

DECEMBER
2025

NEWSLETTER

PUBLICATION

Kumar, A. Jain, M.K*. (2025). Assessment of Entropy Derived 2D River Velocity Profiles from Surface Velocity Radar Measurements: A case study of the Ganga and Bhagirathi Rivers. *Scientific Reports* (2025) (In press) (<https://doi.org/10.1038/s41598-025-33283-1>). (Q1)

Saha, Jain, M.K*, Joshi, P., Das, S., and Rawat, N. (2025). Development of Daily Downscaled, Bias-corrected CMIP6 climate Datasets for estimating Reference Evapotranspiration in South Asia. *Scientific Data* 12:1879 (<https://doi.org/10.1038/s41597-025-06149-4>). (Q1)

Nikunj K. Mangukiya, Anupal Baruah, Diganta Barman, B. M. Arjun, Ashutosh Sharma* (2025) Integrating Analytical Hierarchy Process and Machine Learning for Enhancing Flood Hazard Mapping, *ASCE Natural Hazards Reviews*, <https://doi.org/10.1061/NHREFO.NHENG-2188>

Gopeshwar Sahu, Nikunj K. Mangukiya, Ashutosh Sharma* (2025). Does MC-LSTM model improve the reliability of streamflow prediction in human-influenced watersheds? *Journal of Hydrology*, 134711.

<https://doi.org/10.1016/j.jhydrol.2025.134711>

Sunil, A., Kumar, P., Singh, A., Agarwal, A., Kumar, A., Kim, S. Y. & Rajni. Indian Ocean sea surface temperature modulates the Arctic Oscillation: A multi-model assessment using CMIP6. *International Journal of Climatology*. 46, e70259 (2026). <https://doi.org/10.1002/joc.70259>

AWARDS



Prof. Ankit Agarwal has been awarded the Young Engineer Award 2025 and inducted as Young Associate by the Indian National Academy of Engineering (INAE) in December 2025.

Prof. Ashutosh Sharma was awarded with Prof. R. J. Garde Young Researcher Award by the Indian Society for Hydraulics (ISH), presented during the 30th International Conference on Hydraulics, Water Resources, River and Coastal Engineering (HYDRO 2025) at NIT Rourkela.

Spandita Mitra has received Global Development Fellowship for the research visit in Imperial College London, UK (March-June 2026).

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LECTURES/TALKS

Prof. Ankit Agarwal delivered a presentation on "Pioneering Methods for Understanding and Forecasting Hydro-Climate Extremes: From Complex Climate Dynamics to Operational Solutions in India" at the INAE Annual Convention 2025, hosted at HAL Management Academy (HMA), Sanjay Nagar, Marathahalli, Bengaluru-560037, from 18th to 20th December 2025.

Prof. Ashutosh Sharma delivered a keynote talk on "Overview of the CAMELS initiative and CAMELS-IND data" at 30th International Conference on Hydraulics, Water Resources, River and Coastal Engineering (HYDRO 2025) at NIT Rourkela.

Prof. Ashutosh Sharma participated in Panel Discussion on "Accelerate Your Career: IAHR and Global Research Collaboration " by IAHR YPN Session at HYDRO International 2025, organized by National Institute of Technology Rourkela, Odisha, India.

Prof. Ashutosh Sharma delivered a lecture on "An Introduction to the CAMELS-IND Dataset" during AI4DRM (Artificial Intelligence for Disaster Risk Management) Workshop, IIT Mandi on Dec 06, 2025.

Spandita Mitra gave presented a poster titled in the American Geophysical Union (AGU) Annual Meeting, held from 15-19th December 2025.

PROJECTS

Glaciers and Glacier Melt Runoff Changes and their Linkages to Hydro-climatic and Topographic Context in the Upper Ganga Basin, funded by National Mission for Clean Ganga (NMCG), PI: Prof. Ashutosh Sharma.

MISCELLANEOUS

Abinesh G, working under the supervision of Prof. Ankit Agarwal, successfully defended his PhD thesis on December 13, 2025. His thesis is titled "Climate-Informed Approaches for Flood Risk Assessment".