30.
12. Biswas, D., Dutta, A., Mukherjee, S. and Mazumdar, A. (2019). "Determination of Escape Velocity of a Particle on Riverbank under Cohesive and Seepage Force", *National Conference on Trends and Advances in Mechanical Engineering (TAME 2019)*, 60.
13. Mukherjee. S. (2015). "Role of Riparian Tree Roots and Pore Water Pressure in Riverbank Stability", *10th All India People's Technology Congress, India*.
14. Mondal P.K. & Mukherjee S. (2014). "Effect of an Applied Electric Field on Heat Transfer Characteristics of a Newtonian Fluid Flow in an Asymmetrically Heated Narrow Confinement", *21st West Bengal State Science & Technology Congress, India*, 321.
15. Mondal P.K. & Mukherjee S. (2013). "Study of a Shear-Driven Flow Between two Infinitely Long Moving Parallel Plates", *20th West Bengal State Science & Technology Congress, India*, 335.
16. Dutta A., Mukherjee. S., and Mazumdar A. (2013). "Influence of Cohesive and Viscous Force of Entrapped Water on Riverbank Erosion", *20th West Bengal State Science & Technology Congress, India*, 334.
17. Dutta A., Mukherjee. S., and Mazumdar A. (2013). "Effect of Capillary Cohesion and Viscosity of Entrapped Water on Riverbank Erosion", *9th All India People's Technology Congress, India*, 71.
18. Ghosh D., Kar S., Chakravorty S., Sinha S. & Mukherjee S. (2012). "Effect of Variation of Inter-particle Distance on the Erodibility of a Riverbank under Cohesive and Viscous Forces", *Journal of the Association of Engineers, India* (ISSN 0368 – 1106), 82 (1 & 2), 25-34.
19. Dutta A., Chanda S., Mukherjee. S., and Mazumdar A. (2012). "Influence of Viscosity in Sediment Transport", *19th West Bengal State Science & Technology Congress, India*, 270.
20. Mukherjee. S. (2011). "Influence of Riparian Vegetation and water Content in the Soil on Riverbank Stability", *8th All India People's Technology Congress, India*, 30.

21. Mazumdar A., Mukherjee. S., Pal A., Das A. and Paul A. (2010). "Variation of the Escape Velocity of a Particle on the Riverbank for Pure and Saline Water", *17th West Bengal State Science & Technology Congress, India*, 57. **(Received the Best Research Paper Award in the Technology (Engineering) Session)**.
22. Mukherjee. S., and Mazumdar A. (2009). "Study of the Behaviour of a Particle on a Cohesive Riverbank Using Suitable Arrangement Models", *16th West Bengal State Science & Technology Congress, India*, 327-328.
23. Mukherjee. S., and Mazumdar A. (2009). "Study of the Mechanism of Cohesive Riverbank Failure Using Different Arrangement Models", *7th All India People's Technology Congress, India*, 372-377.
24. Mukherjee. S., and Mazumdar A. (2009). "Calculation of the Escape Velocity of Particles with Dimensional Non-Uniformity on a Cohesive Riverbank for Variable Inter-Particle Distance". *National Seminar on Mathematical Modelling of Pollution and Global Warming, India*, 48-59.
25. Mukherjee S., Mazumdar A., Mondal P.K., Ray S., Mandal A., Singh P.K. and Chongder T.K. (2008). "An Analytical Study of Sediment Transport Phenomenon and Calculation of Relevant Parameters for Ideal and Real Fluids", Conference on *34th National Conference on Fluid Mechanics & Fluid Power (FMFP-08)*, India, 208-211.
26. Narjinary P., Bhadra S., Roy T., Das U., Bhattacharya P. & Mukherjee S. (2008). "Study of Water Quality in Domestic, Agricultural and Industrial Areas in Kalyani, West Bengal", Conference on *Integrated Water & Wastewater Management, India*.
27. Pal A., Sen C., Bhowmik R.S., Dasgupta S., Das U., Kar S. & Mukherjee S. (2008). "Study of the Sewage Treatment Plant of Kalyani Municipality", Conference on *Integrated Water & Wastewater Management, India*.
28. Mukherjee S. and Mazumdar A. (2008). "Study of the Mechanism of Bank Erosion under Cohesion for Different Volumes of Entrapped Water and Different Inter-Particle Distances", Conference on *Integrated Water & Wastewater Management, India*.
29. Mukherjee S., Mondal P.K., Chakraborty A., Mukherjee A. and Ghosh P. (2007). "Performance Variation of a Cooling Tower in Different Seasons", Conference on *34th National Conference on Fluid Mechanics & Fluid Power (FMFP-07)*, India, 896-899.
30. Mukherjee S., Ghosh C., Sarkar K.K. and Jana M. (2007). "A Graphical Case-Based Approach for Determination of Structural Design Parameters of a Mechanical Draft Cooling Tower at Different Operating Conditions and Seasonal Variations", Conference on *Trends and Advances in Computer Aided Design and Engineering (TACADE 2007)*, India, 293-302.
31. Mukherjee. S., Mitra D. and Sam S. (2005). "Increasing Health Hazards due to Air Pollution at Kolkata", *5th All India People's Technology Congress, India*, EV 8-12.

32. Mukherjee. S., Das T. (2005). "Energy from Biomass and Present Scenario in India", 5th All India People's Technology Congress, India, EN 1-5.

Reviewer of

Journal of Hydro-environment Research (Elsevier) (7*)
Journal of Hydraulic Engineering (ASCE) (3*)
Journal of Applied Mathematical Modelling (Elsevier) (1*)
KSCE Journal of Civil Engineering (Springer) (17*)
Engineering Applications of Computational Fluid Mechanics (Taylor & Francis, Hong Kong Polytech. Univ.) (15*)
Journal of Water Science and Engineering (China) (2*)
Asian Journal of Water, Environment and Pollution (Netherlands) (2*)
Journal of the Institution of Engineers (India) (Springer) (15*)
International Journal of Fluid Mechanics Research (Begell House) (2*)
International Journal of Agricultural Sciences (Int. Scholars Journals, USA & Africa) (1*)
International Journal of Hydrology Science and Technology (Inderscience) (1*)
International Journal of Energy Research (Wiley) (2*)
Journal of Applied Fluid Mechanics (Iran) (3*)
Journal of the Association of Engineers (India) (3*)
Indian Science Cruiser (4*)
Asian Journal of Environment and Ecology (India) (1*)
International Journal of Engineering and Advanced Technology (India) (1*)
Journal of Scientific Research and Reports (India) (1*)
Advances in Research (India) (1*)
Groundwater for Sustainable Development (Elsevier) (1*)

* Number of papers reviewed

Reviewed 3 books published by Tata McGraw Hill, McGraw Hill and Pearson.

Reviewed 24 conference papers till date.

Also acted as an External Reviewer of Project proposals for Indian Institute of Technology Kharagpur.

Member of Learned Societies and / or Professional Bodies:

1. Member - International Association for Hydro-Environment Engineering and Research (IAHR)
2. Life Fellow & Executive Council Member – The Association of Engineers (India)
3. Life Member - The Institution of Engineers (India)
4. Life Member – Forum of Scientists, Engineers & Technologists (FOSET)
5. Life Member & Executive Council Member – Institute of Science, Education & Culture (ISEC)
6. Life Member – Bangiya Bijnan Parishad (Founded by Prof. Satyendranath Bose)
7. Life Member – The Indian Science Congress Association