

Newsletter

August & September 2026

Research published, honours received, conferences attended and talks delivered across the department.

12

Publications

2

Awards & Recognitions

7

Events

7

Invited Talks

01 AWARDS & RECOGNITIONS

GLOBAL YOUNG ACADEMY

Prof. Ankit Agarwal

Member of the Global Young Academy (2026–2030) at the GYA Annual General Meeting in Bremen, Germany — recognising scientific excellence, societal engagement, and global academic leadership.

ODISHA URBAN CONCLAVE 2026

Prof. Bhaskar Jyoti Deka

Honored by the Government of Odisha to deliver a technical presentation and participate in the Odisha Urban Conclave 2026, held on 23 August at the Convention Centre, Lok Seva Bhawan, Bhubaneswar.

02 PUBLICATIONS

WATER RESEARCH · VOL 308 (C) Q1 · IF 12.8

Hydrodynamic Controls on Vertical Transport and Retention of Microplastic Particles in Subsurface Sediments

Singh, J., **Yadav***, B. K., Schneidewind, U., Chauhan, N., Dehbandi, R., Haverson, L., Li, K., Krause, S. (2026)

doi.org/10.1016/j.watres.2026.127051

ENVIRONMENTAL MANAGEMENT · 76(10) Q1 · IF 3.4

A source-pathway-receptor framework for quantifying ecological risk to shallow- and deep-rooted vegetation under heavy metal contamination

Dwivedi, P., **Yadav***, B. K. (2026)

doi.org/10.1007/s00267-026-02587-x

JOURNAL OF HYDROLOGY · 136061

Impact of reservoir storage on propagation from meteorological to hydrological drought

Gupta, A., Jain, M. K., Pandey, R. P., & Hannah, D. M. (2026)

doi.org/10.1016/j.jhydrol.2026.136061

EWRA

Uncertainty in drought characterization using gridded and station datasets from the India Meteorological Department in the Krishna River Basin, India

Gupta, A., Jain, M. K., Pandey, R. P., & Hannah, D. M. (2026)

ewra.net/ew/volume_2026_90.htm

JOURNAL OF WATER PROCESS ENGINEERING · 92 Q1 · IF 6.6

PFAS-free surface engineering of membranes for enhanced vapor transport and emerging pollutant rejection

Jilagam N. K., and Deka B. J.* (2026) · 110747

doi.org/10.1016/j.jwpe.2026.110747

SCIENTIFIC REPORTS

Comparative evaluation of rating curve estimation methods for data-scarce mountainous rivers in the Indian Himalayas

Saxena, N. and Sen, S. (2026)

doi.org/10.1038/s41598-026-71941-0

WATER RESOURCES RESEARCH · 62

A cost-effective probe for monitoring groundwater-surface water interactions

Reddy, P. K., Kulkarni, R., & Sen, S. (2026) · e2025WR041873

doi.org/10.1029/2025WR041873

JOURNAL OF ENVIRONMENTAL MANAGEMENT · 414

Role of urban discharges in regulating the dynamics of river water quality to antibiotic resistance in subtropical river basins

Pandey, N. K., Alkhatib, A. E. A., Simon, M., Vishwakarma, R. K., Kumar, J., Srikanth, V., Sen, S., Joshi, H., Yadav, S., Mateo-Sagasta, J., Jampani, M., Sikka, A., Hazra, S. (2026)

doi.org/10.1016/j.jenvman.2026.130572

CHAOS · 36(10)

Contrasting seasonal organization of Arctic dynamical and thermodynamic variability

Kulkarni, S., & Agarwal, A. (2026) · 101101

doi.org/10.1063/5.0355263

NATURE SUSTAINABILITY

Himalayan hazards to high-mountain hydropower

Schwanghart, W., Agarwal, A. & Korup, O. (2026)

doi.org/10.1038/s41893-026-01955-z

HYDROLOGICAL SCIENCES JOURNAL

Improving NCMRWF Unified Model Rainfall Forecasts over India through IMERG-Calibrated IMDAA Reanalysis

Raghuvanshi, A. S., Kumar, K. N., Kaur, S., & Agarwal, A. (2026)

doi.org/10.1080/02626667.2026.2737818

SCIENTIFIC DATA

Non-stationary Multivariate Bias-corrected CMIP6 Climate Projections of Daily Precipitation and Temperature over India

Sharma, S., Raghuvanshi, A. S. & Agarwal, A. (2026)

doi.org/10.1038/s41597-026-08081-7

03 EVENTS

7 AUGUST 2026 · FEATURED EVENT

ANRF + IIT Roorkee Research X Impact Conclave

The Department of Hydrology, IIT Roorkee, participated in the conclave, which featured research presentations and posters across AI, quantum technologies, healthcare, climate, renewable energy, infrastructure, and emerging technologies. The inaugural ceremony was graced by Prof. Kamal Kishore Pant, Director, IIT Roorkee, highlighting the institute's commitment to research excellence and societal impact.

50+

research presentations

77

PhD research posters

127+

research works

11 AUG 2026

Prof. Sumit Sen delivered a keynote talk on “Hydrology: Watching Water Move” under the 2-day Science Education Workshop on “Climate Change, Water Security and Human Health in Cold Desert Ladakh: A lab-to-Field demonstration”.

24 AUG 2026

Prof. Sumit Sen gave a talk on “Watershed Management for Water Security: From the basics to the field: Rejuvenating smaller rivers and streams through sub-catchment prioritization and impact-assessment monitoring” under the APL Global Watermark Council Meet.

SEPTEMBER 2026

Teachers' Day 2026. The Department of Hydrology celebrated with great joy, gratitude, and enthusiasm. The event brought teachers and students together in a warm atmosphere that strengthened the bond between them.

14–18 SEP 2026

Prof. Sumit Sen presented a talk on “[talk title]” at the Ecohydrological Conference (HydroEco26), University of Birmingham, United Kingdom.

16 SEP 2026

Prof. Sumit Sen participated and presented the department and IIT Roorkee in a research project meeting at the University of Plymouth, United Kingdom.

25–26 SEP 2026

Prof. Brijesh Kumar Yadav co-chaired the 6th National Groundwater Conference (INGWC-2026) at IIT (ISM) Dhanbad, conducted under the aegis of AGGS – Association of Global Groundwater Scientist.

04 INVITED TALKS

KEYNOTE 16–21 Aug 2026

“Management of Shallow Groundwater Resources through MAR in Coastal”

Prof. Brijesh Kumar Yadav · Five-day Indo-USA workshop on Managed Aquifer Recharge for Flood Resilience & Groundwater Sustainability, Chandigarh

TECHNICAL TALK 23 Aug 2026

“Wastewater Treatment & Reuse by Urban Local Bodies: Technologies and Resource Recovery”

Prof. Bhaskar Jyoti Deka · Invited by the Housing & Urban Development Department, Government of Odisha — Odisha Urban Conclave 2026: Technical Symposium on Used Water Management

PLENARY 14–18 Sep 2026

“Interaction Pathways between Terrestrial Groundwater and Coastal Ecosystem along Southeastern Arabian Sea Coast”

Prof. Brijesh Kumar Yadav · Ecohydrological Conference (HydroEco26), University of Birmingham, United Kingdom

INVITED TALK 19–20 Sep 2026

“Enhancing high-temperature fuel cell performance: The impact of silicotungstic acid on phosphoric acid-doped polyether sulfone-polyvinylpyrrolidone membranes”

Prof. Bhaskar Jyoti Deka · 2nd International Symposium on Innovative Design for Excellence, Affordability and Sustainability (IDEAS), jointly organized by Queen’s University, Kingston, Canada and IIT Roorkee

INVITED TALK 21 Sep 2026

“Environmentally sustainable membranes for efficient desalination and wastewater reuse”

Prof. Bhaskar Jyoti Deka · University of Toronto, Toronto

OPENING KEY TALK 25–26 Sep 2026

“Building Groundwater Resilience through Nature-Based Solutions: Management of Coastal and Terrestrial Aquifers in a Changing Climate”

Prof. Brijesh Kumar Yadav · 6th National Groundwater Conference (INGWC-2026), IIT (ISM) Dhanbad

SEMINAR TALK 30 Sep 2026

“Global and Indian Environmental Pollution: Emerging Trends, Policy Perspectives, and Advanced Membrane Solutions”

Prof. Bhaskar Jyoti Deka · India Korea Center for Research and Innovation (G-KIC Asia) S&T Seminar

