

PUBLICATIONS
(Journal published)

1. Gurugubelli Yatirajulu, P V Timbadiya, and **Bandita Barman**. Probability density functions in an asymmetric alluvial sinuous channel, *Stochastic Environmental Research and Risk Assessment*, 2025. **(IF 3.9)**
2. Saundarya Narayan Kashyap, **Bandita Barman**, Turbulent flow characteristics over gravel bed channel with submerged vegetation patches, *Physics of Fluids*, 37 (3), 2025. **(IF 4.1)**
3. Laxman V Rathod, P. V. Timbadiya, and **Bandita Barman**. Turbulent flow structure in a symmetric compound channel with flexible emergent vegetation over floodplains. *Ecohydrology*, 18 (1), 2025. **(IF 2.5)**
4. Laxman V Rathod, P V Timbadiya, and **Bandita Barman**. Turbulent Anisotropy and Coherent Structures in Flow through a Symmetric Compound Channel with Emergent Floodplain Vegetation, *Physics of Fluids*, 37 (1), 2025. **(IF 4.1)**
5. Ravi Kumar Mishra, **Bandita Barman**, Tinesh Pathania. 3D Modeling of Hydro-Morphodynamic Characteristics of Mining Affected Alluvial Channel using TELEMAC3D and GAIA, *Physics of Fluids*, 36 (10), 2024. **(IF 4.1)**
6. Gurugubelli Yatirajulu, P V Timbadiya, and **Bandita Barman**. Flow turbulence and morphological characteristics in an asymmetric alluvial sinuous channel, *Ocean Engineering*, 312: 119341, 2024. **(IF 4.6)**
7. Gurugubelli Yatirajulu, P V Timbadiya, and **Bandita Barman**. Turbulent flow structures and Reynolds stress anisotropy in an asymmetric sinuous mobile channel, *Physics of Fluids*, 36 (8), 2024. **(IF 4.1)**
8. **Bandita Barman**, Saundarya Narayan Kashyap, and Bimlesh Kumar. Flow velocity prediction in a vegetated channel using soft computing techniques, Multiscale and Multidisciplinary Modeling, Experiments and Design, 1-11, 2024. **(IF 1.9)**
9. **Bandita Barman**, Jyotirmoy Barman, and Bimlesh Kumar. Fractal dimensions of hydraulic parameters in sand mined alluvial channel. *Water Supply*, 22 (6): 2022, 6143–6156. **(IF 1.768)**
10. **Bandita Barman** and Bimlesh Kumar. Quantification of Turbulent Flow Anisotropy in an alluvial channel Mining Pit. *Marine Georesources and Geotechnology*, 2022/ <https://doi.org/10.1080/1064119X.2022.202550>. **(IF 2.673)**
11. **Bandita Barman**, Bimlesh Kumar, and Arup Kumar Sarma. Impact of sand mining on alluvial channel flow characteristics. *Ecological Engineering*, 135, 36-44, 2019. **(IF 4.035)**
12. **Bandita Barman**, Bimlesh Kumar, and Arup Kumar Sarma, Dynamic characterization of migration of a mining pit in an alluvial channel. *International Journal of Sediment Research*, 34, 155-165, 2019. **(IF 2.902)**
13. **Bandita Barman**, Bimlesh Kumar, and Arup Kumar Sarma, Turbulent flow structures and geomorphic characteristics of mining affected alluvial channel. *Earth Surface Processes and Landforms*, 43, 1811-1824, 2018. **(IF 4.133)**
14. **Bandita Barman**, Anurag Sharma, Bimlesh Kumar, and Arup Kumar Sarma, Multiscale characterization of migrating sand wave in mining induced alluvial channel. *Ecological Engineering*, 102, 199-206, 2017. **(IF 4.035)**
15. **Bandita Barman**, Arup Kumar Sarma, and Bimlesh Kumar, Mining Pit Migration of an Alluvial Channel: Experimental and Numerical Investigations. *ISH Journal of Hydraulic Engineering*, Online ISBN 978-3-319-55125-8, 2018. **(IF 0.451)**

Journals (under review)

1. Laxman V Rathod, P. V. Timbadiya, and **Bandita Barman**. Flow hydrodynamics in a compound channel with submerged flexible floodplain vegetation. *Journal of Hydraulic Engineering*, Revision submitted. **(IF 2.8)**
2. Laxman V Rathod, P V Timbadiya, and **Bandita Barman**. Flow and

submerged flexible vegetation interaction in a compound channel, *Journal of Hydrology*, under review **(IF 6.3)**

3. Gurugubelli Yatirajulu, P V Timbadiya, and **Bandita Barman**. Evolution of flow turbulence and higher order correlations in an asymmetric alluvial sinuous channel, *Acta Geophysica*, under review. **(IF 2.1)**

BOOK CHAPTER **Bandita Barman**, Bimlesh Kumar, and Arup Kumar Sarma. Experimental study on mining pit migration. Book Title: *Development of water resources in India*, Series Title: Water Science Technology Library Series, Springer, Vol. 84, Chapter 26, ISBN: 978-3-319-55124-1.

Koradia Ashishkumar K, **Bandita Barman**. Numerical Solution of Two-Dimensional Shallow Water Flow with Finite Difference Scheme. Book Title: Fluid Mechanics and Hydraulics: International Conference on Hydraulics, Water Resources and Coastal Engineering, (pp. 115-126). Series Title: Lecture Notes in Civil Engineering Singapore: Springer Nature Singapore, ISBN 978-981-19-9150-9.

CONFERENCE PAPERS (Last 5 Years)

1. Ravi Kumar Mishra, **Bandita Barman**, and Tinesh Pathania. Hydro-Morphodynamic Characteristics of a Mining Pit Near a Channel Confluence, 41st IAHR World Congress, Singapore, 22-27 June, 2025.
2. Yatirajulu Gurugubelli, Laxman Rathod, Timbadiya P.V., and **Bandita Barman**. Computation of Bed Shear Stress Using Multiple Methods and Quadrant Analysis in an Asymmetric Sinuous Channel, 41st International Association for Hydro Environmental Engineering and Research (IAHR) World Congress, Singapore during June 22-27, 2025.
3. Laxman Rathod, Yatirajulu Gurugubelli, Timbadiya P.V., and **Bandita Barman**. Turbulent flow Structure in Compound Channels: Comparing the Morphological Effects of Two Emergent Flexible Floodplain Vegetation Types, 41st International Association for Hydro Environmental Engineering and Research (IAHR) World Congress, Singapore during June 22-27, 2025.
4. Ravi Kumar Mishra, **Bandita Barman**, and Tinesh Pathania. A critical overview of impact of sediment mining on fluvial systems, UNCCRD Delta Summit, Bangkok, 17-20 March, 2025.
5. Ravi Kumar Mishra, **Bandita Barman**, and Tinesh Pathania. Estimating Bathymetry of a Mining Affected Straight Alluvial Channel, 29th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, CWPRS Pune, 18-20 December, 2024.
6. Laxman V Rathod, Timbadiya P.V., and **Bandita Barman**. Investigating the Flow Hydrodynamics in a Compound Channel with Flexible Vegetated Floodplains, 29th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, Central Water & Power Research Station (CWPRS), Pune, India during 18-20 December, 2024.
7. Yatirajulu Gurugubelli, Timbadiya P.V., and **Bandita Barman**. Flow Turbulence and Third Order Correlations in an Asymmetric Sinuous Channel, 29th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, Central Water & Power Research Station (CWPRS), Pune, India during 18-20 December, 2024.
8. Saundarya Narayan Kashyap and **Bandita Barman**. Velocity distribution in a narrow open channel with submerged rigid vegetation, 29th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, CWPRS Pune during 18-20 December 2024.

9. Rozy Kumari and **Bandita Barman**. Numerical Modelling of Sediment Transport Dynamics in Braided Rivers: A Comprehensive Review, 29th International Conference on Hydraulics, Water Resources, River and Coastal Engineering, Central Water & Power Research Station, Pune, INDIA during 18-20 December, 2024.
10. Laxman V Rathod, Timbadiya P.V., and **Bandita Barman**. Impact of Flexible Emergent Vegetation on Open Channel Velocity Distribution in a Compound Channel, 28th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering, NIT Warangal during 21-23 December, 2023.
11. Yatirajulu Gurugubelli, Timbadiya P.V., and **Bandita Barman**. Turbulent Flow Characteristics of Asymmetric Sinuous Bend, 28th International Conference on Hydraulics, Water Resources, Environmental and Coastal Engineering, NIT Warangal during 21-23 December, 2023.
12. Laxman Rathod, Gurugubelli Yatirajulu, P. V. Timbadiya and, **Bandita Barman**. Performance of Acoustic Doppler Vectrino Profiler in Measurement of Velocity Profile in Mobile Bed Channel, 23rd congress of the international association for hydro environmental engineering and research – Asia pacific division, IIT Madras 2022.
13. Gurugubelli Yatirajulu, P. V. Timbadiya and, **Bandita Barman**. Longitudinal and Lateral Velocity in a Sinuous Channel Bend, International Seminar on Sustainable Technologies for River Erosion Alleviation and Management (STREAM – 2022)
14. Gurugubelli Yatirajulu, P. V. Timbadiya and, **Bandita Barman**. Review on Morphology and Turbulence Characteristics in Meandering Rivers, EGU General Assembly 2022.
15. Laxman Rathod, P. V. Timbadiya and, **Bandita Barman**. Flow Resistance Due to Rigid and Flexible Vegetation: A Review, EGU General Assembly 2022.
16. Laxman V Rathod, **Bandita Barman**, Bimlesh Kumar. Estimation of Bed Material Load using Artificial Intelligence Techniques, EGU General Assembly 2021. (Online)
17. Koradia Ashishkumar K, **Bandita Barman**. MacCormack Finite-Difference Scheme for Simulation of Flood Hydrograph, International Conference (Online) on Water and Environment (ICWE- 2021) March 22-23, 2021 (Best paper award)
18. Jyotiprakash Tarei, **Bandita Barman**. Performance of Mac-Cormack finite difference scheme with TVD and Artificial Viscosity, Water Resources and Coastal Engineering (HYDRO), NIT Rourkela, 2020. (Online)