

CURRICULUM VITAE OF DR. ASHISH PANDEY

PRESENT POSITION: Professor

CONTACT ADDRESS: Dept. of Water Resources Development & Management
Indian Institute of Technology (IIT) Roorkee
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PROFESSIONAL AFFILIATIONS

Fellow, Institution of Engineers (India).
Fellow, Indian Water Resources Society, Roorkee, India.
Fellow, Indian Association of Hydrologists, Roorkee, India.
Life Member, International Commission on Irrigation and Drainage, India
Member, American Society of Agricultural and Biological Engineering, USA
Life Member, Central Board of Irrigation and Power, New Delhi
Life Member, International Society of Soil and Water Conservation, Beijing.
Life Member, Indian Society of Remote Sensing, Dehradun, India.
Life Member, Indian Association of Soil and Water Conservationist, Dehradun, India.
Life Member, Indian Society of Technical Education, New Delhi, India.
Life Member, Soil Conservation Society of India, New Delhi.
Life Member, Indian Society of Agricultural Engineers
Life Member, Indian meteorological Society, New Delhi

EDUCATION

Exam/ Degree	Board/Univ./ Institute	Year	Subject	Remarks
Ph.D.	IIT Kharagpur, India	2005	Soil & Water Conservation Engineering*	Institute Scholarship and DAAD Scholarship
M.Tech.	J.N.K.V.V. Jabalpur India	1998	Soil & Water Engineering**	Gold Medalist
B. Tech.	J.N.K.V.V. Jabalpur India	1996	Agricultural Engineering	-
* Ph.D. thesis title: Hydrological Modeling of a Watershed Using Remote Sensing, GIS, and WEPP Model.				
** M. Tech. thesis title: Performance of Drip Emitters as Influenced by Crop Geometry.				

BROAD AREA OF SPECIALIZATION

Soil and Water Conservation Engineering, Irrigation Water Management, Micro Irrigation and OFD works, Remote Sensing and GIS applications in Water Resources.

TEACHING AND RESEARCH EXPERIENCE

1. **Professor:** Department of Water Resources Development and Management, IIT Roorkee. December 17, 2019–Continue
2. **Associate Professor:** Department of Water Resources Development and Management, IIT Roorkee. April 04, 2014 –December 16, 2019
3. **Assistant Professor:** Department of Water Resources Development and Management, IIT Roorkee. March 28, 2007 – April 03, 2014.
4. **Lecturer:** Department of Agricultural Engineering, NERIST, Nirjuli, Itanagar. July 10, 2001 to March 25, 2007.
5. **Institute Scholar:** Agricultural & Food Engineering Department, I.I.T. Kharagpur, India. August 23, 1999, to July 08, 2001.
6. **Junior Project Officer:** Agricultural & Food Engineering Department, I.I.T., Kharagpur, India. September 11, 1998, to August 16, 1999.

ADMINISTRATIVE RESPONSIBILITIES AT IIT ROORKEE

1. Head of the Department of WRD&M from February 01, 2021- till date
2. Coordinator, Regional Coordinating Institute (RCI), Unnat Bharat Abhiyan (UBA), IIT Roorkee. August 2019-till date
3. Coordinator, THOMSO-2019, IIT Roorkee.
4. Chief Returning Officer, SAC Election-2019-20.
5. Professor-In-Charge, Building, September 03, 2019- January 31, 2021
6. Member, Sponsored Research and Industrial Consultancy Committee (SRICC), IIT Roorkee. June 17, 2017, to June 17, 2019.
7. Chairperson, Screening Committee for the recruitment of Project Staff /Research Staff of the SRIC Projects, IIT Roorkee. April 01, 2018, to June 15, 2019.
8. Chairman, Departmental Academic Program Committee (DAPC) June 01, 2015- August 28, 2019.
9. Secretary, Departmental Faculty Committee, IIT Roorkee January 25, 2010- January 31, 2021
10. Professor -In-Charge, Irrigation Water Management Lab., March 16, 2016- till date.
11. Professor -In-Charge (Library), January 07, 2008-February 2021.
12. Professor -In-Charge, Irrigation Water Management Lab., January 07, 2008- May 08, 2015.
13. Professor -in-Charge, Spatial Science Lab., February 01, 2019-till date.
14. Professor-in-Charge, Computer Lab. January 01, 2013- December 2021.
15. Member, Library Advisory Committee, Central Library, IIT Roorkee May 26, 2008- March 2022.
16. Professor -In-Charge, Demonstration Farm, January 07, 2008-May 31, 2019.
17. Chief Warden, Azad Bhawan, IIT Roorkee June 01, 2015-June 30, 2018.
18. Faculty Advisor, Deptt. of WRD&M, Cognizance 2018.
19. Faculty Advisor, Deptt. of WRD&M, Cognizance 2016.
20. Warden, Rajendra Bhawan, IIT Roorkee January 2010 to March 31, 2013.

AWARDS/HONORS

1. Delivered **19th - Water Tech Talk on** "Irrigation Efficiency Improvement through On- Farm Water Management" organized by National Water Mission, Ministry of Jal Shakti, Deptt. of Water Resources, River Development & Ganga Rejuvenation, Govt. of India on April 08, 2022.
2. Chairman, The Institution of Engineers (India), Roorkee Local Centre (October 30, 2021- till date)
3. Bagged First Prize (Rs. 5000/- Cash) from Hindi Cell, IIT Roorkee for the Best Hindi article “कृषि- मौसम परामर्श सेवाओं की उपादेयता” published in ‘Manthan’, a half-yearly magazine of IIT Roorkee.
4. Executive Vice President(HQ), Indian Water Resources Society (IWRS) (February 01, 2021- till date)
5. Shortlisted in the top ten “Outstanding Teachers” list in PG category for the years 2020 and 2021.
6. Editor, Indian Journal of Soil Conservation. Published by Indian Association of Soil & Water Conservationists. April 2018 till date.
7. Guest Editor of Special issue on Challenges in Irrigation Management for Food Security-I, J. Indian Water Resources Society (IWRS). 37 (1):2017.
8. Guest Editor of Special issue on Challenges in Irrigation Management for Food Security-II, J. Indian Water Resources Society (IWRS). 37 (2):2017.
9. Eminent Engineers Award-2015 by the Institute of Engineers (India), Uttarakhand State Centre (IEI, UKSC), Dehradun.
10. Guest Editor of Special issue on Soil Erosion and Sediment Yield Modelling, J. Hydrologic Engineering (ASCE). June 2015. 20, (6): C2015001.
11. Annual Best Paper Award of IWRS - 2014 for the paper entitled “Experimental verification of the effect of slope, soil and AMC of a fallow land on Runoff Curve Number” (Cash prize of Rs. 5,000/- , memento and citation).
12. Guest Editor of Special issue on Soil Conservation Service Curve Number (SCS-CN) Methodology, J. Hydrologic Engineering (ASCE). November 2012. 17, (11): 1157-1286
13. National Secretary, Indian Water Resources Society, Roorkee since August 18, 2011 to till date.
14. Joint Editor, Indian Water Resources Society, Roorkee June 2007 to August 17, 2011
15. IAH Annual Best Paper Award: Received Indian Association of Hydrologists (IAH) Annual Best Paper Award for the year 2007 for the paper entitled “Decision support system for prioritization and watershed management” (Cash prize of Rs. 10,000/-, memento and citation).
16. Certificate of Merit (2009) for research paper entitled “Frequency analysis for one day to seven consecutive days of annual maximum rainfall for the District of North Lakhimpur, Assam” awarded by Institution of Engineers (India).
17. Vishwavidyalaya and Jindal Gold Medal: M. Tech. First Position.
18. Chairman of Session entitled “Surface Hydrology and Water Management” in the Hydro 2015 Organized by Department of Civil Engineering, IIT Roorkee.
19. Panelist in the session entitled "Addressing the Water-Food-Energy Nexus Sustainable Development and Inclusive Growth" organized by Govt. of India, Ministry of Water Resources, River Development and Ganga Rejuvenation in the India Water Week -2017 at Vigyan Bhawan, New Delhi on October 11, 2017.
20. Best Paper Award for the paper on " Reference crop evapotranspiration estimation using remote sensing technique" presented by Samuel Mukpuou (Presenter), Ashish Pandey and V.M. Chowdary in the International Conference on “Sustainable Technologies for Intelligent Water

Management -2018” jointly organized by IWRS and Dept., of WRDM, IIT Roorkee during February 16-19, 2018.

21. Panelist in the session entitled "Re-orientating the Water Education to Address the Water Related Challenges” organized by Ministry of Jalshakti, Govt. of India in the India Water Week -2019 at Vigyan Bhawan, New Delhi on September 25, 2019.
22. Panelist in the session entitled "The River conservation Synchronised Agriculture” organized by Centre for Ganga River Basin Management Studies, IIT Kanpur and NMCG, Ministry of Jalshakti, Govt. of India in the India Water Impact Summit [IWIS] 2020- Comprehensive Analysis and Holistic Management of Local Rivers and Waterbodies on December 14, 2020.
23. Moderator and Keynote Speaker in the Session on “Jal Vimarsh: Water and Krishi” in the India International Science Festival (IISF-2020) organized by Ministry of Science & Technology, Ministry of Health & Family Welfare, and Ministry of Earth Sciences in association with Vijnana Bharati (VIBHA) during December 22–25, 2020.
24. Distinguished Chief Guest. In a UBA workshop on “Assembly of Solar Study Lamp” organized by the College of Engineering Roorkee on March 02, 2021.
25. Keynote Speaker in the Session on "Jal Vimarsh: Water and Krishi" in the India International Science Festival (IISF-2020) organized by Ministry of Science & Technology, Ministry of Health & Family Welfare, and Ministry of Earth Sciences in association with Vijnana Bharati (VIBHA) during December 22-25, 2020.
26. Keynote Speaker in an online International Conference on "Sustainable Water Resources Development and Management," SWARDAM-2021, 8-9 March 2021, Organized by GEC Aurangabad, Maharashtra.
27. Guest of Honour. In National Conference on “Water Resources Management in Hilly Region Under Climate Change” organized by the Graphic Era Deemed to be University, Dehradun on March 19, 2021.
28. Best Paper Award for the paper on "Water Budget Monitoring of the Ganga River Basin Using Remote Sensing Data and GIS" presented by Gagandeep Singh (presenter) and Ashish Pandey in the International e-Conference on “Water Source Sustainability” jointly organized by IWRS and Dept., of WRDM, IIT Roorkee during June 18-20, 2021.

INTERNATIONAL /NATIONAL SCHOLARSHIP AND FELLOWSHIPS

1. Selected for JSPS Postdoctoral Fellowship (2009-2010) for Foreign Researchers, Japan. *[Not Availed]*
2. Selected for BOYSCAST fellowship (2006-07): DST, GOI. *[Not Availed]*
3. DAAD Scholarship: German Academic Exchange Services, Integrated Environment Engineering, sandwich program during June 1, 2004 to August 31, 2004 in the Institute of Water Resources Management, Hydrology and Agricultural Hydraulic Engineering. University of Hannover, Germany.
4. Institute Scholarship: I.I.T. Kharagpur for Ph.D. Program.
5. ASPEE Scholarship: ASPEE, Agril. Research & Development Foundation, Mumbai for M.Tech.
6. Merit Scholarship: B.Tech. Ist year
7. Merit Scholarship: High School and Higher Secondary Examination.

VISITS ABROAD

1. Visited Nara, Japan during November 19-24, 2018, to present a paper in the PAWEES-INWEPF International Conference 2018.
2. Visited New Mexico State University, Las Cruces during July 10-13, 2017, for academic and research discussion.
3. Visited University of Texas, El Paso during July 14-15, 2017 for academic and research discussion.
4. Visited Spokane, Washington during July 16-19, 2017 to present a paper in the ASABE 2017.
5. Visited Oregon State University, Corvallis during July 20-23, 2017 for academic and research discussion.
6. Visited Vienna, Austria during April 23-29, 2017 to present a paper in the European Geosciences Union (EGU) General Assembly 2017.
7. Visited Orlando, Florida, during July 17-21, 2016 to present a paper in the ASABE 2016.
8. Visited the Texas A&M Agri Life Research and Extension Centre (Texas A&M University System), Vernon, TX during July 11 to 16, 2106 for academic and research discussion.
9. Visited Beijing, China, to present a paper in an International Conference on Water Resource and Environment (WRE 2015) from July 24th to 29th, 2015.
10. Visited Lagos, Nigeria for site visit of consultancy project on “Hydrological Study and Area Drainage Study of Project Sites at Lekki Free Trade Zone (FTZ), Lagos. Sponsored by Dangote Oil Refining Company Ltd. Nigeria from March 24, 2015 to April 01, 2015
11. Visited Pattaya (Thailand) to present a paper at the International Conference on Chemical, Biological and Environment Sciences (ICCBES'2014) during Dec. 15-16, 2014.
12. Visited Dallas, Texas, the United States of America to present a paper in the American Society of Agricultural and Biological Engineer's Annual International Meeting during July 27- August 03, 2012.
13. Visited Louisville, Kentucky, the United States of America to present a paper in the American Society of Agricultural and Biological Engineer's Annual International Meeting during August 5-12, 2011.
14. Visited Taipei, Republic of China to attend Study Meeting on Monitoring and Management of Agricultural Water Quality for Green Food Production in the Asia-Pacific Region under Asian Productivity Organization (APO) sponsored program during Sep. 29-Oct. 03, 2008.
15. Visited Institute of Water Resources Management, Hydrology and Agricultural Hydraulic Engineering, University of Hannover (Germany) Under German Academic Exchange Services (DAAD) Scholarship from June 1, 2004, to August 31, 2004.

MEMBER OF TECHNICAL COMMITTEES

1. Member, Expert Group on “Water Security” sub-theme on “Water Use Efficiency & Governance” constituted by the Ministry of Jal Shakti, DoWR, RD&GR. (Dec 2021-continued)
2. Member, Working Group on Climate Change and Agricultural Water Management (WG-CLIMATE), International Commission on Irrigation and Drainage (ICID). Nominated by Indian National Committee on Irrigation and Drainage (INCID). (July 2021-continued)

3. Member, Working Group on use of non-conventional water resources for irrigation ((WG-NCWRI), International Commission on Irrigation and Drainage (ICID). Nominated by Indian National Committee on Irrigation and Drainage (INCID). (July 2021-continued)
4. Member, Working Group on Sustainable On-Farm Irrigation System Development (WG-SON-FARM), International Commission on Irrigation and Drainage (ICID). Nominated by Indian National Committee on Irrigation and Drainage (INCID). (July 2021-continued)
5. Member of the India-Bangladesh Joint Technical Committee for conducting the Joint Feasibility Study of the Ganges-Padma Barrage Project (GBP) of Bangladesh constituted by the Ministry of Jal Shakti, DoWR, RD&GR. (February 2021- continued)
6. Member of the National Committee on Surface Water (INCSW) of MoWR, Govt. of India w.e.f. 15.06.2012 to 14.06.2015 (Three Years).
7. Member of Water Resources Division Council, Bureau of Indian Standards, Govt. of India.
8. Member of Sectional Committee on Lakes & Reservoirs, WRD-10 of Bureau of Indian Standards, Govt. of India.

SPONSORED (R&D) PROJECTS COMPLETED (12)

1. Hydrological Experiment for the validation of Scatterometer Derived Hydrological Products and Application for River Basin Management. Sponsored by Space Applications Centre (SAC), ISRO, Ahmedabad. **[Principal Investigator]**.
2. Acoustic Doppler Current Profiler. Sponsored by IIT Roorkee under Matching Grant Scheme-2018. **[Principal Investigator]**.
3. Hydro Surveyor M9. Sponsored by IIT Roorkee under SMILE-2018. **[Principal Investigator]**.
4. Assessment of Sediment Yield from the Tehri Catchment (New). THDC India Limited Bypass Road, Rishikesh. **[Co-Principal Investigator]**.
5. Hydrological Response of a River Basin in Changing Climate. Sponsored by Ministry of Water Resources (MoWR), RD&GR, Government of India, New Delhi. **[Principal Investigator]**
6. Experimental verification of SCS Runoff Curve Numbers for Selected Soils and Land Uses. Sponsored by Ministry of Water Resources (MoWR), Government of India, New Delhi. **[Co-Principal Investigator]**.
7. Assessment of Sediment Yield from Tehri Reservoir Catchment. THDC India Limited Bypass Road, Rishikesh. **[Co-Principal Investigator]**
8. Preparation of Action Plan for Improvement of Irrigation Water Use Efficiency. Sponsored by Ministry of Water Resources (MoWR), Govt. of India New Delhi. **[Co-Principal Investigator]**
9. Design and Development of drip irrigation system for field crops. FIG, IIT Roorkee. **[Principal Investigator]**
10. Agriculture and Sustainable Life support systems: A case study of Tawang and West Kameng Districts of Arunachal Pradesh. Sponsored by MHRD, Government of India. **[Co-Principal Investigator]**
11. Landslide Zonation of Dikrong River Basin using Remote Sensing and Geographic Information System. Sponsored by MHRD, Government of India. **[Principal Investigator]**
12. Study on Basic Hydraulics and Moisture Movement of Drip Emitters. Sponsored by NERIST, Nirjuli, Itanagar (India). **[Principal Investigator]**.

SPONSORED (RESEARCH & DEVELOPMENT) PROJECTS ON-GOING (9)

1. Identification of Critical Soil Erosion Prone Areas and Preparation of Catchment Area Treatment Plan. Sponsored by National Mission for Clean Ganga, Ministry of Jalshakti, Govt. of India. **[Principal Investigator]**.
2. Capacity development programme on-site suitability mapping for managed aquifer recharge under varying climatic conditions using remote sensing and machine learning-based hydrological modelling tools. Sponsored by Asia-Pacific -Network for Global Change Research, Kobe, Japan. **[Co-Principal Investigator]**.
3. Historical Trend Analysis of Ramsar Wetlands in India: A Remote Sensing and Modeling Approach. Sponsored by Space Applications Centre (SAC), ISRO, Ahmedabad. **[Principal Investigator]**.
4. Irrigation Efficiency Improvement through On-Farm Water Management. Sponsored by Ministry of Jal Shakti, Department of Water Resources & RD and GR, Govt. of India. **[Principal Investigator]**.
5. Water Resources Assessment under Climate Uncertainties. Sponsored by ISRO, Department of Space, GOI, Bangalore. **[Principal Investigator]**.
6. Gramin Krishi Mausam Sewa (GKMS). Sponsored by Ministry of Earth Science, Govt. of India, New Delhi. **[Principal Investigator]**.
7. Forecasting Agricultural output using Space Agrometeorology and Land-based Observations (FASAL). Sponsored by Ministry of Earth Science, Govt. of India, New Delhi. **[Principal Investigator]**.
8. Water4Change - Fit-for-purpose water-sensitive design for fast-growing livable cities. Sponsored by DST-NWO call on Urban Water Systems (Bilateral DST-NOW Project). **[Co-Principal Investigator]**.
9. Arth Ganga Project. Sponsored by IIM Lucknow under National Mission for Clean Ganga, Ministry of Jalshakti, Govt. of India. **[Co-Principal Investigator]**.

CONSULTANCY PROJECTS COMPLETED [51 Completed + 3 Ongoing]

1. Certification of Flow Measurement System installed in Satluj river. **Client:** NJHPS, SJVN Ltd., Himachal Pradesh. **[Principal Investigator]**.
2. Technical Evaluation of Micro Irrigation Projects. **Client:** Narmada Valley Development Authority Narmada Bhawan, Bhopal (M.P.) **[Investigator]**.
3. Revalidation of design and technical solution of rainwater harvesting ponds within the premise of Hindan Air Force Station, Ghaziabad. **Client:** L&T Construction, C-17 Project, IAF, Hindan, Ghaziabad (UP) **[Principal Investigator]**.
4. Area Drainage Study for North Karanpura Super Thermal Power Project (3×660 MW) in the State of Jharkhand. **Client:** NTPC Ltd, Noida. **[Principal Investigator]**.
5. Area drainage study for proposed Baruni Thermal Power Project in the state of Bihar. **Client:** Talcher Thermal Power Station, NTPC Ltd. **[Principal Investigator]**
6. Conduct of concurrent evaluation study providing LIS to group of 5 No. Panchayats Sandhole, Sohar, Neri, Ghanalla, and Datwar in Tehsil Sandhole District Mandi (HP). **Client:** IPH Circle, Hamirpur, Irrigation and P.H. Department, Himachal Pradesh. **[Principal Investigator]**

7. **Concurrent evaluation study providing** LIS to group of villages of GP Binga Samoud and Saklana in Tehsil Dharampur District Mandi (HP). Client: **IPH Circle, Hamirpur, Irrigation and P.H. Department, Himachal Pradesh. [Principal Investigator]**
8. Area drainage study for proposed Talcher Thermal Power Project-III (2×660 MW) in the state of Odisha. Client: Talcher Thermal Power Station, NTPC Ltd., Distt. Angul. **[Principal Investigator]**
9. Area Drainage Study for Telangana STPP, (Stage I and Stage II). Client: NTPC Ltd, Noida. **[Principal Investigator]**
10. Preparation of Irrigation Plan to use the Treated Effluent discharge. Client. M/s. Ramaa Shyama Papers Pvt. Ltd. Faridpur, Bareilly. **[Investigator]**.
11. Hydraulic mathematical study for crossing NOIDA-Greater NOIDA Metro Corridor near NOIDA-Greater NOIDA Expressway over Hindon River in Distt. GB Nagar. Client: UP Irrigation Dept., Okhla **[Investigator]**
12. Identification of alternate surface water storage schemes for meeting water requirement of Deoghar UMPP considering Air Cooled Condenser Technology. Client: M/s PFC Consulting Limited, New Delhi. **[Principal Investigator]**.
13. Area Drainage Study for Plant and Ash Dyke for Patratu STPP. NTPC Ltd, Noida. **[Principal Investigator]**
14. Hydrological Study of Proposed Solar Plant at Radhanesda, District Banaskatha, Gujarat. Client: Gujarat Power Corporation Ltd., Block No. 8, Sixth Floor, Udhyog Bhavan, Sector-11 Gandhi Nagar. **[Principal Investigator]**.
15. Hydrogeological Study for Telangana Super Thermal Power Project. Client. NTPC Limited, Ramagundam STPP, P.O. Jyoti Nagar, District Karim Nagar-505215, India **[Principal Investigator]**.
16. Hydrogeological Study for Pudimadaka Project (4×1000 MW), Visakhapatnam, Andhra Pradesh. Client. NTPC Limited, SRHQ, IInd Floor, MCH Complex, R.P. Road, Secunderabad 500 003. Andhra Pradesh, India **[Principal Investigator]**.
17. Hydrological and Hydrogeological study for Unchahar Stage –IV (1 ×500 MW)". Client. NTPC Limited, Feroz Gandhi Unchahar Thermal Power Station, P.O. Unchahar- Raiebareli, Uttar Pradesh-229406, India. **[Principal Investigator]**.
18. Hydrogeological Study for Barethi STPP. Client. NTPC Limited, 4th Floor, Magneto-Offizo, Labhandi, G E Road, Raipur, Chhattisgarh- 492001, India **[Principal Investigator]**.
19. Hydrogeological Study around Lara STPP. Client. NTPC Limited, Lara Super Thermal Power Project, Raigarh, Chhattisgarh-496001, India **[Principal Investigator]**.
20. Area Drainage Study for 2 × 660 MW Buxar Thermal Power Project of SJVN Thermal Pvt. Ltd. **Client:** SJVN Thermal Private Ltd., Saket, New Delhi. **[Investigator]**
21. Area Drainage and Storm Water Conservation Study for Pudimadaka Supper Thermal Power Project (4×1000 MW) **Client:** NTPC Ltd, Noida. **[Investigator]**
22. Area drainage and flood control study for Solar Power Plant at Mithakhari, Port Blair, A&N Islands. NTPC Ltd, Noida. **[Investigator]**.
23. Hydrological Study and Area Drainage Study of Project Sites at Lekki Free Trade Zone (FTZ), Lagos, Nigeria Client. M/S Dangote Oil Refining Company Ltd. Lagos, Nigeria. **[Principal Investigator]**.
24. Preliminary Feasibility Report (PFR) of Artificial Lwali Lake, Pauri block, Pauri. Client: Executive Engineer, Irrigation Division, Srinagar Garwal, Uttarakhand. **[Principal Investigator]**.

25. Water Availability study for Chhattisgarh Ultra Mega Power Project. **Client:** M/s. Power Finance Corporation, New Delhi. **[Investigator]**
26. Area Drainage and Hydrological Study-Gidderbaha Thermal Power Project. **Client:** M/s. Desin Pvt. Ltd., Desin House, New Delhi. **[Investigator]**
27. Site visit and Review of Hydrological, Hydro-geological and Area drainage study reports for Raigarh Thermal Power Project. **Client:** Visa Power Ltd. Kolkata. **[Investigator]**
28. Water availability Study for Chitrangi Thermal Power Project. **Client:** Chitrangi Power Ltd., Reliance Energy Centre, Santa Cruz. Mumbai. **[Investigator]**
29. Water Availability Study for Ambarnath GIP Railway Dam Jhambivali Village, District-Thane, Maharashtra. **Client:** Indian Railway Catering and Tourism Corporation Ltd. (IRCTC), New Delhi 110001. **[Investigator]**
30. Site visit and Review of Study on Area Drainage, Hydrogeology of Tilda TPP. **Client:** M/S GMR Chhatisgarh Energy Private Ltd. **[Investigator]**
31. Review of Report on Water Availability, Hydro-Geology and Area Drainage of Birra Thermal Power Project (Chhattisgarh). **Client:** M/S MB Power (M.P.) Ltd. Moser Baer. **[Investigator]**
32. Site Visit and Review of Report on Water Availability and Hydrology for 2520 MW TPP at Anuppur. **Client:** M/S MB Power (M.P.) Ltd. Moser Baer. **[Investigator]**
33. Identification of water source and water availability for power plant linked to Mourya Coal Block (Jharkhand) **Client:** M/s. Power Finance Corporation, New Delhi. **[Investigator]**
34. Mathematical modeling to assess submergence effect of Polavaram Dam. **Client:** Chief Engineer, PP&F, Water Resources Deptt., Bhubaneswar, Orissa. **[Investigator]**
35. Two Purpose Driven Study (PDS) project under Hydrology Project Phase II Program. **Client:** Deputy Director Hydrometeorology, Division No.4 Raipur-492001, Chhatisgarh. **[Principal Investigator]**
36. Water and Waste Water Audit. **Client:** M/s NALCO, Smelter Plant, Nalco Nagar, Angul, Orissa. **[Investigator]**
37. Dam break analysis of Mullaperiyar Dam; Idukki Dam, Cheruthony Dam, Kulamavu Dam; Lower Periyar Dam; and Bhuthathankettu Barrage and the propagation of flood wave from Mullaperiyar Dam to the Arabian Sea. **Client:** Chief Engineer (ISW), Govt. of Kerala, Thiruvananthapuram **[Investigator]**
38. Area Drainage Study for Plant and Ash Dyke for Gadawara Super Thermal Power Project (4×660 MW). **Client:** NTPC Ltd, Noida. **[Principal Investigator]**
39. Area Drainage Study for Plant and Ash Dyke for Bareilly Super Thermal Power Project (6×660 MW) **Client:** NTPC Ltd, Noida. **[Principal Investigator]**
40. Water availability study of at least 118 cusecs (106 MCM/yr) for 2nd Jharkhand UMPP (4000MW) from Ajay river considering the proposed sites at Siktiya & Hussainabad in Deoghar district of Jharkhand & preparation of detailed project report. **Client:** M/s. Power Finance Corporation, New Delhi. **[Principal Investigator]**
41. Water Availability Study of Patratu Reservoir and Related Thermal Power Plants. **Client:** M/s. Power Finance Corporation, New Delhi. **[Principal Investigator]**
42. Conceptual water availability and intake point study for proposed 1320 MW TPP at Distt. Deogarh, Jharkhand. **Client:** DED, Dalmia Power Ltd., 45 Scindia House, Connaught Place, New Delhi. **[Investigator]**
43. Study of feasibility for alternate means for drawl of water from River Sone for 2×600 MW Anuppur Thermal Power Project. **Client:** M/S MB Power (M.P.) Ltd. Moser Baer. **[Investigator]**

44. Dam break analysis of the proposed barrage located at 435 meters upstream of Dhurwasin Road Bridge. **Client:** M/S MB Power (M.P.) Ltd. Moser Baer. **[Investigator]**
45. Area Drainage Study for Plant and Ash Dyke for Bilhaur Super Thermal Power Project (2×660 MW) **Client:** NTPC Ltd, Noida. **[Principal Investigator]**
46. Study on assessment of soil loss in Himalayan watershed. **Client:** Dr. Aman Sharma, Chief Engineer (Env't.), WAPCOS Ltd., Gurgaon. **[Principal Investigator]**
47. Surface Runoff Study for SEL (IPP) at Jharsuguda. **Client:** Sesa Sterlite Limited, Jharsuguda.Orissa. **[Investigator]**
48. Sensitivity analysis of HEC-RAS Dam break input variables. **Client:** Dr. Aman Sharma, Chief Engineer (Env't.), WAPCOS Ltd., Gurgaon. **[Investigator]**
49. EIA and EMP Study of the proposed storage dam on river Ajay for Water Supply to 4000 MW UMPP at Hussainabad in Deoghar District of Jharkhand and preparation of detailed report. **Client:** M/s. Power Finance Corporation, New Delhi. **[Investigator]**
50. Cumulative scientific study to assess the impact of existing and proposed HP stations on Saryu river basin in the Distt. of Bageshwar. **Client:** GM (Civil- UJVNL, Dehradun). **[Investigator]**
51. Cumulative scientific study to assess the impact of existing and proposed HP stations on Eastern Ramganga basin in Bageshwar. **Client:** GM (Civil- UJVNL, Dehradun). **[Investigator]**.

CONSULTANCY PROJECTS COMPLETED [3 Ongoing]

1. Contour study of ground water and recharge at NTPC Unchahar and its related area. **Client.** NTPC Limited, Feroz Gandhi Unchahar Thermal Power Station, P.O. Unchahar- Raibareli, Uttar Pradesh **[Principal Investigator]**.
2. Model Water Balance Study using system studies and modeling techniques for Godavari Basin between Sri Ram Sagar Project and Polavaram. **Client.** National Water Development Agency (NWDA), Hyderabad, Ministry of Jalshakti, Government of India. **[Principal Investigator]**.
3. Model water balance study (Hydrological studies) of Kuno basin using system studies and modelling techniques. **Client.** National Water Development Agency (NWDA), Gwalior, Ministry of Jalshakti, Government of India. **[Principal Investigator]**.

TEACHING ENGAGEMENT AT THE DEPARTMENT OF WRD&M, IIT ROORKEE

P.G. (Including Pre Ph.D. Courses)

1. WR -573 Principles & Practices of Irrigation
2. WR- 503 Water Resources Planning & Management
3. WR-576 Operation, Maintenance & Management of Irrigation Systems
4. WR- 583 Remote Sensing & GIS Applications in Agriculture
5. WR-571 Design of Irrigation and Drainage Works
6. WR-522 Environmental Impact Assessment of Water Resources Projects
7. WI -504 On-Farm Development

LABORATORY DEVELOPMENT AT DEPARTMENT OF WRD&M, IIT ROORKEE

1. Demonstration Farm at Toda Kalyanpur Village.
2. Developed drip irrigation system facility for testing of drip irrigation system in the Demonstration Farm of the Department.
3. Developed a setup of a rainfall simulator for the characterization of rainfall.
4. Developed Spatial Science laboratory.
5. Developed Agromet Observatory at IIT Roorkee. Sponsored by IMD, MoES, Govt. of India
6. Developed a Mobile App “**MAUSAM**” under the GKMS project Sponsored by IMD, MoES, GOI, New Delhi to disseminate Agro Advisory Service (AAS) in Haridwar District at the Block level.
7. Developed a Mobile App “**KISAN**” in collaboration with NRSC-N, ISRO, New Delhi under the GKMS project Sponsored by IMD, MoES, GOI to disseminate Block wise Agro Advisory Service (AAS) in Uttarakhand.
8. Developed video (Hindi and English) on Gramin Krishi Mausam Sewa (GKMS).
9. Developed a manual for Agromet Field Unit, IIT Roorkee (in Hindi) “Fasal Prabandhan Evam Krishi Mausam Salaahkari Sewayen,” especially for the farmers.

REFRESHERS COURSES / SHORT TERM TRAINING PROGRAMS ORGANIZED

INTERNATIONAL TRAINING PROGRAMS ORGANISED (13)

1. **International** e-ITEC Course on "Remote Sensing and GIS Applications in Agriculture" at Department of WRD&M, IIT Roorkee during September 01-03, 2021. Sponsored by Ministry of External Affairs, Govt. of India. *[Coordinator]*
2. **International** Training on “Water Audit and Rainwater Harvesting” for South African Nationals Under the Third India Africa Forum Summit (IAFS-III) at Department of WRD&M, IIT Roorkee during February 18-22, 2019. **Sponsored by** Ministry of External Affairs, Govt. of India. *[Coordinator]*
3. **International** Training on “Planning, Design, and Implementation of Irrigation Schemes” at CEC, IIT Roorkee during December 05-15, 2016 for Capacity Building of FAO and Afghan Ministry of Energy and Water (MEW) staff. **Sponsored by** Food and Agriculture Organization of the United Nations (FAO). *[Coordinator]*
4. **International** Training on “Water Resources Engineering” at CEC, IIT Roorkee during December 06- 26, 2013 for Capacity Building of Afghan Ministry of Energy and Water (MEW) staff as part of the Western Basins Water Resources Management Project. **Sponsored by** Asian Development Bank and Cowater International Inc., Canada. *[Coordinator]*
5. **International** Training on “HEC-RAS Modeling” at CEC, IIT Roorkee during November 13-December 03, 2013, for Capacity Building of Afghan Ministry of Energy and Water (MEW) staff as part of the Western Basins Water Resources Management Project. **Sponsored by** Asian Development Bank and Cowater International Inc., Canada. *[Coordinator]*
6. **International** training on “Construction Supervision- Quality Control” during June 1-14, 2013 for PCU, MEW, Islamic Republic of Afghanistan, Kabul. **Sponsored by** Islamic Republic of Afghanistan, Kabul. *[Co-Coordinator]*
7. **International** Training on “Water Resources Project Administration” at CEC, IIT Roorkee during April 8-28, 2013 for Capacity Building of Afghan Ministry of Energy and Water (MEW) staff as

part of the Western Basins Water Resources Management Project. **Sponsored by** Asian Development Bank and Cowater International Inc., Canada. **[Coordinator]**

8. **International** Training on “Modern irrigation Practices” at IIT Roorkee during March 04-15, 2013 for capacity building of Ministry of Agriculture, Irrigation & Livestock/On-Farm Water Management Project, Islamic Republic of Afghanistan. **Sponsored by** Ministry of Agriculture, Irrigation & Livestock/On-Farm Water Management Project, Islamic Republic of Afghanistan. **[Coordinator]**
9. **International** Training on “Water Resources Project Administration” at CEC, IIT Roorkee during January 27- February 16, 2013 for Capacity Building of Afghan Ministry of Energy and Water (MEW) staff as part of the Western Basins Water Resources Management Project. **Sponsored by** Asian Development Bank and Cowater International Inc., Canada. **[Coordinator]**
10. **International** Training on “Water Resources Engineering” at CEC, IIT Roorkee during December 07- 28, 2012 for Capacity Building of Afghan Ministry of Energy and Water (MEW) staff as part of the Western Basins Water Resources Management Project. **Sponsored by** Asian Development Bank and Cowater International Inc., Canada. **[Coordinator]**
11. **International** Training on “Livelihood in River Basin” at CEC, IIT Roorkee during September 27 to October 23, 2012, for Capacity Building of Afghan Ministry of Energy and Water (MEW) staff as part of the Western Basins Water Resources Management Project. **Sponsored by** Asian Development Bank and Cowater International Inc., Canada. **[Coordinator]**
12. **International** Training on “Economic Development for Rural and Smaller Communities” at CEC, IIT Roorkee during July 02-28, 2012 for the Capacity Building of Afghan Ministry of Energy and Water (MEW) staff part of the Western Basins Water Resources Management Project. **Sponsored by** Asian Development Bank and Cowater International Inc., Canada. **[Coordinator]**
13. **International** training on “Ground Water Governance in Asia: Theory & Practice” during November 18-December 02, 2007. **Sponsored by** IWMI, Srilanka. **[Co-Coordinator]**.

National Training Programs Organised (20)

1. Training on “Technical Issues of Hydropower” at CEC, IIT Roorkee during March 21-25, 2022. **Sponsored by** SJVN Limited Shimla H.P. **[Coordinator]**
2. Training program on "Latest Technologies in Water Sector" under the Mandatory Cadre Training Program (MCTP) for Central Water Engineering Services Group ‘A’ officers during December 20-24, 2021. Sponsored by National Water Academy, Central Water Commission, New Delhi, GOI. **[Coordinator]**
3. Training on “River Training Works” from October 27 to November 01, 2012. **Sponsored by** Applied Research International Pvt. Ltd., New Delhi. **[Co-Coordinator]**
4. Training on “Technical Issues of Hydropower” at CEC, IIT Roorkee during January 21-28, 2019. **Sponsored by** SJVN Limited Shimla H.P. **[Co-coordinator]**
5. Training on “Project Management for River Valley Projects” at CEC, IIT Roorkee during August 20-24, 2018. **Sponsored by** NHPC Ltd. Faridabad. **[Coordinator]**
6. Training on “Slope Stability and Stabilization Techniques, Treatment with Geo-Synthetics for HE Projects” at CEC, IIT Roorkee during August 10-14, 2018. **Sponsored by** NHPC Ltd. Faridabad **[Co-Coordinator]**
7. Training on “Application of Remote Sensing and GIS in Hydropower Project” at CEC, IIT Roorkee from November 27 to December 02, 2017. **Sponsored by** NHPC Ltd. Faridabad **[Coordinator]**

8. Training on “Geotechnical and Geological investigations under overburden” at CEC, IIT Roorkee from October 02 to October 07, 2017. **Sponsored by** NHPC Ltd. Faridabad **[Co-coordinator]**
9. Training on “Dam Safety Management Including Instrumentation of Existing Dams” at CEC, IIT Roorkee from September 26 to October 01, 2017. **Sponsored by** NHPC Ltd. Faridabad. **[Co-coordinator]**
10. Training on “Project Management for River Valley Projects” at CEC, IIT Roorkee during September 11-16, 2017. **Sponsored by** NHPC Ltd. Faridabad. **[Coordinator]**
11. Training on “Technical Issues of Hydropower” at CEC, IIT Roorkee during August 19-26, 2017. **Sponsored by** SJVN Limited Shimla H.P. **[Co-coordinator]**
12. Training on “Dam Safety Management Including Instrumentation of Existing Dams” at CEC, IIT Roorkee during August 7-14, 2017. **Sponsored by** SJVN Limited Shimla H.P. **[Co-Coordinator]**
13. Training on “Assessment of Soil Erosion and Sedimentation Control in Hydro Power Projects” at CEC, IIT Roorkee during June 19-25, 2017. **Sponsored by** NHPC Ltd. Faridabad. **[Coordinator]**
14. Training on “Geotechnical and Geological investigations under overburden” at CEC, IIT Roorkee during January 27-29, 2017. **Sponsored by** NHPC Ltd. Faridabad **[Co-Coordinator]**
15. Training on “Dam Safety Management Including Instrumentation of Existing Dams” at CEC, IIT Roorkee during January 13-15, 2017. **Sponsored by** NHPC Ltd. Faridabad **[Co-Coordinator]**
16. Training on “Operation and Maintenance of Irrigation Schemes” at CEC, IIT Roorkee during June 11-16, 2012. **Sponsored by** Asian Development Bank, New Delhi. **[Coordinator]**
17. Training on “Irrigation Water Requirement and Scheduling” at CEC, IIT Roorkee during December 19-24, 2011. **Sponsored by** Asian Development Bank, New Delhi. **[Coordinator]**
18. Training on “Advanced Techniques and Tools for Hydrological Analysis and Design” during 26th-31st October 2009 at CEC, IIT Roorkee. **Sponsored by** Self sponsored course. **[Co-Coordinator]**
19. Training on “Correction of Irrigation System Deficiency for Improved Canal Irrigation” during January 28- February 02, 2008. **Sponsored by** Ministry of Water Resources (MoWR), GOI, New Delhi. **[Co-Coordinator]**
20. Training on “Application of Remote Sensing and GIS in Irrigation Water Management” during January 14-19, 2008. **Sponsored by** Ministry of Water Resources (MoWR), GOI, New Delhi. **[Co-Coordinator]**

SEMINARS/ WORKSHOPS ORGANIZED (22)

1. Roorkee Water Conclave 2022, March 02-04, 2022. **[Organizing Secretary].**
2. Regional Farmers Awareness and Role of Agromet Advisory Services for Uttarakhand. Organised, GKMS project, IIT Roorkee. February 19, 2022. **[Chairman Organizing Committee].**
3. A Panel discussion on Gross Environment Product (GEP) on July 27, 2021. Organized by Himalayan Environmental Studies and Conservation Organization (HESCO) and hosted by the DWRDM, IIT Roorkee. **[Chairman Organizing Committee]**
4. **International e-conference on “Water Sources Sustainability” during June 18 to June 20, 2021.** Organised by the Dept. of Water Resources Development & Management Indian Institute of Technology Roorkee and Indian Water Resources Society (IWRS) **[Chairman Organizing Committee]**
5. **National Webinar on “Enhancement of Irrigation Water Use Efficiency for Future Food Security” on October 14, 2020.** Sponsored by Indian Water Resources Society (IWRS) and Dept.

- of Water Resources Development & Management Indian Institute of Technology Roorkee. *[Organizing Secretary]*
6. Regional workshop “On Farmers Awareness and Role of Agromet Advisory Services For South-West Uttarakhand. March 04, 2020. **Sponsored by MoES, IMD, New Delhi [Chairman].**
 7. Roorkee Water Conclave 2020, February 26-28, 2020. *[Organizing Secretary].*
 8. Farmer’s awareness workshop on “Micro irrigation Systems” on June 14, 2019, at IIT Roorkee. *[Organizing Secretary].*
 9. National Workshop on “Flood management Under Changing Climate” on February 01, 2019, at IIT Roorkee. *[Organizing Secretary].*
 10. International Conference on “Sustainable Technologies for Intelligent Water Management” at IIT Roorkee during February 16-19, 2018. **Sponsored by MoWR, RD &GR, NMCG, SJVN Limited, NTPC, CSIR etc. [Organizing Secretary]**
 11. National Workshop on “Hydropower Development and Management- Thinking Ahead” on April 16, 2017, at IIT Roorkee. **Sponsors: NHPC Ltd. Faridabad [Organizing Secretary].**
 12. National Workshop on “Challenges in Irrigation Management for Food Security” during November 26-27, 2016, at IIT Roorkee. **Sponsors: Ministry of Water Resources, River Development & Ganga Rejuvenation, Govt. of India [Organizing Secretary].**
 13. Workshop on “Water Governance” during September 19-20, 2016, at Auditorium, Library Building, CWC, New Delhi. **Sponsor: Ministry of Water Resources, River Development & Ganga Rejuvenation, Govt. of India [Organizing Secretary].**
 14. Workshop on “Climate Change: issues and challenges with special emphasis for hilly region” at IIT Roorkee on March 28, 2014. **Sponsor: QIP Centre IIT Roorkee and Indian Water Resources Society (IWRS), Dept. of Water Resources Development & Management Indian Institute of Technology Roorkee. Sponsors: CSIR, New Delhi [Coordinator]**
 15. Workshop on “Water Use Efficiency” at IIT Roorkee on December 09, 2013. **Sponsor: Indian Water Resources Society (IWRS), Dept. of Water Resources Development & Management Indian Institute of Technology Roorkee. [Organizing Secretary]**
 16. International Workshop on “Piano Key Weir for In-Stream Storage and Dam Safety (PKWISD-2012) in Delhi during May 30- June 01, 2012. **Sponsored by MoWR, WAPCOS and CSIR etc. [Organizing Secretary]**
 17. International Workshop on River Management” during December 14-17, 2010, at NASC Complex, New Delhi. **Sponsor: MoWR, Planning Commission, Ministry of DoNER, WAPCOS, DST, CSIR etc. [Joint Organizing Secretary]**
 18. Brain Storming Session on “Preparation of action plan for improvement of Irrigation Water Use Efficiency” at IIT Roorkee on Feb. 21, 2010. **Sponsored by Ministry of Water Resources (MoWR), GOI, New Delhi. [Co-coordinator]**
 19. Workshop on “Global Climate Change and its Impact on Water Resources” at IIT Roorkee on December 06, 2008. **Sponsor: Indian Water Resources Society (IWRS), Dept. of Water Resources Development & Management Indian Institute of Technology Roorkee. [Organizing Secretary]**
 20. **International** training on “Ground Water Governance in Asia: Theory & Practice” during November 18-December 02, 2007. **Sponsored by IWMI, Srilanka. [Co-coordinator].**
 21. National workshop on “Environment, Agriculture & Sustainable Life Support Systems: Perspectives of NER” on November 06, 2004. **Sponsored by All India Council for Technical Education (AICTE), New Delhi.) [Coordinator]**
 22. National workshop on “Research Methodology” during March 20 - 24, 2006, **Sponsored by Indian Council of Social Science Research, NE Regional Center, Shillong. [Coordinator].**

WORKSHOPS ORGANIZED AS A COORDINATOR, REGIONAL COORDINATING INSTITUTE (RCI)- UNNAT BHARAT ABHIYAN (UBA), IIT ROORKEE

1. Workshop on “UBA Orientation Program” for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh on September 28, 2019 at IIT Roorkee. Organized by RCI UBA, IIT Roorkee
2. Workshop on “Management Development Programme on Rural Development Leadership” for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh during February 3-6, 2020 at IIT Roorkee. Sponsored by NIRDPPR, Guwahati. Organized by RCI UBA, IIT Roorkee, National Institute of Rural Development and Panchayati Raj (NIRDPR), Guwahati and Uttarakhand Institute of Rural Development and Panchayati Raj (UIRDPR).
3. Webinar on “COVID - 19 and Agriculture” for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh and Progressive farmers of Haridwar on March 16, 2020. Organized by RCI UBA, IIT Roorkee and Department of Water Resources Development and Management, IIT Roorkee. (Keynote Speakers: Dr. Anand Sharna, DDG, IMD, Prof. Brijesh Singh, GBPAUT, Pantnagar).
4. Webinar on “Water Security in Hilly Areas” for the UBA Coordinators of Participating Institutes (PIs) of 12 Hilly States on May 28, 2020. Organized by RCI UBA, IIT Roorkee and Department of Water Resources Development and Management, IIT Roorkee. (Keynote Speakers: Padma Bhushan Dr. Anil P. Joshi and Prof. M.L. Kansal, IIT Roorkee).
5. Webinar on "Skills for inclusive and Sustainable Growth in Rural Areas" for the UBA Coordinators of Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh on July 11, 2020. (Keynote Speakers: Prof. Harnam Singh, Deen Dayal Upadhyay Kaushal Kendra, Uttarakhand.).
6. 4 days Webinar workshop on "Preparation of Model Village/ smart Village Plan " for the UBA Coordinators of Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh on July 18 & 19, 2020 and July 25 & 26, 2020. Organized by RCI UBA, IIT Roorkee and National Institute of Rural Development and Panchayati Raj (NIRDPR), Guwahati. (Keynote Speakers: Ms. Namami Bansal, IAS, Joint Magistrate, Roorkee, Prof. R.M. Pant, Director, NIRDPR, Guwahati and Prof. M.K. Shrivastava, NIRDPR, Guwahati).
7. Webinar on “Transformation of an impoverished village into a model of development” on August 10, 2020. (Keynote Speaker: Padm Shri Popatrao Baguji Pawar).
8. Webinar on “Farmer’s Awareness on Agromet Advisory Services” on August 28, 2020. (Keynote Speaker: Dr. K.K. Singh, Head, Agromet Advisory Services Division, IMD, New Delhi).
9. Webinar on “Role of Organic farming in Rural Development and self Reliant India” on September 19, 2020. (Keynote Speaker: Padm Shri Bharat Bhusan Tyagi).
10. Webinar on “Enhancing Irrigation Water Use Efficiency” on September 23, 2020. (Keynote Speaker: Shri G. Asok Kumar, IAS, Additional Secretary & Mission Director at National Water Mission, DoWR, RD & GR, Ministry of Jal Shakti, Govt. of India.).
11. Webinar on “A Road Map for Indian Horticulture-Both for self-reliance and Exports” on October 02, 2020. (Keynote Speaker: Dr. M. Ariz Ahammed, IAS, Principal Secretary, Govt. of Assam).
12. Webinar on “Participatory and Sustainable Rural Development – An Experiment in Jhabua, Madhya Pradesh” on October 16, 2020. (Keynote Speaker: Padma Shri Mahesh Sharma).
13. Webinar on “Role of Agromet Advisory Services on the Management of Rabi Crops” on November 26, 2020. Keynote Speakers: Dr. Anand Sharma, Deputy Director-General, IMD, New

Delhi, and Dr. A. K. Pandey, Professor, G. B. Pant University of Agriculture & Technology Pantnagar.

14. Webinar on “Role of Farm Machinery for Hills Agriculture” on January 23, 2021.
15. Online workshop on “Rural Entrepreneurship and Self-reliant India” on March 03, 2021. (Keynote Speaker: Prof. Amit K. Dwivedi, Entrepreneurship Development Institute of India-Ahmedabad (EDII-Ahmedabad).
16. Online workshop on "Drone: A modern tool for Sustainable Agriculture" on April 16, 2021. (Keynote Speaker: Dr. Ambrish Kumar, Dean, College of Agricultural Engineering, Dr. Rajendra Prasad Central Agricultural University, Samastipur, Pusa, Bihar.
17. Webinar on " Community Samvud for COVID-19 Pandemic" on May 23, 2021. (Keynote Speaker: Dr. Santosh Kumar, Associate Professor of Community and Family Medicine and Nodal Officer COVID-19 Community Task Force, AIIMS Rishikesh.
18. Webinar on "Ecosystem Restoration for Prosperous India" on June 05, 2021. (Keynote Speaker: Dr. Satish Kumar Shastri, International Promoter of Indian Culture.
19. Webinar on " National Education Policy - 2020 " on July 03, 2021. (Keynote Speaker: Mr. Jai Prakash Pandey, Director, Department of School Education & Literacy, Ministry of Education, Govt. of India).
20. Webinar on "Post COVID Wellness and Emerging Health Challenges" on July 04, 2021. (Keynote Speaker: Dr. Santosh Kumar, Associate Professor of Community and Family Medicine and Nodal Officer COVID-19 Community Task Force, AIIMS Rishikesh.
21. Launch of “Digital Health Platform- UDAAN” by IIT Roorkee and AIIMS Rishikesh on October 16, 2021.
22. "UBA Orientation Program" for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh, Bihar and Maharashtra on November 26, 2021 at IIT Roorkee. Organized by RCI UBA, IIT Roorkee.
23. Launch of “UBA Household Survey App” on March 02, 2022 in collaboration with NRSC-N, ISRO, New Delhi at IIT Roorkee.
24. Launch of e-book on “कोरोना से बचाव: एक सजग पहल” on April 12, 2022, by NCI,UBA, RCI, UBA IIT Roorkee and AIIMS Rishikesh

WORKSHOPS ORGANIZED AS CHAIRMAN, INSTITUTION OF ENGINEERS (INDIA), ROORKEE LOCAL CENTRE

1. Organised “World Telecommunication & Information Society Day ” at the Institution of Engineers (India), Roorkee Local Centre on May 17, 2022. (Keynote Speaker: Prof. N.P. Pathak, Head, ECE Dept. IIT Roorkee)
2. Organised “World Water Day” at the Institution of Engineers (India), Roorkee Local Centre on March 26, 2022. (Keynote Speaker: Dr. Nandakumaran P., Chairman (Retd.), Central Ground Water Board, New Delhi)
3. Organised “World Engineering Day for Sustainable Development” at the Institution of Engineers (India), Roorkee Local Centre on March 10, 2022. (Keynote Speaker: Prof. M.L. Kansal, IIT Roorkee)
4. Organised “Energy Conservation Day” at the Institution of Engineers (India), Roorkee Local Centre on December 14, 2021. (Keynote Speaker: Prof. R.P. Saini, IIT Roorkee)

QIP SHORT TERM LECTURES/ SPECIAL LECTURES DELIVERED

One Hundred Fifty-Five (155)

DETAILS OF RESEARCH SUPERVISION

POSTDOC MENTORING (01)

1. Dr. Ravindra Kumar Verma, Institute Post-Doctoral Fellow, September 2019- May 2022.

INTERNSHIP OFFERED (02)

1. Mr. Yosef Mekonnen, African Centre of Excellence (PG Program), July 2019 to November 2019
2. Mr. David M. N.Gosselin, Indo-US Water Advanced Research & Innovation Internship (PhD Program. January 2018 to June 10, 2018.

PH.D. THESES (10 AWARDED +16 ONGOING = 26)

Sl. No.	Thesis Title	Name of Student	Year of Completion	Single/ Jointly
1.	Long Term Prediction of Hydro-Meteorological Variables in Betwa Basin	Mr. Shakti Suryavanshi	2013	Jointly with [Prof. U.C. Chaube]
2.	Climate Change Study on Hydro meteorological variables on different Spatiotemporal scales	Ms. Darshna	2013	Single
3.	Investigation of Some Critical Aspects of Rainfall-Runoff-Sediment Yield Modeling	Ms. Sarita Gajbhiye	2015	Jointly with [Dr. S.K. Mishra]
4.	Hydrological Modelling of A River Basin Using Multi-Satellite Precipitation Estimates	Mr. Dheeraj Kumar	2015	Jointly with [Prof. Nayan Sharma] & Prof. Dr. Wolfgang-Albert Flügel, FSU-Jena, Germany]
5.	Hydrological Modelling of A River Basin Using Multi-Satellite Precipitation Estimates	Mr. Birendra Bharti	2016	Jointly [Prof. S.K.Tripathi]
6.	Study of Climate Change and its Impact on Part of Brahmaputra Basin	Ms. Pratibha Warwade	2016	Jointly with [Prof. Nayan Sharma] & Prof. Dr. Bodo Ahrens, Goethe,

				University Frankfurt, Germany]
7.	Evaluation of satellite-based precipitation estimates for hydrological modeling	Mr. Sushil Kumar Himanshu	2018	Single
8.	Water quality assessment and pollution status of Upper Ganga Canal	Mr. Tesfamariam A.B.	2018	Jointly with [Dr. P.K. Jha (MIED)]
9.	Hydrological Modeling to study the interactions of land use-climate-hydrology for sustainable river basin management	Mr. Palmate Santosh Subhash	2019	Single
10.	SCS-CN-Inspired Rainfall-Runoff Sediment Yield Modeling	Mr. Shailendra Kumre	2019	Jointly with [Prof. S.K. Mishra]
11.	Effect of Different Nutrient Management on Growth, Yield, and Quality of Rice	Mr. Deepak Maurya	On-going (PT) (January 2013) (Allotted in Oct 2016)	Jointly with [Prof. S.K. Tripathi]
12.	Hydrological modelling using satellite rainfall and impact of climate change	Mr. Amar Kant Gautam	On-going (FT) (July 09, 2014)	Single
13.	Investigation of Some Hydrologic and Hydraulic Issues in Water Resources	Mr. Nand Kishore Sharma	On-going (PT) (July 09, 2014)	Jointly with [Prof. S.K. Mishra]
14.	Investigation of various aspects of sediment yield modelling	Mr. Vikas G. Jadhao	On-going (PT) (July 07, 2017)	Jointly with [Prof. S.K. Mishra]
15.	Hydrological Modelling of a River Basin Assimilating Scatterometer retrieved water fluxes	Mr. Deen Dayal	On-going (FT) (July 14, 2017) (Project)	Jointly with [Dr. P.K. Gupta, SAC, Ahamadabad]
16.	Flood inundation modeling for Alaknanda River Basin of NW Himalayan Region	Mr. Gagandeep Singh	On-going (FT) (July 06, 2018)	Single
17.	A Study of Sediment Yield, Droughts, and Environmental Flow	Mr. Sabyasachi Swain	On-going (FT) (July 06, 2018) (Project)	Jointly with [Prof. S.K. Mishra]
18.	A Critical Investigation of SCS-CN Methodology for Rainfall-Runoff Modelling	Mr. Ishan Sharma	On-going (FT) (July 06, 2018)	Jointly with [Prof. S.K. Mishra]
19.	Simulation of Regional Irrigation Water under Climate Change	Mr. Debasis Senapati	On-going (PT) (December 27, 2018)	Single
20.	Water Resources Assessment under climate uncertainties	Mr. Praveen Kalura	On-going (FT) (July 12, 2019) (Project)	Jointly with [Dr. V.M. Chowdary, NRSC-N, New Delhi]

21.	Irrigation Planning And Management with using Internet of Things (IoT)	Mr. Yogesh Kumar Kushwaha	On-going (FT) (July 12, 2019)	Single
22.	Irrigation Water Management	Mr. Dhananjay Paswan Das	On-going (FT) (August, 2020)	Single
23.	Irrigation Water Management	Mr. Sandeep Kumar Chourasia	On-going (FT) (August, 2020)	Single
24.	Wetlands Management using Remote Sensing and GIS	Mr. Manish Kumar Rawat	On-going (FT) (February 11, 2021)	Jointly with [Prof. Basant Yadav]
25.	Application of Satellite Images for Hydrological Analysis	Mr. C.M. Bhatt	On-going (FT) (February 11, 2021)	[Prof. Dharmendra Singh, ECE Dept. and Dr. Prakash Chauhan, IIRS, Dehradun]
26.	Study on Crop Yield Forecasting Using Advanced Techniques	Kapil Bhoutika	On-going (FT) (July 24, 2021)	Single

M.TECH. THESIS (87 Completed +3 Ongoing =90)

Sl. No.	Thesis Title	Name of Student	Year of Completion	Single/ Jointly
1.	Soil Erosion Modeling Using Remote Sensing and GIS	Mr. A. Mathur IIT, Kharagpur	2007	Jointly
2.	Use of GIS for Water Resources Development and Management	Ms. Sneha Lata Behra	2008	Single
3.	Identification of Critical Erosion Prone area of a Watershed using Remote Sensing and GIS	Mr. Birendra Bharti IIT, Kharagpur	2009	Jointly
4.	Integrated Assessment of Vulnerability to Drought	Mr. Prakash K. Xalxo, IIT, Kharagpur	2009	Jointly
5.	Performance evaluation of drip and micro sprinklers	Ms. Melony Zoremsangi	2009	Jointly
6.	Simulation based optimization of irrigation systems	Ms. Darshana	2009	Single
7.	Numerical investigation of water distribution	Mr. Eddy Irwanto	2009	Jointly
8.	CFD analysis for improvement in effectiveness of potable water storage reservoir	Mr. Jumhedi	2009	Jointly
9.	I-D Mathematical Model Studies for Prediction of Long term bed level changes in Kosi river reach from barrage to 47 Km. downstream	Mr. S.A. Burele	2009	Jointly
10.	Assessment of Hydropower Potential Using GIS for Southern Mizoram	Mr. Daniel Lalrempuia Pachuau	2010	Jointly

11.	Remote Sensing and GIS Based Planning of an Irrigation Project- A case Study	Mr. Hari Datta Paudel	2010	Single
12.	Watershed Modeling Using Remote Sensing and GIS	Mr. Jadhav Audumbar Keshav	2010	Single
13.	Modeling and Optimization of Drip Irrigation System	Mr. Araya Zera Y Ghebreamlak	2010	Jointly
14.	Hydrological Modeling for flood forecasting using Remote Sensing and GIS	Mr. Onisus Loden	2011	Jointly
15.	Design of Desedimentation Chamber in a Himalayan River	Mr. Ketan Agarwal	2011	Jointly
16.	Remote Sensing based sedimentation for Shervati reservoir Karnataka	Ms. Harsha M. Chaudhary	2011	Jointly
17.	Hydrological Modelling of a River basin Using the SWAT	Mr. Somzaye	2012	Single
18.	Assessment of Surface water Potential of Ken Sub-Basin (of Yamuna basin) and Feasibility of Inter basin Transfer of water.	Mr. P.S. Murthy	2012	Single
19.	Modelling of Drip Irrigation System	Mr. Pankaj Sharma	2012	Jointly
20.	Hydrological Modelling using SWAT Model	Mr. Bir Singh Dhami	2013	Single
21.	Impact of Climate Change on Hydrological Response of a River Basin	Mr. Palmate Santosh Subhash	2013	Jointly
22.	Hydrological Modeling Using SWAT-A Case Study of Ken River Basin	Mr. Prabin Shreshta	2013	Single
23.	Environmental flow assessment of eastern Ramganga river	Mr. Surojit Das	2013	Jointly
24.	Estimation of Irrigation Water Requirement in Climate Change Scenario for Betwa Basin	Mr. Reetesh Kumar Pyasi	2014	Single
25.	Flood Estimation for Ungauged Catchments	Mr. Anugrah Singh	2014	Jointly
26.	Evaluation of Evapotranspiration Models In Humid Region	Mr. Almutaz Abdelfattah	2014	Single
27.	A GIS based graphical user interface for irrigation management	Mr. Saroj Acharya	2014	Jointly
28.	Effects of Climatic Variation on Index Insurance	Mr. John M. Ndungi	2014	Jointly
29.	Assessment of Drought for Mitigation	Mr. Thajuddin, Ubaid, B.M.	2015	Jointly
30.	Sedimentation and Useful Life Computation of Gobindsagar (Bhakara) Reservoir.	Ms. Deepa S. Koomullil	2015	Jointly
31.	Development of a GIS based User Interface for Irrigation Management	Mr. Mogarakar, Nikhil Sunil	2015	Single
32.	Dam Break Study	Mr. Vijayakumar P.G.	2015	Jointly

33.	Irrigation Water Quality Assessment of Upper Ganga Canal in Roorkee	Mr. Daniel Kanbienaa	2015	Jointly
34.	Improvements in Planning of an Irrigation Project-Case Study of Tanzania	Mr. Fredrick Magusi	2016	Jointly
35.	Design Analysis of fuse gate Application for dam safety and storage enhancement	Mr. Mukti Narayan	2016	Jointly
36.	Soil Erosion Modeling using Remote Sensing and GUS for Nagaland	Mr. Imtiwati N. Jamir	2016	Single
37.	Water Quality Modeling Through Computational Fluid Dynamics (CFD)	Mr. Navdeep Singh Dhiryan	2016	Jointly
38.	Remote Sensing and Geographic Information System Based Irrigation Management - A Case Study of Nepal	Mr. Pradip Bantwa	2017	Jointly
39.	Evaluation of a canal Irrigation System Using RS and GIS-A Case Study	Mr. Randhir Jha	2017	Jointly
40.	Ground Validation of Multi-Satellite precipitation data products	Mr. Anil Kumar	2017	Jointly
41.	Development of Lake Hydrodynamic Model-A Case Study	Mr. Sunil Kumar S.	2017	Jointly
42.	Drought assessment over Gaya and effect of El-Nino on it	Mr. MD. Osama Alam Warsi	2017	Jointly
43.	Study the problems of improved rice varieties adoption in Bhutan	Mr. Om Prakash Ghalley	2017	Jointly
44.	Two phase study for pollution dispersion analysis in water flow in channel	Mr. Abhisekh Kumar	2017	Jointly
45.	Assessment of Irrigation Potential using Remote Sensing and GIS – A Case Study of South Sudan	Mr. Gano Wilson Akush	2018	Single
46.	Hydrological Modeling of West Rapti River Basin of Nepal using SWAT	Mr. Shekhar Nath Neupane	2018	Single
47.	Assessment of Evapotranspiration using satellite Data: A case study of Tamor Watershed, Nepal.	Mr. Kul Raj Chalise	2018	Single
48.	Experimental Verification of Rainfall Simulator	Mr. Rupesh Bhattarai	2018	Jointly
49.	Hydrological Modelling Over Ganga River Basin using VIC Model.	Mr. Yogesha M	2018	Jointly
50.	Reference Crop Evapotranspiration Estimation Using Remote Sensing Technique	Mr. Samuel Malou Mukpuou	2018	Jointly
51.	Assessment of Blue, Green and Grey Water Footprint at River Basin Level: A Case Study for the Koshi River Basin, Nepal	Mr. Kumar Ghimire	2018	Jointly
52.	Computer Simulation Study for Restoration and Disaster Mitigation of Mountainous Streams	Mr. Manoj Prasad Patel	2018	Jointly
53.	Application of Jack Jetty and Trail Dyke in River Training Works	Mr. Vishnu Bhandari	2018	Jointly
54.	Computer Simulation Study on Dredging and Dyking in a Brahmaputra River Reach.	Mr. Deepak Dhakal	2018	Jointly

55.	Assessment of Irrigation water Utilization for Chahar Asyab District, Kabul, Afghanistan	Mr. Wahidullah	2019	Jointly
56.	Application of Snowmelt Runoff Model Using GIS and Remote Sensing Techniques for the Upper Kabul River Basin	Mr. Nasratullah	2019	Jointly
57.	Soil Erosion Modeling of A Hilly catchment	Mr. Osama Mirran Hussein	2019	Jointly
58.	Identification of Ground Water Potential Zone using GIS & Remote Sensing-A Case Study of Morang District Nepal	Mr. Santosh Kumar Rouniyar	2019	-
59.	Performance Evaluation of Canal Irrigation System using Remote Sensing and GIS	Mr. Aarif Hussain Bhat	2019	Jointly
60.	Hydrological modelling using Scatterometer data	Mr. Abhilash Soni	2019	Jointly
61.	Estimation of crop water requirement using satellite data	Mr. Prahalad Shau	2019	Jointly
62.	Comprehensive CAT plan for Nathpa Jhakri Catchment using RS and GIS technique	Mr. Deepesh Sharma	2019	Jointly
63.	Dynamic Crop Growth Simulation Using DSSAT model	Mr. Al Azhar	2019	Jointly
64.	Assessment of InfoCrop v2.1 model using various fertilizer applicatons, 2019	Mr. Abhay Dhatwaliya	2019	Jointly
65.	Irrigation Planning using Scatterometer data and VIC Model	Mr. Madhab Koirala	2020	Jointly
66.	Application of VIC Model For River Basin Planning And Management	Mr. Kiran Karki	2020	Jointly
67.	Application of SWAT Model for river basin planning and management	Mr. Bishal K.C.	2020	Jointly
68.	Crop Yield Forecasting using Remote Sensing and GIS Technology	Mr. Mukti Nath Jha	2020	Jointly
69.	Modelling of Sustainable Urban Drainage System Using Storm Water Management Model	Mr. Guru Chythanya Guptha	2020	Jointly
70.	Drought Management in the Tons River Basin	Anil Kumar Mahato	2020	Jointly
71.	An estimation of crop water requirement using CROPWAT model in Suakoko Bong County, Liberia	Mr. Abel Gonotokpah Gonotee	2020	Jointly
72.	Estimation of Crop Evapotranspiration Using SEBAL (Surface Energy Balance Algorithm For Land) Model	Mr. Tejasva Meratwal	2020	Single
73.	Modelling and mapping of flood using HEC-RAS and satellite data: A case study of Godavari flood	Mr. Shashank Soni	2020	Single
74.	Downscaling of Climatic Variables in the Tons river basin and its application in hydrological modelling	Mr. Manish Kumar	2020	Single
75.	Water availability assessment in ganga basin using SWAT model	Mr. Raman Saha	2020	Single

76.	Land use land cover change detection and its forecasting	Mr.Ajay Kumar Monadal	2020	Single
77.	Assessment of water pricing and fee collection on the maintenance of small holders irrigation schemes in Tanzania	Mr. Banzi Abdallah	2020	Single
78.	Performance Evaluation of Rehabilitated Irrigation Systems: (A Case Study of Igongwa Irrigation Scheme in Misungwi District Mwanza region Tanzania.)	Mr. Elias John Mwita	2020	Single
79.	Performance Assessment of Irrigation and Drainage System in Tanzania	Mr. Leonard Someke	2021	Single
80.	GIS-Based multi criteria approach surface irrigation potential assessment for Ethiopian River Basin	Mr. Megersa Fekadu Gemechu	2021	Single
81.	Evaluate the performance of small scale irrigation schemes in Tanzania (A Case Study Iringa District Council)	Mr. Godliver Livingstone	2021	Single
82.	Assessment of Water Availability in Betwa River Basin, India Using SWAT	Mr. Mrutyunjaya Barik	2021	Single
83.	Evaluating impacts of land use land cover changes on the hydrology of Kessem Watershed Awash Basin, Ethiopia	Mr. Daniel Terefe	2021	Jointly
84.	Irrigation Water Requirements of Shared Centre Pivot System For Smallholder Farmers In Iringa Tanzania	Mr. Said Hussein	2021	Jointly
85.	Application of SWAT model for river basin planning and management	Mr. Akal Bahadur Mahat	2021	Jointly
86.	Soil moisture estimation using remote sensing and GIS techniques	Mr. Abhisekh Semwal	2022	Single
87.	Storm Water Management in urban areas using remote sensing and modelling using SWMM technology	Mr. Vivek Kumar Meena	2022	Jointly
88.	Hydrological Analysis of Wetland using Remote Sensing and GIS	Mr. Satyanarayan Choudhary	2021-Cont. (part-time)	Jointly

UNDERGRADUATE THESIS (B.TECH.)

— Supervised 9 dissertations at NERIST, Nirjuli, Itanagar (During 2002 -2006).

RESEARCH PUBLICATIONS (List Enclosed as Annexure-I)

<https://orcid.org/0000-0003-2110-8283>

<https://www.scopus.com/authid/detail.uri?authorId=55851948174>

<https://scholar.google.com/citations?user=YFimKCQAAAAJ&hl=en>

Publications	Published	Accepted	Total	Google	Web of Science	Scopus
Refereed Journals	Int(78)+33(Nat)=111	-	111	4261	2058	2306
Conferences	(Int(59)+16 (Nat)=75	-	75	-	-	-
Books	7	1	8	-	-	-
Book Chapters	34	3	37	-	-	-

BOOKS AUTHORED (7+1=8)

1. Introductory Soil and Water Conservation Engineering. Authors: Mal, B. C. and **Pandey, A.**; Published by: Kalyani Publishers, Delhi-110039; ISBN: 978-93-272-8793-6; Year 2018.
2. Climate Impacts on Water Resources in India. **Pandey, A.**, Mishra, S.K., Kansal, M.L., Singh, R.D., Singh, V.P. (Eds.). Water Sci. Technol. Library (WSTL), Vol. 95 by Springer International Publishing, Book ISBN-978-3-030-51426-6 Year 2021
3. Water Management and Water Governance. **Pandey, A.**, Mishra, S.K., Kansal, M.L., Singh, R.D., Singh, V.P. (Eds.). Water Sci. Technol. Library (WSTL), Vol. 96 by Springer International Publishing, Book ISBN-978-3-030-58050-6; Year 2021.
4. Hydrological Extremes. **Pandey, A.**, Mishra, S.K., Kansal, M.L., Singh, R.D., Singh, V.P. (Eds.). Water Sci. Technol. Library (WSTL), Vol. 97 by Springer International Publishing, Book ISBN-978-3-030-59147-2; Year 2021.
5. Hydrological Aspects of Climate Change. Editors: **Pandey, A.**, Kumar, S., Kumar, A., (Eds.). Springer Transactions in Civil and Environmental Engineering by Springer Nature Singapore Pte Ltd., ISBN 978-981-16-0393-8; Year 2021.
6. Geospatial Technologies for Land and Water Resources Management. Editors: **Pandey, A.**, Chowdary, V.M., Behera, M.D., and Singh, V.P. (Eds.). Water Sci. Technol. Library (WSTL), Vol. 103. ISBN 978-3-030-90478-4; Year 2022.
7. Geospatial Technologies for Resources Management. Editors: Jha, C.S., **Pandey, A.**, Chowdary, V.M. and Singh, V.P. (Eds.). Water Sci. Technol. Library (WSTL): Vol. 115. ISBN 978-3-030-98980-4; Year 2022.
8. Sustainability of Water Resources - Impacts and Management. Editors: Yadav, Basant, Mohanty, M. P., **Pandey, A.**, Singh, V.P. and Singh, R. D. (Eds.). Water Sci. Technol. Library (WSTL): **Accepted**

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1. Singh, G. and **Pandey, A.** (2022). Water Budget Monitoring of the Ganga River Basin using remote sensing data and GIS. Book Chapter in: Water Science and Technology Library (WSTL) : **In Press**
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3. Swain, S., Mishra, S. K., **Pandey, A.**, and Dayal, D. (2022). A Stochastic Model-based Monthly Rainfall Prediction over a Large River Basin. Book Chapter in: Water Science and Technology Library (WSTL) : **In Press**
4. Jha, M.N., Kumar, A., Dubey, S., **Pandey, A.** (2022). Yield Estimation of Rice Crop Using Semi-Physical Approach and Remotely Sensed Data. Book Chapter in: Water Science and Technology Library (WSTL), Springer. vol. 115, Cham. pp.331-349 <https://doi.org/10.1007/978-3-030-98981->

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5. Bhoutika, K., Kumar, A., Das, D. P., **Pandey, A.** (2022). Geospatial Technology for Crop Yield Forecasting-A Case Study of SW Uttarakhand. Book Chapter in: Water Science and Technology Library (WSTL), Springer. vol. 115, Cham. pp.315-330. https://doi.org/10.1007/978-3-030-98981-1_14.

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8. **Pandey, A.**, Singh, G., Chowdary, V.M., Behera, M.D., Prakash, A. J. and Singh V.P. (2021). Overview of Geospatial Technologies for Land and Water Resources Management. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. 1-16. doi.org/10.1007/978-3-030-90479-1_1.

9. Swain, S., Mishra, S. K., **Pandey, A.** (2021). Appraisal of Land Use/Land Cover Change over Tehri Catchment using Remote Sensing and GIS. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp.37-51. doi.org/10.1007/978-3-030-90479-1_3.

10. Kalura, P., **Pandey, A.**, Chowdary, V.M and Raju, P.V. (2021). Land use land cover change detection of the Tons river basin using Remote Sensing and GIS. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp.53-65. doi.org/10.1007/978-3-030-90479-1_4.

11. Jha, Randhir, **Pandey, A.** and Ale, S. (2021). Performance Evaluation of a Minor of Upper Ganga Canal System Using Geospatial Technology and Secondary Data. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp.155-172. doi.org/10.1007/978-3-030-90479-1_10.

12. Senapati, D. and **Pandey, A.** (2021). Role of geospatial technology for enhancement of field water use efficiency. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp. 173-184. doi.org/10.1007/978-3-030-90479-1_11.

13. Bhoutika, K., Paswan, D., Kumar, A. and **Pandey, A.** (2021). Application of Remote Sensing and GIS in Crop Yield Forecasting and Water Productivity. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp.207-222. doi.org/10.1007/978-3-030-90479-1_13.

14. Dayal, D., **Pandey, A.** and Gupta, P. K. (2021). Performance Evaluation of SM2RAIN-ASCAT Rainfall Product over an Agricultural Watershed of India. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp.223-236. doi.org/10.1007/978-3-030-90479-1_14.

15. Verma, R. K., **Pandey, A.** and Mishra, S. K. (2021). Surface Runoff Estimation Using Coupled RS & GIS And SCS-CN Model: A Case Study of Barakar Watershed. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp.237-254. doi.org/10.1007/978-3-030-90479-1_15.

16. Rawat, M. K., **Pandey, A.**, Yadav, B., Gupta, P. K. and Patel, J.P. (2021). Change Detection Mapping and Monitoring of Ramganga Reservoir, Pauri Gharwal, Uttarakhand, Using Geospatial Technique. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp. 365-389. doi.org/10.1007/978-3-030-90479-1_21.

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20. Kumar, D., **Pandey, A.**, Flügel, W.A. and Nayan Sharma (2016). Distributed hydrological modelling under hypothetical climate change scenario for a sub-basin of the Brahmaputra river. Book Chapter in “River System Analysis and Management”. Published by Springer Nature. pp.219-247. doi.org/10.1007/978-981-10-1472-7_12

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22. Lal, M., Mishra S. K., **Pandey, A.** and Kumar, Y. (2017). Runoff curve number for 36 small agricultural plots at two different climatic conditions in India. Development of Water Resources in India. Published in Water Science and Technology Library Book Series (WSTL), Switzerland AG, Springer Nature. vol. (75). pp 255-269. doi.org/10.1007/978-3-319-55125-8_22.

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24. **Pandey, A.**, Dayal, D., Palmate, S. S., Mishra, S.K. and Pandey, R.P. (2021). Long Term Historic Changes in Temperature and Potential Evapotranspiration over Betwa River Basin. Water Science and Technology Library (WSTL), vol 95. Springer, Cham. pp.267-286. doi.org/10.1007/978-3-030-51427-3_23.

25. Singh, R., Singh, S. and **Pandey, A.** (2021) Water Quality and Human Health. Water Science and Technology Library (WSTL), vol 95. Springer, Cham. pp.331-369. doi.org/10.1007/978-3-030-51427-3_27.

26. Bahita T.A., Swain S., Dayal D., Jha P.K., **Pandey A.** (2021) Water Quality Assessment of Upper Ganga Canal for Human Drinking. Water Science and Technology Library (WSTL), vol 95. Springer, Cham. pp.371-392. [doi-org-/10.1007/978-3-030-51427-3_28](https://doi.org/10.1007/978-3-030-51427-3_28).

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28. Mukpuou, S., Pandey, A., Chowdary, V.M. (2021). Reference Crop Evapotranspiration Estimation Using Remote Sensing Technique. Water Science and Technology Library (WSTL), Springer. vol. 96, pp. 61-78. Cham. pp. 91-111. doi.org/10.1007/978-3-030-58051-3_7.

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31. Lal, M., Mishra, S. K., **Pandey, A.**, Kumar, D. (2021). Revisiting the Antecedent Moisture Content Based Curve Number Formulae. Water Science and Technology Library (WSTL), Springer. vol. 96, pp. 279-302. Cham. pp. 317-334. doi.org/10.1007/978-3-030-58051-3_21.

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33. Jadhao, V., Bhattarai, R., **Pandey, A.**, Mishra, S. K. (2021). Performance evaluation of a rainfall simulator in laboratory. Water Science and Technology Library (WSTL), Springer. vol. 96, pp. 375-391. doi.org/10.1007/978-3-030-58051-3_25.
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37. Dhakal, D., Sharma, N. and **Pandey, A.** (2021). Review of flow simulation methods in alluvial river. Water Science and Technology Library (WSTL), Springer. vol. 97, Cham. pp.289-306. doi.org/10.1007/978-3-030-59148-9_21.

PEER REVIEWER OF THE JOURNALS

Water Resources Research (WRR); J. American Society of Agricultural and Biological Engineering (ASABE); Remote Sensing of Environment (Elsevier); Geoderma (Elsevier); Advances in Water Resources; Applied Energy (Elsevier); Land Degradation & Development (Wiley Inter Science); Hydrological Process (Wiley Inter Science); (Biosystems Engineering (Elsevier); J. Water Resources Management (Springer); J. Environmental Monitoring and Assessment (Springer); J. Environmental Geology (Springer); Environmental Management (Springer); Journal of Hydrologic Engineering (ASCE). Journal of Earth System Science (Springer); Paddy and Water Environment (Springer); Sadhana - Academy Proceedings in Engineering Science (Springer); Hydrological Science Journal (Taylor and Francis); Arid Land Research and Management (Taylor and Francis); Asian J. Geoinformatics; J. Indian Soc. Remote Sensing; World Applied Sciences Journal; Journal of Mountain Science.; J. Indian Water Resources Society; Hydrology Journal (IAH); Agricultural Water Management (Elsevier) etc.

Date: June 01, 2022

Place: Roorkee

(Ashish Pandey)

DETAILS OF RESEARCH PUBLICATIONS IN JOURNALS

INTERNATIONAL JOURNALS (78 Nos.)

1. Swain, S., Sahoo, S., Taloor, A. K., Mishra, S.K. and **Pandey, A.** (2022). Exploring recent groundwater level changes using Innovative Trend Analysis (ITA) technique over three districts of Jharkhand, India. *Groundwater for Sustainable Development* 18 (2022) 100783.
2. Gautam, A.K. and **Pandey, A.** (2022). Ground validation of GPM Day-1 IMERG and TMPA Version-7 products over different rainfall regimes in India. *Theoretical and Applied Climatology*. **10.1007/s00704-022-04091-8**.
3. **Pandey, A.** and Mogarekar, N. (2022). Development of A Spatial Decision System For Irrigation Management. *J. Indian Society of Remote Sensing*. 50 (2), 385–395 (2022). 10.1007/s12524-020-01305-2.
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6. Singh, G. and **Pandey, A.** (2021). Hybrid Ensemble Modeling for Flash flood Potential Assessment and Susceptibility Analysis of a Himalayan River Catchment. *Geocarto International* - <https://doi.org/10.1080/10106049.2021.2017007>.
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9. Singh, G. and **Pandey, A.** Flash flood vulnerability assessment and zonation through an Integrated Approach in the Upper Ganga Basin of the Northwest Himalayan region in Uttarakhand. *International Journal of Disaster Risk Reduction*.66 (2021)102573.
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11. Kalura, P., **Pandey, A.**, Chowdary, V. M. and Raju, P.V. (2021). Assessment of Hydrological Drought Vulnerability using Geospatial Techniques in the Tons River Basin, India. *India. J Indian Soc Remote Sens* 49, 2623–2637.
12. Palmate, S.S., **Pandey, A.**, Pandey, R. P. and Mishra, S.K. Assessing the land degradation and greening response to changes in hydro-climatic variables using a conceptual

- framework: A case study of central India (2021). *Land Degradation & Development*. 32 (14): 4132-4148.
13. **Pandey, A.**, Gautam, A.K., Chowdary, V. M., Jha, C.S. and Cerdà, A. (2021). Uncertainty Assessment in Soil Erosion Modeling using RUSLE, Multisource and Multiresolution DEMs. *J. Indian Society of Remote Sensing*. 49 (7):1689–1707; **DOI:**10.1007/s12524-021-01351-4.
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Details of Research Publications in Conferences

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1. Singh, G. and **Pandey, A.** (2021). Spatiotemporal Assessment of Vegetation Cover over the Upper Ganga Basin in the Indian Himalayan State of Uttarakhand using Google Earth Engine. PAWEES 2021 International Conference. (Virtual Presentation on October 29, 2021)

2. Swain, Sabyasachi, Mishra, S.K., and **Pandey, A.** (2021). Assessment of Drought Characteristics under Climate Change over the Agriculture-dominated Marathwada Region, India. (Virtual Presentation on October 29, 2021)
3. Singh, G. and Pandey, A. (2021). Water Budget Monitoring of the Upper Ganga Basin of the Northwest Himalayan region using remote sensing data and GIS. International e-conference on "Water Sources Sustainability" during March 18-20,2021. Paper No.ICWSS21/118
4. Sharma, Ishan, S. K. Mishra, Ashish Pandey, Shailendra K. Kumre, and Sabyasachi Swain. "Determination and Verification of Antecedent Soil Moisture Using Soil Conservation Service Curve Number Method Under Various Land Use by Employing the Data of Small Indian Experimental Farms" In *Watershed Management Conference 2020*, ASCE, 2020.
5. Kumre, S. K., S. K. Mishra, Ashish Pandey, Deen Dayal, and Kumar Amrit. "Identification of Flood and Drought Years over the Northeast Indian Region Using Normalized Index." In *World Environmental and Water Resources Congress 2020: Groundwater, Sustainability, Hydro-Climate/Climate Change, and Environmental Engineering*, pp. 229-235. Reston, VA: ASCE, 2020.
6. **Pandey, A***, Bishal, K.C., Kalura, P. and Chowdary, V. M.. Critical area prioritization for river basin planning and management under future scenarios using SWAT model. EGU, General Assembly: May 04-08, 2020. EGU2020-3970. (Virtual Presentation on May 6, 2020).
7. Singh, R. D., Kumar, G. and **Pandey, A.** Assessment of Water Footprint for Koshi River Basin (KRB), Nepal. EGU, General Assembly: May 4-8, 2020. EGU2020-4395 (On-line presentation, May 6, 2020).
8. Mishra, S.K., Sharma, I. **Pandey, A.** and Kumre, S. An Approach to Accommodate and Estimate Antecedent Moisture in Runoff Curve Number Methodology- An Experimental Study. EGU, General Assembly: May 4-8, 2020 EGU2020-8346 (On-line presentation, May 4, 2020).
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13. Singh, G. and **Pandey, A.** Flood Mapping using Multi-temporal Open Access Synthetic Aperture Radar Data in Google Earth Engine. Abstract No. RWC-116, Roorkee Water Conclave 2020 during February 26-28, 2020 at IIT Roorkee.

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56. **Pandey, A.,** Chowdary, V.M. and ***Mal, B.C.,** Watershed Prioritization Using USLE, GIS and Remote Sensing. Paper number-062149, ASABE Annual International Meeting-2006, ASABE Oregon Convention Center, Portland, Oregon, July 9 -12, 2006.
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National Conferences (16)

1. ***Pandey, A.**, Challenges of irrigation management for food security. Keynote Paper Presented and Published in Souvenir of National Conference on Water Management in Himalayan Region, Organized by Civil Engineering Department, GEU, Dehradun, February 11, 2017.
2. ***Palmate, S.S., Pandey, A.**, Suryavanshi, S. and Himanshu, S.K., Relationship between Climate Variability and Runoff in the Betwa River Basin. International Conference on Climate Change and Rural Development, Aurangabad, January 21-23, 2016.
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4. ***Pandey, R.P., Kumar, R., Pandey, A. and Singh, R. D.**, Relating Regional Climate and Drought Characteristics. Keynote Paper Presented Published in the Proc. of National Conference on Recent Trends and Innovations in Civil Engineering, pp.108-119, Civil Engineering Department, BRCM College of Engineering and Technology, Bahal, Distt. Bhiwani (Harayana), India. November 15-16, 2013..
5. ***Pandey, A. and Acharya, S.**, Geographic Information Systems in Irrigation management: An Overview. Keynote Paper Presented and Published in Proc. of National Conference on Recent Trends and Innovations in Civil Engineering, pp. 120-126, Civil Engineering Department, BRCM College of Engineering and Technology, Bahal, Distt. Bhiwani (Harayana), India. November 15-16, 2013.
6. ***Darshan and Pandey, A.**, Trends Analysis of Rainfall Series in Haryana. National Conference on Science of Climate Change and Earth's Sustainability: Issues and Challenges at Lucknow, September 12-14, 2011.
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8. ***Pandey, A., Pandey, R.P., Chaube, U. C. and Singh, R.P.**, Assessment of Surface Water Potential and Peak Runoff Rate of a Hilly Watershed Using Remote Sensing and GIS Technique. Presented and published in the Proceeding of National Seminar on Conservation and Restoration of Lakes, pp. 49-64, at NEERI, Nagpur, Maharashtra, October 16-17, 2008.
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13. **Pandey, A.** and *Pant, R.M., Strategic Environmental Assessment (SEA): A solution for maintaining the rich environmental heritage of Arunachal Pradesh. National seminar on Arunachal Pradesh- Tradition in Transition (Linking Ecology, Economics and Ethics), pp. 14, NERIST, Nirjuli, September 13-16, 2005.
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