

Curriculum Vitae
DR. BRIJESH KUMAR YADAV

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EDUCATIONAL QUALIFICATIONS

- Ph.D. (April 2008) “Mathematical Model of Phytoextraction for Contaminated Soils”
 - Department of Environmental Resources, UNESCO-IHE Institute for Water Education, Delft, The Netherlands; Nov 2006- Oct 2008 (Advisor: Prof. Maarten A. Siebel)
 - Department of Civil Engineering, Indian Institute of Technology Delhi, India; Jan 2003- Oct 2006 (Supervisor: Prof. Shashi Mathur)
- M. Tech., Water Resources Engineering from Indian Institute of Technology (IIT) Delhi, India (CGPA 8.51/10); 1999-2000 (Dissertation: “Hydro-environmental modeling of lakes using mathematical and Artificial Neural Networks models”)
- B. E., Agricultural Engineering from College of Technology and Engineering (CTAE) Udaipur, Rajasthan, India; 1995-1999

RESEARCH AREAS / INTERESTS

Subsurface flow and contaminant transport, Plant-soil-atmosphere interactions, Phytoremediation of contaminated soil-water, Salt water intrusion and managed aquifer recharge (MAR), Bioremediation of hydrocarbon polluted sites, Biomonitoring, Assessment of Microplastic pollution, Multiphase flow, CO₂ sequestration in deep subsurface, Nitrate transport in vadose zone, Vulnerability assessment of groundwater and its quantification, Geophysical investigations, Surface-Ground water interactions, Submarine groundwater discharge and density dependent flow, Seepage through dams.

PROFESSIONAL EXPERIENCE

- **Head**, Department of Hydrology, IIT Roorkee (June 01, 2021- till date)
- **Professor**, Department of Hydrology, IIT Roorkee (March 18, 2021- till date)
- **Joint Faculty**, International Centre of Excellence for Dams (ICED), IIT Roorkee (Oct 2023- to date)
- **Associate Professor**, Department of Hydrology, IIT Roorkee (April 2016- March 17, 2021)

- **Assistant Professor**, Department of Hydrology, IIT Roorkee (July 2012- April 28, 2016)
- **Ramanujan Fellow**, Civil Engineering Department, IIT Delhi (Jan 2011- July 2012)
- **Postdoctoral Research**, University of California, Davis (July 2010- Dec 31 2011)
- **Postdoctoral Research**, University of Utrecht, Netherlands (Nov 2008 – June 2010).
- **Researcher** at UNESCO-IHE Institute for Water Education, Delft, Netherlands (Nov 2006 - Oct 2008)

SUPERVISION OF RESEARCH WORKS

FELLOW/INSPIRE FACULTY MENTORING

1. Dr. Rajneesh Singh “Wastewater Treatment for Agricultural Reuse in Rural Communities” (**Ramanujan Fellow**). May 2023- Till date
2. Dr. Pankaj Dey “Hydrologic Signatures of Floods across India” (**Inspire Faculty Fellow**), June 2023- Till date

POSTDOC MENTORING (06)

1. Dr. Aditya Kapoor “Strengthening of Groundwater Laboratory for Seepage in Dams” May 2023- Till Date
2. Dr. Manoj Kumar “Sustainable Agri-Water Use in the Hindon Sub-Basin using Hydrogeological investigations” Jan 2024- Till date
3. Dr. Apoorv Verma “Soil and Groundwater Quality Assessment in under varying environmental conditions” Jan 2022- April 2024
4. Dr. Deepak Kumar, Bioremediation of LNAPL in Costal Semi (-Arid) Environmental Condition (Project DST-695-HYD). June- Sept. 2014; Dec 2018- Till date
5. Dr. Basant Yadav, Reactive transport modelling for discrete fracture network in porous media (Project CCT-1043-HYD), July-October 2017
6. Dr. Shobhika Parmar, Assessment of heavy metals in soil-plant of wastewater irrigated farms and its remediation using phytoextraction, NPDF, Aug-Nov 2017

PhD STUDENTS (Completed: 12; IN PROGRESS: 12)

Completed (Total 12; Singly-06 and Jointly-06)

1. Ms. Shreejita Basu, Bioremediation of LNAPLs in polluted soil-water system under varying environmental conditions, 2011-2016, Jointly with Prof. Shashi Mathur, IIT Delhi
2. Mr. Jahangeer, Non-point source pollutants transport in deep and heterogeneous vadose zone, 2012-2018
3. Mr. Pankaj Kumar Gupta, “Multi-scale fate and transport of LNAPL under varying subsurface flow conditions” July 2014-2018
4. Ms. Shachi, “Hydrogeological aspects of CO₂ sequestration in subsurface” July 2014-2020
5. Mr. Shashi Ranjan, “In situ arsenic sequestration using permeable reactive barriers” January 2015- 2020 (Co-guide: Prof. Himanshu Joshi, IIT Roorkee)
6. Ms. Anooja Thomas, “Plant water uptake using root compensation and hydraulic redistribution mechanisms” Jan -2016- 2021

7. Mr. Apoorv Verma, Groundwater vulnerability assessment using mechanistic and index based models, (Jointly with: Prof N B Singh, IET Lucknow); 2023 Completed
8. Mr. Jitendra Kumar Vyas "Non-contract discharge estimation through Entropy Theory" (Jointly with Prof. M Perumal and Prof. Tommaso Moramarco, IRPI Italy) April 2022
9. Mr. Mohamed Fadhili Mwabumba "Hydrologic responses to climate and land use/cover changes of Ngorongoro conservation area and surrounding catchments, Northern Tanzania" (Jointly with Dr. Mwemezi J. Rwiza & Dr. Madaka Tumbo, Nelson Mandela African Institute of Science Technology (NM-AIST), Arusha, Tanzania) 2017 - 2023
10. Ms. Anuradha Garg, "Assessment of NAPL and heavy metal co-contamination in soil-water system" 2018-2023, Completed
11. Mr. Shubham Tiwari "Managed aquifer recharge in saline regions for enhanced recovery of freshwater" 2018-2023, Completed
12. Mr. Tegegn Kassa Beyene "Surface and groundwater interaction modeling at watershed scale in Ethiopia" 2018 (Jointly with - Prof. Manoj & Prof. Ankit , IIT Roorkee): Completed
13. Ms. Rosette Nyiranziza "Surface-groundwater interactions in crater highlands of Tanzania" 2019 (Jointly with Nelson Mandela African Institute of Tech. and Science)
14. Mr. Jaswant Singh "Assessment of micro-plastics from landfill leachate" 2020
15. Mr. Deepak Tripathi "Managed aquifer recharge (MAR) in Coastal regions" 2021
16. Mr. Prabhat Dwivedi, "Surface-Groundwater interactions under changing climate" 2022
17. Mr. Shravani Yadav "Assessment of Surface-ground water interactions with special emphasis on MPs and heavy metals" 2022
18. Akansha Kesharia "Hydrodynamics of Submarine Groundwater Discharge (SGD) in changing climatic conditions" 2022
19. Baljinder Singh "Hydrogeochemical assessment of polluted sites" January 2023- Till date
20. Mr Sanjay Kumar "Impact of Climate Change on groundwater Resources" July 2023- Till date
21. Mr. Dhiraj Sonkar "Assessment of groundwater potential zones in (semi)-arid regions for applying Managed Aquifer Recharge" July 2023- Onwards
22. Mr. Negasi Haile "Groundwater Assessment in sedimentary and hard rock containing watershed of Ethiopia"

MASTERS' THESIS SUPERVISION (AWARDED: 40; ONGOING: 03)

Awarded

1. Voona Ramganesh "Investigating Groundwater Flow Regime and Recharge Sources of Waterlogged Farmland: A Hydrogeological, Isotopic, and Numerical Modeling Approach for Remedial Measures" May 2024
2. Josephat Mihija Kadoto "Dam based water resources management planning for Makutupora basin in Tanzania" May 2024
3. Aishwarya Bhattacharya "Assessment of Fate and Transport of Heavy Metals (Cr, Cd) in Hard-rock Aquifers" (Jointly with Prof. Nitin Khandelwal), May 2024

4. Shubhanshu "Unraveling the Effects of Shifting cultivation on Physicochemical and Hydraulic Properties of Soil and Water Resources" June 2023
5. Shruti Jain "Analysis of Seepage Flow Through Earthen Dams under Various Design Factors and Reservoir Water Level Conditions" June 2023
6. Suvashree Sahoo "Assessment of Groundwater recharge using Probabilistic and Mechanistic Approaches for hard Rock Areas" Completed Jun 2023
7. Aniket Chandra "Geophysical Investigation and Groundwater Quality Assessment around an MSW Site" June 2022.
8. Deepak Tripathi "Managed aquifer recharge in salt affected regions of India" June 2021
9. Souvik Gupta "Modeling geological sequestration of CO₂ under ins-situ reservoir condition" June 2021
10. Shubham Singh "Groundwater arsenic source apportionment using Inverse modeling approach" June 2021
11. Umesh Uchenia "Fate and transport of Micro-plastic through variably saturated zone" June 2021
12. Negasi Haile "Applied Groundwater flow modeling of Akaki-Kaliti sub city well field of Ethiopia" July 2020
13. Amit Vats "Combined Removal of Chromium and Toluene from ground water using Nano-scale Zero Valent Iron" July 2020
14. Amensis Habtamu, Assessment of Salt Removal from vadose zone by a Fully Penetrating Ditch Drains under the Influence of Sink or Source, July 2020
15. Firewaynie Kasu "Delineating Groundwater Potential and Recharge Zones of Haramaya Watershed, Ethiopia, Completed in July 2020
16. Uzzawal Sen "Analysing Arsenic Contaminated Aquifers of Gopalganj District Bangladesh using MODFLOW"- Completed in June 2019
17. Manik Goel "Groundwater Assessment and Vulnerability Mapping of Vindhyan-Ganga Sedimentary Formations Around Mirzapur District in India" - Completed in June 2019
18. Abhishek Kumar "Multidimensional Flow Modeling using Discrete Fracture Network in Fractured Rocks", Completed in June 2019
19. Abhishek, "Inverse Modeling of Heterogeneous Vadose zone using Genetic Algorithm: Afield Scale Lysimeter study" (Jointly with Prof. Thomas Wohling, TU Dresden)- Completed in June 2019
20. Ashish Kumar Singh Chaudhary "Modeling soil moisture flow and solute transport through vadose zone of Gwalior" Completed in May 2018
21. Bijendra Kumar Baghel "Hydrogeological investigation and groundwater modeling for aquifer characterization of Bhopal region" Completed in May 2018
22. Shubham Goswami "Vadose zone modeling under varying Environmental conditions" May 2018 (Jointly Prof. CSP Ojha, IIT Roorkee)
23. Abhishek Das "Hydro-geochemical analysis of Mewat (Nuh) district, Haryana" June 2017 (Jointly with Dr Gopal Krishan, NIH Roorkee)
24. Vivek Kumar "Role of substrate pressure and temperature on CO₂ sequestration" June 2017

25. Himanshu Tyagi "Modeling saline water interface under varying groundwater flow conditions" May 2017
26. Jogendra Pal "Numerical analysis of groundwater flow on efficiency of ground source heat pumps" June 2016
27. Saurabh Sharma "Impact of water table dynamics on sea-water interface in coastal zone using sand tank experiments" June 2016.
28. Manish Tungaria "Groundwater Protection Planning: A case study from Saharanpur City U.P." IIT Roorkee, June 2015 (Jointly with Dr .D C Singhal, IIT Roorkee)
29. Kuntal Purkayastha "Soil Moisture Dynamics Modeling In Vadose Zone Using Hydraulic Redistribution Mechanism of Plants" IIT Roorkee, June 2015
30. Haji shaaban "Groundwater Pollution Risk Assessment of the Zanzibar Island in Tanzania" IIT Roorkee, June 2014
31. Sayed M. Junaid "Nitrate fate and transport simulation in heterogeneous vadose zone of Doon Valley, Uttarakhand, India " IIT Roorkee, June 2014
32. Rakesh Deopanday "Geophysical Investigation of groundwater availability" IIT Roorkee, June 2014 (Jointly with Dr .D C Singhal, IIT Roorkee)
33. Sachi Srivastava "Modeling dense non-aqueous phase liquids transport in variably saturated porous media ", IIT Roorkee, June 2014
34. Heidi Eilzer "Impact of soil-moisture content on LNAPL fate and transport in unsaturated zone", completed (Jointly with Dr. Franz Lennartz, TU Dresden, Germany), 2014
35. Mamata Verma, "Vulnerability and Pollution Risk Assessment of Groundwater Resources of Doon Valley, India" IIT Roorkee, June 2013\
36. Monika Agnihotri "Runoff Modelling and crop water planning of Gadarwara watershed in Madhya Pradesh" IIT Roorkee, June 2013 (Jointly with Dr. D K Srivastava, IIT Roorkee)
37. Shristi Rajbhandari, "Effect of water table dynamics on fate and transport of a light NAPL" Utrecht University, Nov 2010 (Jointly with Prof Majid Hassanizadeh)
38. Yvonne M. Mos, "Bioremediation of toluene contaminated soil under different environmental conditions" Utrecht University, August 2010 (Jointly with Prof Majid Hassanizadeh)
39. Mr. Kwame Owusu-Ansah, "Evaluation of Household Solid waste processing options in Accra, Ghana", UNESCO-IHE, Delft, April 2008 (Jointly with Prof. Piet Lens)
40. Mr. Asrat Yirgu Senato, "Recycling of MSW- a case study for the city of Awassa, Ethiopia", UNESCO-IHE, Delft, April 2008 (Jointly with Prof Piet. Lens)

BTECH PROJECTS

Completed: 05 (Two at IIT Delhi, one at Utrecht University, and two at IIT Roorkee); Summer Interns (07)

PROFESSIONAL BODIES MEMBERSHIP

Dam Safety Society (Life Member), International Association of Hydrogeologists (INC-IAH)-141080, International Association of Hydrological Sciences (IAHS); International Society for Porous Media (INTERPORE); American Geophysical Union (AGU); International Association

of Engineers (IAENG), Indian Association of Hydrologists (IAH), Indian Association of Water Resources Society (IWRS), Association of Global Groundwater Scientists (AGGS)-116 ; Life Member Indian Society of Agricultural Engineers (5094)

Member of National Committees

1. Team leader of the three-member committee to evaluate the ongoing National Hydrological Projects (NHP) projects and its future need (Constituted by Secretary, DoWR, RD&GR)
2. Chairperson of the "Expert Committee on Ground Water" by the Government of Sikkim made by the Honorable High court of Sikkim
3. Member of State committee of Dams Safety of Uttarakhand State
4. External member of the "Area Advisory Board (AAB)" of Amity Institute of Environmental Sciences for two years (2021-2023)
5. Centre's Administrative Committee (CAC) member of Institute Instrumentation Centre
6. Member of Research Advisory Group (RAG) of Gujarat Environmental Management Institute (GEMI), Government of Gujarat, India
7. Member of the Technical committee formed by Hon'ble NGT to investigate the impact of mining up to the radius of 10 km from the Bassi Wild Life Sanctuary, Chittorgarh District, Rajasthan
8. Member of the Joint Assessment formed by Hon'ble NGT, in the matter of Om Puri Vs Hindustan Zinc Ltd & Ors
9. Member of the Joint inspection committee formed by Hon'ble NGT in the matter of Adil Ansari Vs M/s C L Gupta Exports Pvt Ltd Amroha, UP
10. Member BIS technical committee for preparing ISO reports on various areas of Water resources.

DETAILS OF SPONSORED PROJECTS

Research Projects: (Sanctioned Amount ~8.0 Cr as PI/Mentor and ~ 1.25 Cr as Co-PI)

S. No.	Title	Sponsoring Agency	Period	Sanctioned Amount (Lacs)	PI/ Co-PI	Status
1	Bioremediation of LNAPL polluted land under (semi)-arid coastal environment conditions	DST	2011-2016	73	PI	Completed
2	Multidimensional soil water flow and nonpoint source pollutant movement through deep and heterogeneous variably saturated zones (FIG)	MHRD	2012-2017	9.5	PI	Completed
3	In-situ Arsenic sequestration using engineered nanomaterials	DST	2016-2017	30.37	CO-PI	Completed
4	Reactive Transport Modelling for Discrete Fracture Network (DFN) in Porous Media	CCTech, Pune	2017-2018	5.5	PI	Completed
5	Bechtop Atomic Absorption Spectroscopy, under SMILE Grant, IIT Roorkee	SMILE Grant	2017-2018	45	PI	Completed

6	Future Secular Changes & Remediation of Groundwater Arsenic in the Ganga River Basin	DST-Newton Bhabha Indo-UK	2018-2021	67.3 (IIT R)	CO-PI	Completed
7	In-situ bioremediation of NAPL pollution within the Baddi-Barotiwal Nalagarh (BBN) Industrial area in HP	DST-UKIERI (Indo-UK)	2018-2021	16.7	PI	Completed
8	Optimal Design of in-situ remediation system for shallow Contaminated aquifers, Teachers Associateship for Research Excellence (TARE)	DST	2018-2021	15	Mentor	Completed
9	An efficient aquifer storage method for enhanced recovery of recharged freshwater in saline regions	DST	2020-2024	59.7	PI	Ongoing
10	Sediment Study and Management of Soil Erosion in the Mat River Catchment	Govt. of Mizoram	2021-2024	27.5	PI	Ongoing
11	Spring Rejuvenation for Water Security in Mizoram	Govt. of Mizoram	2021-2024	20.5	CO-PI	Ongoing
12	Co-creating Sustainable Agri-Water Use in the Hindon Sub-Basin –A Multi-Scale Participatory Approach	DST-NWO	2022-2027	51 (IIT R)	PI	Ongoing
13	Strengthening of Groundwater Simulation Laboratory for Seepage in Dams for ICED	CWC	2023-2028	165	PI	Ongoing
14	Identification and assessment of groundwater potential zones in (semi)-arid regions for applying Managed Aquifer Recharge (MAR) technique in Rajasthan, India	WDSC, Govt. of Rajasthan	2023-2026	120	PI	Ongoing
15	Mentoring of Inspire Faculty Fellow (Dr. Pankaj Dey) on “Hydrologic Signatures of Floods across India”	DST	2023-2028	112	Mentor	Ongoing
16	Mentoring of Ramanujan Fellow (Dr. Rajnesh Singh) on “Wastewater Treatment for Agricultural Reuse in Rural Communities”	DST	2023-2028	119	Mentor	Ongoing
17	Unravelling the Hydrodynamics of Submarine Groundwater Discharge (SGD) in changing climatic conditions for better management of coastal Aquifers	ISRO	2024-2027	48.54	PI	Sanctioned

Consultancy Projects: (Total Amount ~ 3.0 Cr as PI, and ~2.5 Cr as Co-PI)

S.No.	Title	Sponsoring Agency	Period	Amount (Lacs)	PI/Co-PI	Status
1	Hydrological Survey for sitting of tube wells in five villages in Baitalghat block, Dist. Nainital, 06 months	Uttarakhand Irrigation Dept.	2017-2018	8.20	PI	Completed
2	Hydro-geological monitoring and analysis of groundwater in and around Lalitpur thermal power plant, 03 months	Spatial Geotech Pvt. Ltd, Noida	2017-2018	2.30	PI	Completed

3	Ground water coloration studies near Shabajpur village, Gajraula	Jubilant Life Sciences Ltd	2014-2017	14.97	Co-PI	Completed
4	Feasibility study for remediating hydrocarbon polluted sites	Dr. Reddy's Laboratory	2016	13.0	Co-PI	Completed
5	Area Drainage Study in and around M/s HPCL Rajasthan Refinery Ltd (HRRL), Pachpadra, Barmer, Rajasthan	Engineers India Limited	2018-2019	11.8	Co-PI	Completed
6	Verifying Water Flow of P&G Baddi Plant	P&G Plant Baddi	2018	4.44	Co-PI	Completed
7	Hydro-geochemical analysis of groundwater resources of Gajraula site using existing piezometers	Jubilant Life Science Ltd, Gajraula, UP	2018-2021	8.47	PI	Completed
8	Groundwater survey for identifying the bore well sites within the premise of Koteswar pooling station	Power Grid Corporation of India Ltd	2018	2.66	Co-PI	Completed
9	Hydrogeology study and groundwater quantification of Mirzapur Thermal Power Plant, UP	Adani Group	2018	9.44	PI	Completed
10	Groundwater Survey of 150-acre area nearby to Vrindavan, and 200 acre in Sikar Rajasthan	D S Group, Noida	2018-19	5.90	PI	Completed
11	Hydrogeological investigation of Pur village site for finding the causes of cracks in buildings	DM, Bhilwara	2019-20	25.96	PI	Completed
12	Environment Impact Assessment of SO2 Emission LPGCL Plant	Spatial Geotech Ltd	2019-20	3.30	PI	Completed
13	Hydrogeological Investigation of Site Nearby to M/S Marshall Cycle and Kathuria Brothers, Ghaziabad	Marshall Cycles, Ghaziabad	2020-21	7.55	PI	Completed
14	Hydrogeological investigation of Asian Paint Site, Mysuru	M/s Asian Paints Ltd	2020-21	18.0	Co-PI	Completed
15	Hydro-Geological survey around Ash Dyke and Plant of NTPC-NKSTPP in Tandwa, Jharkhand	NTPC	2020-22	31.6	Co-PI	Completed
16	Hydro-geological Study for BRBCL Nabinagar, Bihar	BRBCL	2020-21	37.0	Co-PI	Completed
17	Review of Hydrogeology to assess impact of NTPC Solapur on surface water and ground regime, Maharashtra	NTPC	2021-22	28.0	Co-PI	Completed
18	Management of Soil Erosion and Sediments in Mat River Catchment	Govt. of Mizoram	2021-2023	22.5	PI	Ongoing
19	Spring Rejuvenation for Water Security in Mizoram	Govt. of Mizoram	2021-2023	14.5	Co-PI	Ongoing
20	Hydro-Geological Study of the Qutub Golf Course, New Delhi for Construction of Environmentally benign Water Bodies	DDA, New Delhi	2022-2023	8.0	PI	Completed
21	Review of Hydrogeology to Assess impact of NTPC Unchahar on surface water and Groundwater regime, UP	NTPC Ltd	2022-2024	28.5	Co-PI	Ongoing

22	Review of Hydrogeology on surface water and Groundwater regime at NTPC Khargone, MP	NTPC Ltd	2023-2025	35	Co-PI	Ongoing
23	Remedial Measures of water Logging at Selected Villages in Purquazi block of Muzaffarnagar	DS Foundation	2023	14.16	PI	Completed
24	Vetting the Inter Cross Regulator (ICR) design of Upper Ganges Canal and Parallel Upper Ganga Canal	UP Irrigation	2023	4.72	PI	Completed
25	Nala/canal diversion of coal mine block in <i>Chandwa</i> tehsil, <i>Latehar</i> district of Jharkhand (2)	Vimta Labs Lid., Hyderabad	2023	8.26	PI	Completed
26	Study on Assessment of Impact of Climate Change on West Seti And Sr-6 H.E. Projects	NHPC Ltd, Faridabad	2023	39.825	PI	Ongoing
27	Preparation of Tail water rating curve of Lakhwar MPP (300 MW)	UJVN Ltd, Govt Uttarakhand	2023	17.7	PI	Ongoing
28	Hydrogeological survey of the Birla Mines area, Chittorgarh (Rajasthan)	Birla Corporation Ltd	2023-2024	18.88	PI	Ongoing
29	Improving primary healthcare for patients with non-communicable diseases during severe flooding in India	NIHR UK	2023-2028	95.0	PI	Approved
30	Assessment of Water Budget and Rainwater Harvesting Infrastructure of the Qutub Golf Course, New Delhi"	DDA, New Delhi	2023	7.08	PI	Ongoing

COORDINATED COURSES/WORKSHOPS

(Total: 18; Sanctioned Amount ~ 1.0 Cr

1. Convened a Two-day International workshop on "Groundwater Resource Assessment Using Geophysical Tools and Techniques" in collaboration with Pan India Consultant Limited and Guideline Geo at IIT Roorkee during April 25-26, 2024
2. Coordinated a one-day International workshop on "Sustainable Agri-Water Use" on January 20, 2023 under the aegis of the DST-NWO project at Department of Hydrology, IIT Roorkee
3. Seven-day DST sponsored Hands-on Training program on "Tools and techniques of experimental hydrology" was held on May 24-30, 2022 at IIT Roorkee under the 'Synergistic Training Program Utilizing Scientific and Technological Infrastructure (STUTI) scheme in collaboration with Amity University UP.
4. Three days online training on "Soil Pollutants Impact Assessment and Remediation of Contaminated Sites" On March 7-9, 2022 sponsored by CPCB. **(Coordinator)**
5. Five-day online QIP short term course on "Applied Solute Transport Modeling for Management of Polluted Land Sites" planned during March 15-19, 2021 (Jointly with Prof. P K Sharma, Civil Engineering)

6. Development and teaching of Hydrology training module “Principles of Hydrology” for Department of Meteorology and Hydrology Govt. of Myanmar sponsored by **WMO**, 2019-2020 (during Nov 16-24, 2020 jointly with Prof. Sumit Sen)
7. Five-day TEQIP-III training FDP on “Applied groundwater Flow and Contaminant Transport Modelling” during June 24-28, 2019 sponsored by **MHRD (Coordinator)**
8. Ten-day GIAN training workshop on “Transport of viruses and colloids in variably saturated soil and groundwater” Feb 12-20, 2019 sponsored by **MHRD (Coordinator)**
9. Three days training on “Carbon Sequestration Estimation and Nitrogen Footprint Assessment” during January 28-30, 2019 sponsored by **CPCB. (Coordinator)**
10. Two-week GIAN training workshop on “Applied groundwater flow and transport modeling with MODFLOW” July 26-August 03, 2018 sponsored by **MHRD (Coordinator)**
11. Two days Indo-UK workshop on “Bioremediation of LNAPL polluted Groundwater” on March 26-27, 2018 at IIT Roorkee sponsored by **Loughborough University (Coordinator)**
12. Three days training on “Identification of Remediation and Management of Polluted soil and Groundwater Sites” On Nov 20-22, 2017 sponsored by **CPCB. (Coordinator)**
13. A brain storming session on “Reactive Transport Modelling for Discrete Fracture Network in Porous Media” on April 12, 2017 at Department of Hydrology, sponsored by **CCTech Pune. (Coordinator)**
14. Two-week GIAN training workshop on “Integrated Modeling of Subsurface flow and solute transport in porous media: challenges and opportunities” 02-14 Jan, 2017 sponsored by **MHRD. (Coordinator)**
15. Five days training on “Identification of Contaminated sites and Its treatment technologies, Interferences and data Management using GIS Hands on training” 14-18 Nov. 2016 sponsored by **CPCB. (Coordinator)**
16. Two-week GIAN training workshop on “Remediation and Management of Polluted Groundwater Sites” 16-24 May, 2016 sponsored by **MHRD. (Coordinator)**
17. One-day workshop on “Modeling fate and transport of soil water pollutants” February 13, 2016 at IIT Roorkee sponsored by **QIP. (Coordinator)**
18. A brain storming session on “Bioremediation of LNAPL Polluted Land under (Semi)-arid Coastal Environment Conditions” organized on November 10, 2014 at Department of Hydrology, IIT Roorkee sponsored by **DST. (Coordinator)**
19. Two mass awareness activities on Groundwater Hydrology at Department of Hydrology with collaboration of NIH-Roorkee during the technical festival Cognizance, on March 22-24, 2013 and March 21-23, 2014 sponsored by NIH (**Faculty Advisor**)

AWARDS, FELLOWSHIPS, RECOGNITION

1. **Ramanujan Fellow** award conferred by DST, Govt. of India.
2. Ranked in top ten “**Outstanding Teachers**” list in PG category consequently for the last four years i.e. 2018, 2019, 2020 and 2021.
3. Member of the PE_10 Panel (Evaluation Committee of seven members) of the FIS 2 (Italian Funds for Science) program of Italy to promote excellence in research in Italy
4. AGGS (Association of Global Groundwater Scientists) Fellow.
5. ‘Secretary General’ of AGGS; From October 2022- Till date

6. Associate Editor 'Journal of Agricultural Engineering (India) [JAEI], ISSN: 0256-6524" January 2023- Till date
7. **Chief Editor**, quarterly E-journal of Association of Global Groundwater Scientists (AGGS) 'Journal of Ground Water Research (JGWR) since 2021
8. **Guest Editor**, Special Issue "Recent Advances in Groundwater Remediation" MDPI *Water* journal
9. **Chief Editor**, biannual newsletter of (AGGS), 2019- till date
10. Editor "Eurasian Journal of Soil Science (EJSS)" since 2021
11. Member of the School of Earth Sciences Board, Central University of Rajasthan (April 2024 - Till date)
12. Editor "Journal of Human Environmental and Health Promotion" since 2019
13. Guest of Honor, Five Days FDP on "Building a Sustainable Future with Green Technology: Innovations, Opportunities and Challenges" by Amity Academic Staff College (AASC) on May 28, 2023
14. Conducted 'Academic Audit' for year 2019-20 of Engineering Institutes affiliated with Gujarat Technical University (GTU)
15. Travel Grant from China to deliver a seminar at **Shantou University**, Dec 10-12, 2019.
16. Travel Grant from Iran to deliver a keynote at **Zanjan University** during, Feb 26-28, 2019.
17. Recipient of Institute Advanced Study (IAS) Grant from **Loughborough University** UK to deliver a research seminar during June 22-29, 2018.
18. Invited by WMO to participate in the "Training of Trainers on the Assessment Guidelines for End-to-End Flood Forecasting and Early Warning Systems" during Sept 12-15, 2023 at Santa Fe in Argentina
19. Moderated the "session 02: Groundwater management for Long-Term Sustainability" during the American Water Resources Association (AWRA-2024) spring conference held during April 8-10, 2024 by Alabama University in Tuscaloosa, USA (Travel Grant was provided by the Host)
20. Chaired a technical Session on during the International Water Conference for Sustainable Development Goals (IWCSDG 2024), Organized by Civil and Chemical Engineering Departments, MANIT Bhopal during March 22-23, 2024.
21. Chaired an online technical session on during the International Conference on Pollution Control for Clean Environment (ICPCCE-2023) conducted by School of Infrastructure, IIT Bhubneswar, on Dec 15-16, 2023
22. Chaired a Technical session "Groundwater Modelling and Management" during the 5th Indian National Groundwater Conference (INGWC-2023), conducted by Department of Civil Engg, IIT Hyderabad, Dec 5-6, 2023
23. Chaired a Technical session on "Exploring linkages amongst environmental challenges, science, and people participation for climate action" during Five days FDP "Mission Life - A Roadmap to Sustainability with Practice and Partnership in Action" on June 07, 2023 by Amity University, Noida
24. Chaired a Technical session during the International Conference on Emerging Contaminants in Water and Environment (ECWE-2023), organised by PSG Institute of Advanced Studies Coimbatore, Feb 20-22, 2023

25. Chairman of the Technical session “Hydrology and geological aspects of springs and impact of climate change in springshed” during the National Symposium cum Workshop on Springshed Management, organised by NERIWALM, Tezpur, on Nov 18, 2022
26. Chairman of the technical session ‘Water, Environment and Health’ during the International e-Conference on “Water Source Sustainability” by the Department of WRDM (IIT-Roorkee) and Indian Water Resources Society (IWRS) from June 18-20, 2021.
27. Chairman of a session during 2nd International conference on sustainable technologies for environmental management (STEM-2019), held DTU during March 25-26, 2019
28. Co-chairman of a session during International conference on “Sustainable technologies for intelligent water management (STIWM) held at IIT Roorkee, Feb 16-19, 2018.
29. Co-chairperson of technical session ‘Groundwater Pollution’ in 7th International Groundwater Conference on “Water security challenges and climate change adaptations”, held by NIH Roorkee in New Delhi on 11-13 Dec, 2017.
30. Grant to travel **AIT, Bangkok** for taking part in Water Security and Climate Change (WSCC): Challenges and Opportunities in Asia sponsored by DAAD in Nov-Dec 2016
31. Session co-chairperson of technical session on Groundwater hydrology in HYDRO-2015, 20th International Conference, IIT Roorkee, 17-19 Dec, 2015.
32. Session chair in the National Conference on “Transportation and water resources engineering (NCTWE) held by L. D. College of Engineering, Gujarat on April 25-26, 2015
33. Chairperson for the poster session “Nonpoint source flux impact on groundwater, vadose zone, and surface waters” in AGU held on Dec 15-19, 2014 in San Francisco, California
34. Postdoc Fellowships by Utrecht University, Netherlands from Nov 2008-June 2010 and California University, Davis from July 2010 to Dec 2010.
35. Research grant awarded by the EU from Nov 2006 to Dec 2008 during PhD and postdoctoral research at UNESCO-IHE Delft, Netherlands.
36. Scholarship by MHRD, New Delhi during PhD and MTech study at IIT Delhi.
37. Qualified National Eligibility Test (2003) for Lectureship / Assistant Professor conducted by ASRB, ICAR, New Delhi, India.

ORGANISED CONFERENCES:

1. Organized the 9th International Groundwater Conference-2022 (**IGWC-2022**) at IIT Roorkee during November 2-4, 2022 with focus on ‘Effective Management of (sub)-surface Water Resources in Arid and Semi-arid regions’ (**Conference Convener and Chairperson**)
2. Organized the 8th International Groundwater Conference-2019 (**IGWC-2019**) at IIT Roorkee during October 21-24, 2019 with focus on ‘Sustainable Management of Soil and Water Resources’. (**Conference Convener; Raised Budget: 22.5 Lacs**)
3. Thematic Coordinator (Water Quality and Human Health) in the 3rd Roorkee Water Conclave 2024 (RWC-2024) on “Responsible Water Management and Circular Economy” under the aegis of IIT Roorkee and National Institute of Hydrology (NIH) during March 4-6, 2024 at IIT Roorkee (Co-chaired the Plenary session and Chaired a PECO session)

4. Organized The 1st Roorkee Water Conclave 2020 (RWC-2020) under the aegis of IIT Roorkee and National Institute of Hydrology (NIH) during February 26-28, 2020 at IIT Roorkee (**Core committee member**)

ADVISOR FOR SANCTIONED PDS TO NIH ROORKEE

1. Assessment of Impacts of Groundwater Salinity on Regional Groundwater Resources, Current and Future Situation in Mewat, Haryana- Possible Remedy and Resilience Building Measures, PDS of 65 Lacs, PI: Dr Gopal Krishna, NIH Roorkee (2018-2021)
2. Hydro-geochemical Evolution and Arsenic Occurrence in Aquifer of Central Ganges Basin, PDS with partnership of Minor Water Resources Department, Govt. of Bihar, 70 Lacs, PI: Dr Sumant Kumar, NIH Roorkee (2018-2021)
3. Water Quality Assessment of Southwestern Punjab Emphasizing carceogenic contaminants and their possible remedial measures, PDS of 65.5 Lacs, PI: Dr Rajesh Singh NIH Roorkee (2018-2021)

OTHER RESPONSIBILITIES

Head, Department of Hydrology, June 01, 2021-till date

Institute Level

1. Member Centre Administrative Committee (CAC) of IIC- June 2023-Till date
2. Member Centre Advisory Committee of CEC- April 2023-Till date
3. Member Institute SRIC Committee, 2016- To date
4. Deputy coordinator: Isotope-ratio Mass Spectrometry (IRMS) Laboratory
5. Chairperson Sangram 2016
6. Co-coordinator Thomso 2016 and in 2014
7. Member Library Advisory Committee, 2013- 2021
8. Member of Institute Football team, 2013- To date
9. Faculty Advisor sports (Gymnasium, Athletics, Taekwondo) from 2013-2017

Department level

1. OC Groundwater and Geophysical laboratories 2013- To date
2. OC Environmental Hydrology Labs, June 2023- To Date
3. Faculty Advisor Cognizance 2013, 2014 and 2017
4. OC Library since 2013-2021
5. OC Educational tour 2013-2018

PATENT

1. Ranjan, S, Kumar, A, Joshi, H, **Yadav B K** (2020) Development of Pumice and Maghemite nanoparticle composite for contaminant removal in water with special reference to Arsenic, (Granted) Patent No- 410075

PUBLICATIONS (Citations ~1600; i10=43, h-index=23)

(Total - 80; Journals- 68; Q1/Q2- 50); *corresponding author

1. Singh, J, **Yadav*, B. K.**, Schneidewind, U., Krause, S. (2024) Microplastics pollution in inland aquatic ecosystems of India with a global perspective on sources, composition, and spatial distribution, *Journal of Hydrology: Regional Studies*, Volume 53, 101798, ISSN 2214-5818, <https://doi.org/10.1016/j.ejrh.2024.101798>. (IF= 4.7), **Q1**
2. Thomas, A, **Yadav, B. K.**, and Simunek*, J (2024) “Water uptake by plants under nonuniform soil moisture conditions: A comprehensive numerical and experimental analysis” *Agricultural Water Management*, Accepted (IF=6.611) **Q1**
3. Garg, A; **Yadav*, B, K**; Ranjan, S; Himanshu Singh (2024) “Effects of Co-contamination by Toluene on Cr (VI) Adsorption by P-nZVI in Soil-water System: A Fixed Bed Column Study” *ASCE's Journal of Hazardous, Toxic, and Radioactive Waste*. <https://doi.org/10.1061/JHTRBP.HZENG-1320> **Q2** (IF=2.7)
4. Ranjan, S., **Yadav*, B. K.**, & Joshi, H. (2024) “In-situ Treatment of As Contaminated Groundwater by Extraction-well Integrated Permeable Reactive Barriers” *ASEC Journal of Environmental Engineering*, DOI:10.1061/JOEEDU.EEENG-7531, Vol 150 (5), **Q2**
5. Tiwari, S., and **Yadav*, B. K.** (2023). Assessment of managed aquifer recharge in saline confined aquifers for freshwater storage and improved recovery: A 3D tank study under various operational conditions, *Journal of Contaminant Hydrology*, 104267, ISSN 0169-7722, <https://doi.org/10.1016/j.jconhyd.2023.104267>. (IF=3.457) **Q1**
6. Shubhanshu, Verma, A and **Yadav* B K** (2023) “Unravelling the Effects of Shifting (Jhum) Cultivation on Physicochemical and Hydraulic Properties of Soil and Water Resources, *ASEC Journal of Environmental Engineering*, 150(2), 05023012 (IF=2.479) **Q2**
7. Tiwari, S., and **Yadav*, B. K.** (2023). Role of hydrogeological factors on Aquifer Storage and Recovery (ASR) performance in saline groundwater regions. *Journal of Water Resources Planning and Management (ASCE)*. Accepted (IF=3.457) **Q1**.
8. Beyene, T. K., Jain, M. K., Agarwal, A., and **Yadav, B. K.** (2023) “Investigation of the propagation of Meteorological to Hydrological drought and water required to recover from drought over Ethiopian basins” *Journal of Water and Climate Change*, 14(9), 2988-3009 (IF=3.457) **Q2**
9. Jahangeer; **Yadav*, B K**; Beegum, S (2023) Modeling of nitrate transport in the vadose zone by considering the mobile-immobile approach using sand tank experiment, *ASCE's Journal of of Hazardous, Toxic, and Radioactive Waste*. **Q2** (IF=2.7)
10. Tiwari, S., Tripathi, D, **Yadav*, B. K.** (2023). Enhanced performance of Aquifer Storage and Recovery (ASR) system in unconfined saline aquifer for different operational factors: A multi-dimensional laboratory and modeling study, *ASCE's Journal of Water Resources Planning and Management*, 149(8), 04023033 (IF=3.457) **Q1**
11. Guleria, A, Gupta, P, Chakma, S, **Yadav, B K** (2023), Unraveling the Fate and Transport of DNAPLs in the Hetero-geneous Aquifer Systems – Critical Review, *Sustainability (MDPI)*, 15(10), 8214 (IF=3.889)

12. Guleria, A, Gupta, P, Chakma, S, **Yadav, B K** (2023); Temporal moment-based approach to understand the dissolved-phase LNAPL recovery and associated characteristics in the porous system under dynamic groundwater table conditions. *AQUA - Water Infrastructure, Ecosystems and Society*; doi: <https://doi.org/10.2166/aqua.2023.188> (IF=3.006) Q2
13. Garg A, **Yadav* B. K.**, Ranjan S, Vatsa A, Das D. B., Kumar D (2022). "Impact of non-aqueous phase liquid on Cr (VI) removal by nano zerovalent iron particles: Effects of contact time, pollution load, and pH." *Journal of Hazardous, Toxic, and Radioactive Waste*. **ACSE**. 10.1061/JHTRBP/HZENG-1183. Q2 (IF=2.7)
14. Krishan, G, Kumar, M, Rao, M S, Garg, Rahul, **Yadav, B K**, Kansal, M L, Singh, S, Bradley, A, Muste, M, Sharma, L M (2023). Integrated approach for the investigation of groundwater quality through hydrochemistry and water quality index (WQI). *Urban Climate*, Vol. 47, 101383, <https://doi.org/10.1016/j.uclim.2022.101383>
15. Krishan, G., Bhagwat, A., Sejwal, P., **Yadav B., K.**, et al. (2022) Assessment of groundwater salinity using principal component analysis (PCA): a case study from Mewat (Nuh), Haryana, India. *Environ Monit Assess* 195, 37 (2023). <https://doi.org/10.1007/s10661-022-10555-1>
16. Tiwari, S., **Yadav*, B. K.**, Polemio, M., (2022). Performance evaluation of Aquifer Storage and Recovery (ASR) system in saline groundwater regions: Impact of operational factors and well design. *Journal of Hydrologic Engineering*, 10.1061/(ASCE)HE.1943-5584.0002222. [https://doi.org/10.1061/\(ASCE\)HE.1943-5584.0002222](https://doi.org/10.1061/(ASCE)HE.1943-5584.0002222)
17. Garg, A., **Yadav*, B. K.**, Das, D. B., & Wood, P. J. (2022). Biomonitoring and phytoremediation of Cr (VI) contaminated water: A study on bioaccumulation and morphological responses in *Eichhornia crassipes*. *Journal of Environmental Engineering*, 10.1061/(ASCE)EE.1943-7870.0002074. [https://doi.org/10.1061/\(ASCE\)EE.1943-7870.0002074](https://doi.org/10.1061/(ASCE)EE.1943-7870.0002074)
18. Garg, A, **Yadav*, B K**, Das*, D B, and Wood, P (2022) "Improving the assessment of polluted sites using an integrated bio-physico-chemical monitoring framework, *Chemosphere*, 290, 133344 (IF=7.086) Q1
19. **Yadav, B K**, Gupta, P K, (2022) "Thermally Enhanced Bioremediation of NAPL polluted soil-water resources", *MDPI Pollutants*, 2022, 2(1), 32-41; <https://doi.org/10.3390/pollutants2010005>
20. Mohamed Mwabumba; Jahangeer Jahangeer; Sahila Beegum; **Brijesh K Yadav**; Mwemezi J Rwiza "Assessment of Groundwater quality under Changing Climate in Ngorongoro Conservation Area (NCA), Tanzania" *ASCE Journal of Irrigation and Drainage Engineering*, 148 (10), 04022032
21. Mwabumba, M, **Yadav, B. K**, Rwiza, M J., Larbi, I, Twisa, S (2022) "Analysis of land use and land-cover pattern to monitor dynamics of Ngorongoro world heritage site (Tanzania) using hybrid cellular automata-Markov model" *Current Research in Environmental Sustainability*, doi.org/10.1016/j.crsust.2022.100126.
22. Mwabumba, M F, **Yadav, B K**, Rawiza, M J, Larbi, I, Dotse, S, Limantol, A M, Sarpong, S, Kwawuvi, D (2022) "Rainfall and temperature changes under different climate scenarios at the watersheds surrounding the Ngorongoro Conservation Area in Tanzania" *Environmental Challenges*, doi.org/10.1016/j.envc.2022.100446
23. Kumar*, S, Kumar, M, Chandola, V K, Kumar, V Saini, R K, Pant, N, Kumari, N, Ankur Srivastava, A, Singh, S, Singh, R, Krishan, G, Indwar, S, Kumar, S, **Yadav, B K**, Maurya, N S, Chaudhary, A (2021) "Groundwater quality issues and challenges for drinking and

- irrigation uses in central Ganga basin dominated with rice-wheat cropping system" *Water*, 13(17), 2344 (IF=2.5) Q1
24. Parmar, S, Kharwar, R, Singh, V., Sharma V J, **Yadav, B K** (2021) "Role of vermiculite on potentially toxic elements stabilization in rhizospheric zone of maize" *Communications in Soil Science and Plant Analysis*, 53:3, 384-395 (IF=1.327)
 25. Ranjan, S., **Yadav*, B. K.**, & Joshi, H. (2021) "Removal of Arsenic (As-III and As-V) from Aqueous Solution by developing Stable Maghemite (γ -Fe₂O₃) Loaded Pumice Composite", *International Journal of Environmental Science and Technology*, <https://doi.org/10.1007/s13762-021-03326-x> (IF=2.540) Q2
 26. Beyene, T. K., Jain, M. K. , **Yadav, B. K.**, & Agarwal, A. (2021) "Multiscale investigation of precipitation extremes over Ethiopia and teleconnections to large-scale climate anomalies" *Stochastic Environmental Research and Risk Assessment*, doi.org/10.1007/s00477-021-02120-y, (IF= 2.807)Q1
 27. Sushkova, S., Minkina, T., Tarigholizadeh, S., Rajput, V., Fedorenko, A., Antonenko, E., Chernikova, N., **Yadav, B. K.**, Batukaev, A. (2021) Soil PAHs contamination effect on the cellular and subcellular organelle changes of *Phragmites australis* Cav., *Environmental Geochemistry and Health*, vol 43, 2407-2421, (IF 3.662) Q1
 28. Gupta P K , Yadav B, **Yadav B K**, Sushkova S, Basu, S (2021) Engineered Bioremediation of NAPL Polluted Sites: An Experimental and Simulation Optimization Approach under Heterogeneous Moisture and Temperature Conditions, *ASCE Journal of Environmental Engineering*, 147(8): 0402102, (IF=1.657) Q2
 29. Kumar, S., Kumar, V., Saini, R. K., Pant, N., Singh, R., Singh, A., Kumar, S, Singh, S., **Yadav, B. K.**, Krishan, G., Raj, A. Maurya N.S., Kumar, M. (2021) Floodplains Landforms, Clay Deposition and Irrigation Return Flow govern Arsenic Occurrence, Prevalence and Mobilization: A geochemical and isotopic study of the Mid-Gangetic Floodplains, *Environmental Research*, doi: 10.1016/j.envres.2021.111516 (IF= 5.715) Q1
 30. Verma, A., **Yadav*, B. K.**, Singh, N. B. (2021) Hydrochemical exploration and assessment of groundwater quality in part of the Ganga-Gomti Fluvial Plain in northern India, *Elsevier-Groundwater for Sustainable Development*, 13 (2021) 100560 (IF=3.0) Q1
 31. Krishan, G, Sejal, P., Bhagwat, A. Prasad, G., **Yadav, B. K.**, Kumar, C.P, Kansal, M. L., Singh, S., Sudarsan, N., Bradley, A., Sharma, L. M., Muste, M (2021) Role of Major Ions in Aquifer Salinization - a Case Study From a Semi-Arid Region of Haryana, India, *Water*, 13, 617, 1-15 (IF=2.5) Q1
 32. Thomas, A, **Yadav*, B. K.**, and Simunek, J (2020) "Root water uptake under heterogeneous soil moisture conditions: An experimental study for unraveling compensatory root water uptake and hydraulic redistribution" *Plant and Soil*, 457(1), 421-435, (IF=3.390) Q1
 33. Pal, P., Pal, P., Nakashima, K. and **Yadav, B. K.**, (2020) "Applications of Chitosan in Environmental Remediation: A Review", *Chemosphere*, 2020, 128934 (IF=7.086) Q1
 34. Krishan G, Prasad G, Anjali A, Kumar C P, Patidar N, **Yadav B. K.**, Kansal M L, Singh S, Sharma LM, A Bradley A, Verma S K (2020) "Identifying the seasonal variability in source of groundwater salinization using deuterium excess- a case study from Mewat, Haryana, India" *Journal of Hydrology: Regional Studies*, 31, 100724 (IF= 3.210) Q1
 35. Ranjan, S, **Yadav*, B. K.**, and Joshi, H (2020) Development of nZVI-Pumice/Zeolite Composites for Effective Removal of Arsenic (III) from Aqueous Solution, *ASCE's Journal of Hazardous, Toxic, and Radioactive Waste*, 24 (3), 04020014, (IF= 2.7) Q2

36. Basu, S, **Yadav* B. K.**, Mathur, S., and Gupta P. K. (2020) "In Situ Bioremediation of LNAPL Polluted Vadose Zone: Integrated Column and Wetland Study", *CLEAN - Soil, Air, Water* 10.1002/clen.202000118. (IF=1.580) Q2
37. Sachi, **Yadav* B. K.**, Rahman, M. A., Pal, M. (2020) "Migration of CO₂ through carbonate cores: effect of salinity, pressure and cyclic brine-CO₂ injection" *ASCE Journal of Environmental Engineering*, 146(2), 04019114 , (IF=1.657) Q2
38. Gupta, P.K. and **Yadav*, B. K.** (2020) "Three-dimensional Laboratory Experiments on Fate and Transport of Light NAPL under Varying Groundwater Flow Conditions". *ASCE Journal of Environmental Engineering*, 146(4), 04020010, (IF=1.657) Q2
39. Verma, A, **Yadav, B K**, and Singh N. B. (2020) "Hydrochemical monitoring of groundwater quality for drinking and irrigation use in Rapti Basin" Springer Nature, SN Applied Sciences, <https://doi.org/10.1007/s42452-020-2267-5>
40. Verma, A, **Yadav, B K**, and Singh N. B. (2020) "Data on the assessment of Groundwater Quality in Gomti-Ganga alluvial plain of Northern India" *Data in Brief*, 30, 105660, (IF 0.970)
41. Krishan G, Ghosh, N C, Kumar C P, Sharma LM, **Yadav B K**, Kansal M L, Singh S, Verma S K, Prasad, G (2020) "Understanding stable isotope systematics of salinity affected groundwater in Mewat, Haryana, India" *Journal of Earth System Science*, 129, 109. (IF 1.104) Q2
42. Minkina, T., Sushkova, S., **Yadav, B. K.**, Rajput, V., Mandzhieva, S., Nazarenko, O. (2019) Accumulation and transformation of benzo[a]pyrene in Haplic Chernozem under artificial contamination, *Environmental Geochemistry and Health*, 42, 2485–2494. (IF 3.662) Q1
43. Gupta P.K., Yadav, B., **Yadav* B. K.**, (2019) "Assessment of LNAPL in Subsurface under Fluctuating Groundwater Table using 2D Sand Tank Experiments". *ASCE Journal of Environmental Engineering*, 145 (9), 04019048. (IF=1.657) Q2
44. Minkina, T., Sushkova, S., Konstantinova, E., **Yadav, B. K.**, Mandzhieva, S., Konstantinov, A., et al. (2019). Polycyclic aromatic hydrocarbons in urban soils within the different land use: A case study of Tyumen, Russia. *Polycyclic Aromatic Compounds*. 40(4), 1251-1265. (IF 1.894) Q3
45. Sushkova, S, Minkina T, Deryabkina I, Rajput, V, Antonenko E, Nazarenko, O, **Yadav B K**, Hakki E, Mohan, D (2018) Environmental pollution of soil with PAHs in energy producing plants zone, *Science of the Total Environment*, Vol 655, 232-241. (IF 6.551) Q1
46. Mustapha I. H., Gupta P. K., **Yadav B. K.**, J.J.A van Bruggen and P. N. L. Lens, (2018) "Performance evaluation of duplex constructed wetlands for the treatment of diesel contaminated wastewater". *Chemosphere*, Vol 205, 166-177. (IF 7.086) Q1
47. Yadav, B., Mathur, S., Ch., Sudheer, **Yadav, B. K.** (2018) "Data Based Modeling Approach for Variable Density Flow and Solute Transport Simulation in a Coastal Aquifer". *Hydrological Sciences Journal*: doi.org/10.1080/02626667.2017.1413491. (IF 2.186) Q1
48. Yadav, B., Mathur, S., Ch., Sudheer, **Yadav, B. K.** (2018) "Simulation-optimization approach for the consideration of well clogging during cost estimation of in-situ bioremediation system", *ASCE Journal of Hydrologic Engineering*, 23(3): 04018001. (IF 2.064) Q2
49. Jahangeer, Gupta P.K., **Yadav* B. K.**, (2017) "Transient water flow and Nitrate Movement Simulation in Partially Saturated Zone". *ASCE Journal of Irrigation and Drainage Engineering* 143(12): 04017048. (IF 1.340) Q1

50. Basu, S, **Yadav* B. K.**, and Mathur, S. (2015) "Enhanced Bioremediation of BTEX Contaminated Groundwater in Pot-Scale Wetlands". *Environmental Science and Pollution Research*, 22(24), 20041-20049. (IF 3.306) Q2
51. **Yadav*, B. K.**, and Junaid, S (2014) "Groundwater vulnerability assessment to contamination using soil moisture flow and solute transport modelling" *Journal of Irrigation and Drainage Engineering*, 141(7), 1-11. (IF 1.340) Q1
52. **Yadav*, B. K.**, Ansari, F.A., Basu, S., and Mathur, A. (2013) "Remediation of LNAPL contaminated groundwater using plant-assisted biostimulation and bioaugmentation methods, *Water, Air, & Soil Pollution*, 225:1793-1801. (IF 1.769) Q2
53. **Yadav*, B. K.**, Hassanizadeh, S. M. and Rajbhandari, S. (2012) "Biodegradation of toluene under seasonal and diurnal fluctuations of soil-water temperature conditions", *Water, Air, & Soil Pollution*, 223(7), 3579-3588. (IF 1.769) Q2
54. Jhajharia D., **Yadav, B. K.**, Maske, S., and Kar, A.K. (2012) "Identification of trends in rainfall, rainy days and 24 hours maximum rainfall over sub-tropical Assam in Northeast India" *Elsevier J. Comptes Rendus Geoscience*, 344(1), 1-13. (IF 1.91) Q1
55. **Yadav*, B. K.** and Hassanizadeh, S. M (2011) "An Overview of Biodegradation of LNAPL-polluted Coastal Regions in (Semi)-arid Environment" *Water, Air, & Soil Pollution*, 220 (1-4), 225-239. (IF 1.769) Q2
56. **Yadav*, B. K.**, Siebel, M. A. and van Bruggen J. J. A. (2011). "Rhizofiltration of a Heavy Metal Containing Wastewater using the Wetland Plant *Carex pendula*" *CLEAN - Soil, Air, Water*, 39 (5), 467-474. (IF=1.580) Q2
57. **Yadav*, B. K.**, Mathur, S. and Siebel, M. A. (2009). "Soil moisture dynamics modeling considering the root compensation mechanism for water uptake by plants" *ASCE Journal of Hydrologic Engineering*, 14(9), 913-922. (IF 2.064) Q2
58. **Yadav*, B. K.**, Mathur, S. and Siebel, M. A. (2009). "Soil Moisture Flow Modeling with Water Uptake by Plants (Wheat) under Varying Soil and Moisture Conditions" *ASCE Journal of Irrigation and Drainage Engineering*, 135(3), 375-38. (IF 1.340) Q1
59. Mathur, S and **Yadav, B. K.** (2009). "Phytoextraction Modeling of Heavy Metal (Lead) Contaminated Site using Maize (*Zea mays*)" *ASCE Practice periodical of hazardous toxic and radioactive waste management*, 13(4), 229-238. (IF= 1.120) Q2
60. **Yadav*, B. K.** and Mathur, S. (2008). "Modeling Soil Water Extraction by Plants Using Non-Linear Dynamic Root Density Distribution Function" *ASCE Journal of Irrigation and Drainage Engineering* 134 (4), 430-436. (IF 1.340) Q1
61. **Yadav, B. K.**, Keshari, A. K. (2007). "A Coupled Mathematical Water and Salt Balance Model of Flat Bay" *Asian Journal of Water, Environment and Pollution*, 4(2), 49-55. (Q3)

Indian Journals

62. **Yadav*, B. K.** and Telila F. K. (2020) "Delineating Potential Groundwater Recharge Zones in the Haramaya Watershed of Ethiopia using GIS based Multi-criteria Assessment" *E-Journal of Geohydrology*, Vol 2 (1), 65-79.
63. **Yadav*, B. K.** and Bihon N. H. (2020) "Groundwater Resource Assessment of Akaki Well-field of Addis Ababa, Ethiopia" *E-Journal of Geohydrology*, Vol 1(2), 35-46.

64. Krishan, G., Chandniha, S.K., Lohani, A. K., **Yadav, B. K.**, Arora, N. K., Singh, S., Kumar, C. P., Sharma, L. M., and Bhardwaj, A. K. (2018) "Assessment of Heavy Metals in Relation to Soil Pollution at Mewat, Haryana, India" *Current World Environment*; 13 (3), 299-306
 65. Veeraswamy, G., Balaji, E., Nagaraju, A., and **Yadav, B. K.** (2019) Multivariate Statistical Approach for Evaluating Groundwater Quality in Sathyavedu Area, Chittoor District (Andhra Pradesh, India), *The Journal of Indian Geophysical Union*, 23(4), 323-332
 66. Priyanka, Krishan G, Sharma L. M, **Yadav B. K.**, Ghosh N. C. (2016) Analysis of Water Level Fluctuations and TDS Variations in the Groundwater at Mewat (Nuh) District, Haryana (India). *Current World Environment*, 11(2), 388-398.
 67. **Yadav***, **B. K.**, Verma, M., and Singhal, D.C. (2014) "Pollution Risk Assessment of Groundwater of an Intermontane Watershed using GIS based Index Approach". *Hydrology Journal*, 37(1-5), 1-77.
 68. **Yadav***, **B. K.** and Mathur, S. (2006) "Modeling of Environmental Phytoextraction in the Vadose Zone" *Indian Journal of Environmental Protection*, 26(7), 593-598.
 69. Keshari, A. K. and **Yadav, B. K.** (2005) "Inflow Forecasting for Flat Bay, Andaman and Nicobar Islands Using Artificial Neural Networks" *Hydrology Journal*, IAH, 28(3),1-15.
- Edited Book: "Recent Developments in Water Resources and Transportation Engineering" Springer Proceedings (TRACE 2022) Book Edited by Nidhi Nagabhatla · Yusuf Mehta · Brijesh Kumar Yadav · Ambika Behl · Madhuri Kumari (2023)

Book Chapters

70. Yadav, S, Jain, S and Yadav, B K (2023) Comprehensive Assessment of Simulation Tools for Analyzing Seepage Through Earthen Dams. In *Recent Developments in Water Resources and Transportation Engineering* (Springer)
71. Singh, J, and **Yadav***, **B K** (2023) Microplastics in River Sediments Nearby to a Sewage Treatment Plant: Extraction, Processing and Characterization Assessment, In *Springer book: Recent Developments in Energy and Environmental Engineering* pp 375-381; [10.1007/978-981-99-1388-6_29](https://doi.org/10.1007/978-981-99-1388-6_29)
72. Tiwari, S. & **Yadav, B. K.**, (2022). Factors influencing the site selection criteria for efficient aquifer storage and recovery (ASR) system in saline regions.', in the proceeding book 'Water Resources Management and Sustainability: Solutions for Arid Regions 2022' by Water Science and Technology Library (Springer).
73. Gupta P K, **Yadav, B. K.**, Sharma, D (2022) "Impacts of climatic variability on subsurface water resources" *Advances in Remediation Techniques for Polluted Soils and Groundwater*, 171- 189, <https://doi.org/10.1016/B978-0-12-823830-1.00003-1>
74. Thomas, A, Singh, V., **Yadav, B. K.** (2021). Agricultural Water Management and Groundwater Recharging Using Vadose Zone Modelling. In: Jha R., Singh V.P., Singh V., Roy L., Thendiyath R. (eds) *Water Resources Management and Reservoir Operation*. Water Science and Technology Library, (107) 277-288. Springer, Cham. https://doi.org/10.1007/978-3-030-79400-2_23
75. Shachi, Gupta P. K., **Yadav* B. K.** (2019), "Aspects of CO₂ injection in geological formations and its risk assessment". Chapter 4, *Environmental Contaminants: Ecological Implications and Management*, Springer, <https://doi.org/10.1007/978-981-13-7904-8>
76. Gupta P. K. and **Yadav* B. K.**, (2017). "Bioremediation of Non-Aqueous Phase Liquids (NAPLS) Polluted Soil and Water Resources". Chapter 8, *Environmental Pollutants and their*

Bioremediation Approaches, ISBN 9781138628892, CRC Press, Taylor and Francis Group, Florida, USA.

77. S. Basu, **B. K. Yadav***, and S. Mathur (2017) Modeling engineered bioremediation of BTEX contaminated water in treatment wetlands in *Wetland Science: 'Perspectives from South Asia'*, Springer, ISBN 978-81-322-3715-0, pp-468-488
78. Gupta P.K., **Yadav* B. K.**, (2017), "Effects of climatic variation on dissolution of LNAPL pollutants in subsurface environment". Chapter 8, *Climate Change Resource Conservation and Sustainability Strategies*, ISBN 9789384871086, DBH Publishers and Distributors, New Delhi
79. Gupta P.K., Abhishek, **Yadav* B. K.**, (2017), "Impact of hydrocarbon pollutants on partially saturated soil media in batch system: Morphological analysis using SEM techniques". Chapter 5, *Water Quality Management; Water Science and Technology*, Vol. 79, Springer.
80. Jahangeer, Gupta P.K., **Yadav B. K.**, (2017), "Spatial and Temporal Nitrate Transport in Deep Heterogeneous Vadose Zone of India's Alluvial Plain" Chapter 14, *Groundwater; Water Science and Technology Library*, ISBN 978-981-10-5788-5, Vol. 79, Springer

Conferences/Symposiums (45+; **Chaired/Co-chaired Sessions- 15**)

1. Delivered a talk on "Enhanced Performance of Managed Aquifer Recharge (MAR) in Saline Aquifers: The Role of Site Selection and Operational Optimization" during the American Water Resources Association (AWRA-2024) spring conference held during April 8-10, 2024 by Alabama University in Tuscaloosa, USA (Session Moderator)
2. Delivered a Plenary talk on "Management of Soil-water Pollution using In-situ Remediation and Advanced Monitoring Methods" in the International Water Conference for Sustainable Development Goals (IWCSGD 2024), Organized by Civil and Chemical Engineering Departments, MANIT Bhopal during March 22-23, 2024 (Plenary Speaker and Session Chair)
3. Paper "Hydrogeochemical assessment of interacting surface-ground water resources of Kali river basin" by **Prabhat Dwivedi*** and Brijesh K Yadav, Hydro-2023 international Conference conducted during Dec 21-23, 2023 at NIT Warangal. (best paper award)
4. Delivered a Keynote talk on "Enhancing fresh water availability in saline regions through managed aquifer recharge" during the 5th Indian National Groundwater Conference (INGWC-2023), conducted by Department of Civil Engg, IIT Hyderabad, Dec 5-6, 2023 (Keynote speaker & session Chair)
5. Delivered a keynote on "Wetlands for Engineered Bioremediation and Biomonitoring of Contaminants" during the International Conference on Sustainable Development and Disaster Resilience Through Innovations (ICSDDRTI-2023) Organized by Amity School of Applied Sciences, Amity University, Lucknow during Oct 5-6 2023. (Chaired the session on Disaster Management)
6. Yadav, B K, and Singh, J (2023) 2nd International Conference on Emerging Contaminants in Water and Environment (ECWE-2023), organised by PSG Institute of Advanced Studies Coimbatore, Feb 20-22, 2023 Comprehensive Assessment of Microplastics Movement through Soil-Water System around an MSW Dumpsite (Keynote speaker & session Chair)
7. **Yadav B. K.**, Shubhanshu, and Sen S, S (2022) "Unravelling effects of Jhum Cultivation on Springshed Soil-water Quality in Mizoram" National Symposium cum Workshop on Springshed Management, organised by North Eastern Regional Institute of Water and

Land Management (NERIWALM), Tezpur on November 18-19, 2022 (Keynote speaker & session Chair)

8. **Yadav B. K.**, and Ranjan, S (2021) "Applications of Permeable Reactive Barrier for the Remediation of Groundwater pollutants" during the 4th Indian National Groundwater Conference (INGWC-2021) conducted online by JNTU Hyderabad held during March 22-24, 2021 (Keynote speaker)
9. **Yadav B. K.**, Basu, S, Ranjan, S and Gupta, P. K. (2020) In-situ Remediation of NAPL and Heavy Metal Polluted, during 3rd Indian National Groundwater Conference on Groundwater Resources Management for Sustainable Development held at CWRDM Kozhikode, Kerala during Feb 18-20, 2020
10. **Yadav B. K.**, Gupta, P. K., Yadav, B. (2019), Engineered Bioremediation of Variably Saturated Hydrocarbon Polluted Site, during the 3rd International conference on Environmental Health held at Zanjan in Iran during Feb 26-28, 2019 (Keynote Speaker)
11. Shachi, **Yadav, B.K.**, Rahman, A. M., Pal M., (2018), "Multiphase flow behavior during CO₂ geo-sequestration in carbonate formations". The Eleventh international conference on thermal engineering theory and applications (ICTEA-2018), Doha Qatar, 25-28 Feb, 2018.
12. Shachi, **Yadav, B. K.**, Rahman. A. M. (2018), "Geological CO₂ storage in saline carbonate formations using core flooding experiments". EGU General Assembly 2018, Vienna, Austria 8-13 April, 2018
13. **Yadav B. K.**, Basu, S, Ansari F., "Plant-Assisted Bioremediation of LNAPL Contaminated Groundwater Using Practical Experiments", AOGS, August 06-12, 2017 held in Singapore.
14. Pal, M., Jadhav S., **Yadav, B. K.** (2017) "Robust gridding and discretization for modeling flow in discrete fracture network medium" in 9th International Conference on Porous Media and Annual meeting" held in Rotterdam, Netherlands, from May 8-12, 2017
15. **Yadav, B. K.**, Basu, S, Mathur S (2017) "Engineered Bioremediation of LNAPL Polluted Soil-water Resources" in International conference on Emerging trends in Water resources and Environmental Engineering at MVGR College, Vizianagaram, Andhra Pradesh, March 30-April 1, 2017 (Keynote speaker and Session chair)
16. Gupta P. K., **Yadav B.K.**, Hassanizadeh S.M., (2017), "Engineered bioremediation of LNAPL polluted soil-water resources under changing climatic conditions". International Conference on Modeling of environmental and water resources systems (ICMEWRS-2017), HBTU Kanpur, 24-26th March, 2017.
17. **Yadav, B. K.** Gupta, P. K. (2016), Role of groundwater variation on fate and transport of LNAPL in subsurface. Water Security Conferences 2016, AIT Thailand 29-02 Dec. 2016
18. **Yadav B.K.** and Saurabh S. (2016), "Role of freshwater recharge on saltwater intrusion" First Indian National Groundwater Conferences JNTU Hyderabad, Oct. 5-7, 2016
19. Anooja T., Singh V., and **Yadav B. K.** (2016), Groundwater Recharge estimation using soil moisture flow modeling of a cropped (Wheat) Region. First Indian National Groundwater Conferences, JNTU Hyderabad, Oct. 5-7, 2016
20. Gupta, P. K., Abhishek, and **Yadav, B. K** (2016), "Impact of hydrocarbon pollutants on partially saturated soil media in batch system: Morphological analysis using SEM techniques". International Conference on Water, Environment, Energy and Society 2016, organized by AISECT University & Texas A&M University, Bhopal, March 15-18, 2016.
21. Jahangeer, Kumar, D., and **Yadav, B. K.** (2016) "Spatial and temporal nitrate transport in deep heterogeneous vadose zone of India's alluvial plain" International Conference on Water, Environment, Energy and Society (IWEES) 2016, organized by AISECT University & Texas A&M University, held in Bhopal on March 15-18, 2016.
22. **Yadav, B. K.**, Basu, S., and Mathur S. (2015) "Engineered Bioremediation of BTEX Polluted Groundwater using Large Scale Column Experiments" in Symposium on Hydrology organised at Central Water Commission New Delhi on Dec 22-23, 2015. (Keynote speaker)

23. Gupta, P. K., and **Yadav, B. K.** (2015), "Large scale laboratory investigation and simulation of fate and transport of LNAPL plume in variably saturated subsurface". HYDRO-2015, 20th International Conference on Hydraulics, Water Resources and River Engineering, IIT Roorkee, 17-19 Dec, 2015. (Session co-chair)
24. Basu, S., **Yadav, B. K.**, and Mathur S. (2015) "Fate and Transport of Dissolved BTEX Through Soil in Large Scale Column Setup" in the 12th annual meeting of Asia Oceania Geosciences Society (AOGS) held in Singapore on August 2-7, 2015.
25. Basu, S., **Yadav, B. K.**, Mathur S. (2015) "Plant Enhanced Bioremediation Of BTEX Contaminated Groundwater Using Canna" 2015 Joint Assembly AGU in Montreal, Canada, on May 3-7, 2015
26. **Yadav, B. K.**, Junaid S. M. (2015) "Vulnerability assessment of shallow groundwater resources using soil moisture flow and solute transport modeling" in the third International Conference on Water Energy and Environment (ICWEE), Shajah, UAE on March 24-27, 2015.
27. **Yadav, B. K.**, Jahangeer, and Harter, T. (2014) "Soil Moisture Flow & Nitrate Movement Simulation through Deep and Heterogeneous Vadose Zone using Dual-porosity Approach" in AGU Fall Meeting held in San Francisco, California on December 14-18, 2014. (Poster session Chair)
28. **Yadav, B. K.**, Haji Shaaban, Dinesh C. Singhal (2014) "Groundwater Pollution Risk Assessment of the Zanzibar Island in Tanzania" in the International Symposium on Integrated Water Resources Management (IWRM), Feb 19-21, 2014 at CWRDM, Kozhikode, Kerala
29. Basu, S., **Yadav, B. K.**, Mathur S. (2014) "A Comparative Study of Enhanced Bioremediation Techniques for a BTEX Compound in Contaminated Groundwater" in the 7th International Conference on Environmental Science & Technology, Houston, Texas, USA on June 9-13, 2014
30. Basu, S, **Yadav B. K.**, Mathur, S. (2013) "Plant enhanced bioremediation of a BTEX compound (Toluene) in polluted groundwater" in Proceedings of National Groundwater Conference held by Tamil Naidu Agricultural University, Chennai on Dec 9-11, 2013
31. Verma, M., **Yadav, B. K.** and Singhal, D. C. (2013) "Pollution Risk Assessment of Groundwater Resources of an Intermontane Watershed in Uttarakhand, India" in the workshop on Groundwater Management in Uttarakhand held by CGWB, Dehradun on Feb 15, 2013.
32. Gupta, P.K., Ranjan, S. and **Yadav, B. K.** (2013) "BTEX biodegradation in soil-water system having different substrate concentrations" in the International Conference on Algal Biorefinery (ICAB) held at IIT Kharagpur, India on January 10-12, 2013.
33. **Yadav, B. K.** and Siebel, M. A. (2012) "Decontamination of Lead (Pb) Containing Root-zone Water uses the wetland plant Carex pendula" in the fifth International Groundwater Conference (IGWC) held at Maulana Azad College of Arts, Science & Commerce, Aurangabad, India on December 18-21, 2012.
34. **Yadav, B. K.** and Hassanizadeh, S. M. and Rajbhandari, S. (2011) "Biodegradation of toluene (a BTEX) under seasonal and diurnal fluctuations of soil-water temperature" in International Congress of Environmental Research (ICER), held at SVNIT Surat, India on Dec 15-17, 2011.
35. **Yadav, B. K.**, Hassanizadeh, S. M. and Kleingeld, P. J. (2010). "Biodegradation of BTEX under Varying Soil Moisture and Temperature Conditions" in the first international

conference on Frontiers in Shallow Subsurface Technology, at TU Delft, The Netherlands on January 20-22

36. **Yadav, B. K.**, Hassanizadeh, S. M. and Kleingeld, P. J. (2009). "Biodegradation of a Light NAPL under Varying Soil Environmental Conditions" in AGU Fall Meeting held in San Francisco, California, USA on December 14-18
37. **Yadav, B. K.**, Hassanizadeh, S. M. and Kleingeld, P. J. (2009). "Bioremediation of a LNAPL (Toluene) Polluted Soil in (Semi)-arid Environment" in International Conference on Non-linearities and Upscaling in Porous Media, held at Stuttgart University, Germany on Oct 5-7
38. **Yadav, B. K.**, Siebel, M. A. and Mathur, S. (2008) "Modeling Phytoremediation of Heavy Metal Contaminated Soils" in 1st International Conference on G16 Research Frontiers in Chalcogen Cycle Science and technology, May 28-29 at Wageningen University, Netherlands
39. **Yadav, B. K.**, Mathur, S. and Siebel, M. A. (2008). "Unsaturated Groundwater Flow Modeling in Presence of Plant Roots" in International Groundwater Conference on Groundwater dynamics and Global Change held at Rajasthan University, Jaipur, India on March 11-14
40. **Yadav, B. K.**, Keshari, A. K. and Siebel, M. A. (2007) "Forecasting catchment flow for a coastal lake using artificial neural networks" in Taal-2007: 12th world lake conference, Conserving lakes and wetlands in future, held in Jaipur, India on 28 October- 2 November 2007
41. **Yadav, B. K.** and Mathur, S. (2006). "Dynamic Modeling of Plant Roots Water Uptake in Vadose Zone for Different Irrigation Techniques" in The Wise water resources management towards sustainable growth and poverty reduction, held in Bangkok, Thailand on October 16-18
42. **Yadav, B. K.** and Mathur, S. (2006). "A Mathematical Model for Plant Response to Combined Salinity and Moisture Stresses" In: An International Perspective on Environmental and Water Resources 2006, held by ASCE in New Delhi, India on Dec 18-20, 2006.
43. **Yadav, B. K.**, and Mathur, S. (2005) "Potential Role of Vegetation in Groundwater Decontamination Modeling" in The Third International Symposium on Southeast Asian Water Environment, Organized by University of Tokyo at AIT Bangkok, Thailand in December, 2005.
44. **Yadav, B. K.** and Mathur, S. (2005) "Phytoremediation Modeling for Heavy Metal Contaminated Soils" In: Third International Conference on Plants and Environmental Pollution (ICPEP-3), Organized by International Society of Environmental Botanists at NBRI Lucknow, India in Nov-Dec. 2005.
45. **Yadav, B. K.** and Mathur, S. (2005) "Phytoextraction Modeling of Contaminated Soils" In: proceeding of Fifth International R&D Conference on Development and Management of Water and Energy Resources, Organized by CBIP in February 2005 in Bangalore, India, Vol-IV, pp 78-84

INVITED /KEYNOTE TALKS (67)

1. Delivered a talk on “Management of Soil-water Pollution using In-situ (Bio)remediation and Effective Monitoring Methods” at Nebraska Water Centre, University of Nebraska-Lincoln (USA) on April 12, 2024.
2. Delivered a talk on “Innovative Water Resources Management” during the National Workshop cum Training Programme on “Accelerating sustainable development through innovative water management strategies” organised by Amity University Noida March 22, 2024 on the occasion of world water day (Invited as the Guest of Honour)
3. Delivered an Expert talk on “Science and its role in Water resources Management” at CSIR - Central Building Research Institute (CBRI) Roorkee on Feb 28, 2024 on the Occasion of National Science Day (Invited as the Guest of Honour)
4. Delivered a webinar on “Application of Soft Computing in Civil Engineering” organised by Research and Development Cell & Graduate School of Engineering and Technology Department of Civil Engineering, Gujarat Technological University (GTU) on Feb 03, 2024
5. Delivered Expert talk on “Applied Numerical Modeling for Fate and Transport of Contaminant in (Sub)-Surface Soil-water Systems” during the Atal FDP on “Assurance modeling for water quality and quantity” by Civil Engg. Department Government Engineering College, Bharuch on December 11, 2023
6. Delivered a Keynote talk on “Enhancing fresh water availability in saline regions through managed aquifer recharge” during the 5th Indian National Groundwater Conference (INGWC-2023), conducted by Department of Civil Engg, IIT Hyderabad, Dec 5-6, 2023.
7. Delivered an online keynote talk on “CO₂ Geo-sequestration in Deep Saline Aquifers: An Efficient measure for curbing GHG Emission” during the 6th International Conference on Civil Architecture, Hydropower and Engineering Management (CAHEM 2023) during September 8-10, 2023 conducted in Chengdu, China
8. Delivered a keynote talk on “Groundwater Depletion in India - Causes, Implication & Way Forward for Sustainable Practices” on July 21, 2023 during the Webinar organized by Amity University, Noida on the occasion of Groundwater Week, July 16-21, 2023
9. Delivered an expert talk on “Comprehensive Assessment of Microplastics Movement through Soil-water around an MSW Dumpsite” at NTPC Solapur (MH) on May 26, 2023
10. Delivered a talk on “Applied Numerical Modeling Techniques for Fate and Transport of Pollutants in Subsurface” during the Ten Days Training Course on “Hydrologic and Hydraulic modelling and its applications in Natural Resources Management” by SKUAST-Kashmir, Srinagar on March 29, 2023
11. Delivered a talk on “Assessment of soil-water pollution processes and advanced monitoring aspects” during the Five Days e-ITEC Training Program on Ecohydrology by IIT Roorkee on March 27, 2023.
12. Delivered a talk on “Geo-sequestration of CO₂ in deep saline aquifers to mitigate climate change” during the E-conference on Climate Change and Water Resource organised by the Department of Geography, The New College Kolhapur on March 21, 2023
13. Delivered a talk on “Water availability aspects in Hydro and Thermal power projects” during a Five Days Training Course on “Hydrological Analysis and Planning for the Hydro

and Thermal Power Projects” sponsored by NTPC Ltd. and organized by Department of Hydrology, IIT Roorkee (March 13-17, 2023)

14. Delivered a talk on “In-situ Treatment of contaminated sites using Bioremediation and Permeable Reactive Barriers” during a Five Days Training Course under NHP on “Water Quality Monitoring & Management” during **February 13-17, 2023** at NIH, Roorkee.
15. Delivered a Laboratory Session on “Hands on Atomic Absorption Spectrophotometer” during a Five Days Training Course under NHP Course on “Hands on Advanced Instrumentations in Water Quality Analysis” during **Jan 16-20, 2023** at NIH, Roorkee.
16. Delivered a conference talk on “Aquifer Recharge Management in Arid and Semi-arid Saline Regions” on December 5, 2022 during the ATAL Faculty Development Programme (FDP) on Rain Water Harvesting for Sustainable Development of Ground water (RHSDG)” organized by SVNIT Surat.
17. Delivered a conference talk on “Fate and Transport of Groundwater Contaminants and Associated Monitoring Aspects” on Nov 22, 2022 during the training program on "Advanced tools and techniques for Managed Aquifer Recharge (ATT-MAR)" sponsored by Asia Pacific Network for Global Change Research (APN), organized by WRDM IIT Roorkee and NIH Roorkee during.
18. Delivered a conference talk on “Managed Aquifer Recharge in (semi)-arid regions of India” on September 23, 2022 during the national Conference on Air, Water and Soil held by J C Bose University of Science and technology, YAMCA, Faridabad during 23-24 Sep 2022.
19. Delivered a talk on "In-situ Treatment of Polluted Sites using Bioremediation and PRB” during the International workshop “Securing sustainable treatment for drinking water production and water recycling with a focus on anionic contaminants” at the Institute for Water Resources and Water Supply, the Hamburg University of Technology, conducted by Indo-German Science and Technology Centre (IGSTC) on July 20-22, 2022
20. Delivered a talk on the topic "Assessment of Emerging Pollutants: A Case Study of Microplastics Containing Landfill Site” during the Conference on Water Quality conducted online by CII-Water Institute to address the Session on Emerging Contaminants: Definitions; Threats and Challenges on 30th June 2022
21. Delivered a webinar talk on “Applied Numerical Modelling Techniques for Water resources systems” on June 26, 2022 during FDP on Computational Advances in Water Resources Modelling (in Hybrid Mode), conducted by department of Civil Engineering, NIT Jamshedpur, 21-26 June 2022.
22. Delivered a platform talk on “Fate and Transport of Contaminants in Subsurface and Associated Monitoring Aspects: Case studies” at NTPC Solapur on June 16, 2022 during their world environment day celebration.
23. Delivered webinar talk on "Engineered Bioremediation of pollutes sites" conducted by the Department of Vocational Studies and Skill Development, Central University of Haryana held on May 26, 2022.
24. Delivered a talk “Contaminant Transport Modelling through example” during the five days online training course “Groundwater Contaminate Transport Monitoring and Modelling “on May 27,2022 under NHP-PDS “Leachate transport modelling for Gazipur landfill site for suggesting ameliorative measures” by NIH Roorkee, May 23-27, 2022.
25. Delivered a talk on “Geo-sequestration of CO₂ to Mitigate Climate Change and Extreme Events” during the three day's training programme on “Disaster Management of Floods

- due to Climate Change” in association with National Institute of Disaster Management (NIDM) under the aegis of “Global Warming and Climate Change Cluster” at Amity University Campuses through the online platform scheduled from March 22-24th, 2022.
26. Delivered a talk on “Geo-sequestration of CO₂ in Deep Saline Aquifers to Mitigate Climate Change” on March 21, 2022 during the National e-conference on "Climate Change and Water Resource " on the occasion of 'World Water Day' organised by The New College, Kolhapur, Maharashtra.
 27. Delivered a talk (Key Speaker) on “Remediation of Polluted Groundwater Sites using Engineered Bioremediation and PRB Techniques” during one day webinar on “Groundwater Contamination and Modelling Approaches, GCMA-2021” conducted by Department of Mathematics & Computing, IIT (ISM) Dhanbad on Dec 23, 2021
 28. Delivered a talk on “Groundwater Contamination and Engineered Bioremediation of Polluted Sites” during 5- Days Online Training Course on Water Quality Assessment and Management December held by NIH Roorkee on Dec 06-10, 2021
 29. Delivered a talk in webinar on the eve of National Pollution Control Day “Scientific and Technological Research for Pollution Prevention & Control” from 03 December, 2021 organized by Amity Institute of Environmental Sciences, Amity University Uttar Pradesh.
 30. Delivered a talk on “Engineered Bioremediation of Polluted Land and Groundwater Sites” on Nov 17, 2021 during the Industrial Training Webinar on Future Mitigation & Adaptation Measures for Flood Resilience, Organised by National Institute of Disaster Management (NIDM), Ministry of Home Affairs, in collaboration with Amity University Lucknow
 31. Delivered a talk on “Overview of Applied Modeling for Water Resources System” on October 25, 2021 during the one-week online training program on “Analysis and modeling in water resources engineering” held by GEC Bhavnagar, Gujarat during Oct 25-29, 2021
 32. Delivered a keynote talk on “Overview of Managed Aquifer Recharge in (semi)-arid regions of India” during the online conference entitled "Threats and Challenges to Sustainability of Natural Resources: Contemporary Remedial Tools and Techniques held by the Department of Soil & Water Conservation Engineering, College of Technology, GBPUA&T Pantnagar during Oct 23-24, 2021
 33. Delivered a keynote talk on “CO₂ Geo-sequestration in Deep Subsurface to Mitigate Climate Change” during the virtual conference cum training on “Climate-Induced Hydrological Disasters, Policies & Management”, Oct 7-9, 2021.
 34. Delivered a keynote talk on “Rejuvenation of Water Bodies: Case Studies” during the 5-day online FDP on “Sustainable practices for conservation and management of water” conducted by the Dr. S. & S. S. Ghandhy Government Engineering College, Surat during Oct 4-8, 2021.
 35. Delivered an expert talk on “Movement of LNAPL under dynamic groundwater flow conditions” during the one and half day Indo-Norwegian Workshop on Computational Challenges and Modelling of Coupled Processes in Porous Media conducted by the University of Bergen Norway during Oct 1-2, 2021.
 36. Delivered a talk “Application of Numerical Techniques in Groundwater Modelling” on June 15, 2021 during the Five Days FDP on “Groundwater Modelling using MODFLOW (Video Conferencing), June 14-18, 2021, organized by NIH Roorkee

37. Delivered a talk on "Geo-sequestration of CO₂ in Deep Saline Aquifers: An efficient measure for curbing GHG emission" on May 17, 2021 during the Five Days Faculty Development Program on "Recent Advancement in Environmental Sustainability and Conservation Strategies" organized by Amity University, Noida, Uttar Pradesh
38. Delivered an expert talk on "Engineered Bioremediation Techniques of Polluted Land and Groundwater sites" during the National webinar on groundwater contamination and remediation organized by the M S University of Baroda, on May 06, 2021.
39. Delivered an expert talk on "Remediation Techniques of Polluted Groundwater" during the World water day celebrated by Central University of Haryana, on March 22, 2021.
40. Delivered an online talk on "Hydrogeology for Landslide Studies" during the NDMA 5 Half Days Online Training Programme on Landslide Mitigation & Detailed Project Report (DPR) Preparation in collaboration with IIT Roorkee, March 01-05, 2021.
41. Delivered an online talk on "Engineered Bioremediation of Polluted Sites" during the NHP training course on "Groundwater Salinity Issues and Management Solutions, organized by NIH Roorkee February 17 -19, 2021.
42. Gave the online lecture on "Engineered Bioremediation of Polluted Land and Groundwater Sites" for Institutions of Engineers (India), Northeast chapter, organized by NERIST, Nirjuli (Arunachal Pradesh) on February 06, 2021.
43. Delivered a webinar talk on Bioremediation during the Global Sustainability Summit-The New Normal organized by Amity Institute of Environmental Sciences & Amity Institute of Ecotoxicity and Safety Management, Uttar Pradesh held during June 3-5, 2020
44. Delivered a conference talk on "bio-remediation of polluted sites" The 1st Indo-China Research Webinar Series 2020 in Civil and Environmental Engineering, organised during May 8-19, 2020
45. Delivered a talk on "Remediation of polluted sites" during a training course on Emerging Technologies and Soft Computing Techniques for Combating Climate Change and Sustainable Development, held at G. B. Pant Institute of Engineering and Technology Pauri Garhwal on Nov 13, 2019.
46. Delivered a talk on "Engineered Bioremediation of LNAPL polluted groundwater sites" during the 5-Day Training Course on "Water Quality Assessment & Management" held at NIH, Roorkee during June 17-21, 2019
47. Gave a keynote talk on Bioremediation of "Hydrocarbon polluted groundwater" during the two days national workshop on 'Challenges of Civil Engineering Infrastructure in 21st Century' held at HBTU Kanpur during 23-24 September, 2019
48. Delivered a talk on "Groundwater Contamination and Engineered Bioremediation of polluted groundwater sites" during the 5-Day Training Course on "Ground Water Quality Monitoring and Assessment" held at NIH, Roorkee during June 3-7, 2019
49. Delivered a talk on 'Ground water management for sustainable development' during the 5 days training program on Water Audit and Rainwater harvesting for the participants of African countries by WRDM IIT Roorkee during Feb 18-22, 2019
50. Delivered a session talk during training for IFS Officers on "Regional Environment Impact Assessment and Environmental Carrying Capacity of Eco-sensitive Zones" organized by Gujarat Environment Management Institute, Gandhinagar during January 21-25, 2018

51. A couple of talks on “Groundwater Contamination and Engineered Bioremediation of LNAPL Polluted Sites” during five-day training course on Ground water quality modeling on Feb 12-16, 2018 held at NIH Roorkee.
52. A talk on “Groundwater contamination and Engineered Bioremediation of NAPL polluted sites” on September 16, 2017 at College of Technology, GBPUA&T, Pantnagar
53. A talk on “Groundwater contamination and Engineered Bioremediation of NAPL polluted sites” during six-day training course on Ground water on August 21-25, 2017 held at NIH Roorkee
54. Keynote talk on Engineered Bioremediation of LNAPL Polluted Soil-water Resources during the conference on Emerging Trends in Water Resources and Environmental Engineering (ETWRE) held at MVGR College, Vizianagaram, AP on March 30, 2017.
55. A talk on “Phyto-remediation for improving water quality of lakes” during a 5-days training course on ILBM approach for conservation and management of lakes at NIH Roorkee on March 23, 2017
56. Expert talk on “Modelling aspects of (sub)surface water resources systems in basin planning” during a one short term training courses on River Basin Planning using HEC Software held at Department of Hydrology on September 07, 2016 and Feb 24, 2017
57. Keynote talk on “Groundwater flow and contaminant transport simulation” during the National Conference on Transportation and Water Resources Engineering (NCTWE-2015) held by L. D. College of Engineering Ahmedabad, on April 26, 2015.
58. “Modeling Concepts of water resources systems” external expert for research week-2015 at GTU, Ahmedabad on April 09, 2015
59. A talk on “Coastal and seasonal wetlands: An overview” during the short-term training course on ‘Climate change issues and its impacts on the water resources management in coastal and seasonal wetlands’ April 06-17, 2014 at Department of Hydrology, IIT Roorkee
60. ‘Applied Modeling of Water Resources Systems’ in workshop organized by Gujarat Technical University (GTU), Ahmedabad on March 31, 2014.
61. A talk on “Modeling root water uptake and soil moisture dynamics considering the root compensation mechanism” in workshop on “Water Use Efficiency” at Department of Water Resources Development & Management, IIT Roorkee on December 09, 2013
62. A talk on “Bioremediation of hydrocarbon polluted groundwater using bio-stimulation and bio-augmentation techniques” in the mini-symposium ‘Eco-technologies for domestic wastewater treatment and reuse’ at UNESCO-IHE Delft, Netherlands on Nov 29, 2013
63. A talk on “Plant-assisted Bioremediation of LNAPL contaminated groundwater” in the two-day Symposium titled ‘Research in porous media science and technology’ at earth Sciences Building, Utrecht University, Netherlands on 25-26 November, 2013
64. Pollution Risk Assessment of Groundwater Resources of an Intermontane Watershed in Uttarakhand State, India” in a workshop on Groundwater Management in Uttarakhand held by CGWB, Dehradun on Feb 15, 2013
65. “Bioremediation of LNAPL polluted soil-water sites in (semi)-arid coastal regions” at Center for Rural Development and technology, IIT Delhi on November 30, 2012.
66. Series of four-lectures on groundwater hydrology were delivered for video recording at TERI University, New Delhi for an e-learning MHRD project in March-April 2012.

67. "Mechanisms of groundwater flow and contaminant transport modelling" at L.D. College of Engineering Campus, Gujarat Technological University (GTU), Ahmedabad on March 15, 2012.
