CURRICULUM VITAE

NAME : **ASHISH PANDEY**

DESIGNATION : Bharat Singh Chair Professor for Water Resources
(MoJS, DoWR, GR&RD,GOI)

CONTACT ADDRESS: Dept. of Water Resources Development & Management
Indian Institute of Technology Roorkee
Roorkee-247 667, Uttarakhand, INDIA
Email: ashish.pandey@wr.iitr.ac.in;ashisfwt@gmail.com
Tel.:+91-1332-285872(O); +91-1332-286872(R)

PROFESSIONAL AFFILIATIONS

Fellow, Institution of Engineers (India).
Fellow, Indian Water Resources Society, Roorkee, India.
Fellow, Indian Association of Hydrologists, Roorkee, India.
Member, American Society of Agricultural and Biological Engineering (ASABE), USA
Life Member, International Commission on Irrigation and Drainage(ICID), India
Life Member, Central Board of Irrigation and Power(CBIP), New Delhi
Life Member, International Society of Soil and Water Conservation(ISSWC), Beijing.
Life Member, Indian Society of Remote Sensing(ISRS), Dehradun, India.
Life Member, Indian Association of Soil and Water Conservationists (IASWC), Dehradun, India.
Life Member, Indian Society of Technical Education(ISTE), New Delhi, India.
Life Member, Soil Conservation Society of India(SCSI), New Delhi.
Life Member, Indian Society of Agricultural Engineers (ISAE)
Life Member, Indian Meteorological Society(IMS), New Delhi

EDUCATION

Exam/ Degree	Board/Univ./ Institute	Year	Subject	Remarks
Ph.D.	IIT Kharagpur, India	2005	Soil & Water Conservation Engineering*	Institute Scholarship & 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	-

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. **Chair Professor, Bharat Singh Chair for Water Resources (MoJS, DoWR, GR&RD):** Sponsored by the Ministry of Jal Shakti, River Development and Ganga Rejuvenation. Govt. of India. January 18, 2023–Continue
2. **Professor:** Department of Water Resources Development and Management, IIT Roorkee. December 17, 2019–Continue
3. **Associate Professor:** Department of Water Resources Development and Management, IIT Roorkee. April 04, 2014 –December 16, 2019
4. **Assistant Professor:** Department of Water Resources Development and Management, IIT Roorkee. March 28, 2007 – April 03, 2014.
5. **Lecturer:** Department of Agricultural Engineering, NERIST, Nirjuli, Itanagar. July 10, 2001 to March 25, 2007.
6. **Institute Scholar:** Agricultural & Food Engineering Department, I.I.T. Kharagpur, India. August 23, 1999, to July 08, 2001.
7. **Junior Project Officer:** Agricultural & Food Engineering Department, I.I.T., Kharagpur, India. September 11, 1998, to August 16, 1999.

INITIATION OF NEW COURSES, DEGREE PROGRAMS, AND CURRICULA

1. Development of the Centre for Sustainable Rural Development (CSRD) at IIT Roorkee. (Approved in August 2023)
2. Started a new M.Tech. program on Drinking Water and Sanitation at IIT Roorkee as Head, WRD&M, IIT Roorkee.. The program has started from Academic Session 2022-2023.
3. Development of curriculum of new PG courses
   i. Smart Irrigation Systems, **ii.** Remote Sensing and GIS Applications in Water Systems

ADMINISTRATIVE RESPONSIBILITIES AT IIT ROORKEE

1. Head, Centre for Sustaible Rural Development (CSRD) from October 04, 2024- to date.
2. Chairperson, Screening / Selection Committee for the recruitment of Project Staff /Research Staff of the SRIC Projects, IIT Roorkee. July 01, 2025, to June 30, 2026.
3. Head, Department of Water Resources Development and Management (WRD&M) from February 01, 2021- January 31, 2024.
4. Member, Expert for Baseline studies for establishing the Research Complex of IIT Roorkee at THDC-IHET, Tehrl from December 30,2024-till date
5. Member, Centre Advisory Committee for Continuing Education Centre (CEC), IIT Roorkee from April 28, 2023 to March 31,2026
6. Coordinator, Regional Coordinating Institute (RCI), Unnat Bharat Abhiyan (UBA), IIT Roorkee. August 2019-till date.
7. Coordinator, THOMSO-2019, IIT Roorkee.
8. Chief Returning Officer, SAC Election-2019-20.
9. Professor-In-Charge, Building, September 03, 2019- January 31, 2021.
10. Member, Sponsored Research and Industrial Consultancy Committee (SRICC), IIT Roorkee. June 17, 2017, to June 17, 2019.

11. Chairperson, Screening Committee for the recruitment of Project Staff /Research Staff of the SRIC Projects, IIT Roorkee. April 01, 2018, to June 15, 2019.
12. Chairman, Departmental Academic Program Committee (DAPC) June 01, 2015- August 28, 2019.
13. Secretary, Departmental Faculty Committee, IIT Roorkee January 25, 2010- January 31, 2021
14. Professor -In-Charge, Irrigation Water Management Lab., March 16, 2016- till date.
15. Professor -In-Charge (Library), January 07, 2008-February 2021.
16. Professor -In-Charge, Irrigation Water Management Lab., January 07, 2008- May 08, 2015.
17. Professor-in-Charge, Spatial Science Lab., February 01, 2019-to date.
18. Professor-in-Charge, Computer Lab. January 01, 2013- December 2021.
19. Member, Library Advisory Committee, IIT Roorkee May 26, 2008- March 2022.
20. Professor -In-Charge, Demonstration Farm, January 07, 2008-May 31, 2019.
21. Chief Warden, Azad Bhawan, IIT Roorkee June 01, 2015-June 30, 2018.
22. Faculty Advisor, Deptt. of WRD&M, Cognizance 2018.
23. Faculty Advisor, Deptt. of WRD&M, Cognizance 2016.
24. Warden, Rajendra Bhawan, IIT Roorkee January 2010 to March 31, 2013.

MEMBER OF TECHNICAL COMMITTEES

1. **Member**, Working Group on "Data, Technology and Innovation Group" under the National Task Force for Integrated Water Resources Development and Management (NTFIWRDM), constituted by the Department of Water Resources, RD &GD, Ministry of Jal Shakti, Government of India w.e.f. March 20, 2025.
2. **Member**, Expert Committee for Baseline studies for establishing the Research Complex of IIT Roorkee at THDC-IHET, Tehrl. Nominated by Director, IIT Roorkee.(Dec 2024 - to date).
3. **Member**, Committee to recommend the remuneration/honorarium of various temporary/contractual positions being created in Rajve Gandhi National Aviation University (RGNAU), Amethi, U.P.
4. **Member**, Task Force on "Women Empowerment in Water Management **(TF–WEWM)**" constituted by the Nominated by Indian National Committee on Irrigation and Drainage (INCID). (January 2024 - to date).
5. **Member**, Working Group on Non-conventional Water Resources and Environment Protection **(WG-NWREP),** International Commission on Irrigation and Drainage (ICID). Nominated by Indian National Committee on Irrigation and Drainage (INCID). (January 2024 - to date).
6. **Member**, Working Group on Climate Change and Impacts **(WG-CLIMATE)**, International Commission on Irrigation and Drainage (ICID). Nominated by Indian National Committee on Irrigation and Drainage (INCID). (January 2024-to date)
7. **Member**, Working Group on Irrigation Water Management and Development (WG-IWM&D), International Commission on Irrigation and Drainage (ICID). Nominated by Indian National Committee on Irrigation and Drainage (INCID). (January 2024- to date).
8. **Special Invitee**, Joint Review Committee (JRC) under establishment of Centre of Water Technology under the India-Israel MoU (February 2024-till date)
9. **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-December 2023)

10. **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-December 2023).
11. **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-December 2023).
12. **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-March 2022)
13. **Member**, 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)
14. **Member,** National Executive Committee,Unnat Bharat Abhiyan, Ministry of Education, Govt. of Indis (September 2019- till date)
15. **Member**, National Committee on Surface Water (INCSW) of MoWR, Govt. of India w.e.f. 15.06.2012 to 14.06.2015 (Three Years).
16. **Member**, Water Resources Division Council, Bureau of Indian Standards, Govt. of India.
17. **Member**, Sectional Committee on Lakes & Reservoirs, WRD-10 of Bureau of Indian Standards, Govt. of India.

AWARDS/HONORS

1. Eminent Expert Member, National Institute of Hydrology Society, Nominated by the Hon'ble Union Minister of Jal Shakti, Govt. of India & President, NIH Society for 3 years (Jan 2025-Dec 2027).
2. Appeared in the Stanford/Elsevier top 2% list of scientists (2023, 2024) worldwide for research impact-based achievements in Engineering.
3. Dr. K.G. Tejwani Award (Management of Natural Resources) of the Indian Association of Soil and Water Conservationists for the year 2022.
4. Chair Professor, Bharat Singh Chair for Water Resources, (Ministry of Jal Shakti, RD & GR, GoI); 2023-continue.
5. Chairman, The Institution of Engineers (India), Roorkee Local Centre (October 30, 2021- till October 31, 2023)
6. 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.
7. Executive Vice President (HQ), Indian Water Resources Society (IWRS), February 01, 2021-January 31, 2024.
8. Shortlisted in the top ten "Outstanding Teachers" list in the PG category for the years 2020,2021 and 2022.
9. Eminent Engineers Award-2015 by the Institute of Engineers (India), Uttarakhand State Centre (IEI, UKSC), Dehradun.
10. 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).

11. National Secretary, Indian Water Resources Society (IWRS), Roorkee, from August 18, 2011 to January 31, 2021.
12. 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).
13. 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).
14. Vishwavidyalaya and Jindal Gold Medal: M. Tech. First Position.

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 from 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.

KEYNOTE SPEAKER/ SESSION CHAIR /PANELLIST

1. Keynote address in India Water Summit 2025 on "Building Water Secure Vikasit Bharat through Innovation, Investment & Governance" in Centenary Celebration of Indian Chamber of Commerce (ICC) on April 25,2025 at New Delhi.
2. Panelist in a seminar on "Social Implications of Artificial Intelligence" Organized by Research and Information System for Developing Countries (RIS), in collaboration with the Deendayal Research Institute on April 04,2025 at India Habitat Centre, Lodhi, New Delhi
3. Chaired a session in the International Conference on "Trailblazing Trends in Sustainable Climate-Resilient Precision Agriculture through Artificial Intelligence and Remote Sensing" at Junagadh Agricultural University, Junagadh, Gujarat, India during January 23-24, 2025.
4. Panelist in the "4 th International Conference on SDGs" Organized by Deen Dayal Research Institute (DRI), Chitrakoot November 22-24, 2024.
5. Chief Guest of the function on the occasion of Engineers Day Program Organised by Indian Water Works Association Meerut Center at Ghaziabad on September 15,2024.
6. Panelist in the session entitled "Space Technology for Soil Resource Mapping, Soil Health Monitoring and Management" organized by the Department of Agriculture & Farmers Welfare, Govt of India at Bharat Mandapam, New Delhi on August 16, 2024.
7. Keynote address at a National Conference on "On-Farm Water Management For Future Water Security". Organized by IWRS, Department of Water Resources Development and Management, IIT Roorkee, and CWC, New Delhi. at Library Building, CWC New Delhi on March 20, 2023.

8. Moderated a high-level session on “Environment & Health Emergencies: Critical trends” in Resilience and Sustainability Summit: Vision 2047. Organized by National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Govt. of India, at Vigyan Bhawan on January 18, 2023.
9. Co-Chaired a session on “Training Needs Assessment” for Water Resources Development and Management. Organised by Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation at New Delhi on July 07, 2023.
10. Chaired a session on “Agricultural Water Management” in a 2-day National Conference (Rajbhasa Hindi) on “Climate Change and Water Management” Organised by the National Institute of Hydrology, Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation at Roorkee on August 17-18, 2023.
11. Chaired an IWMI, Water Research Commission (WRC) of South Africa, and University of Kwazulu-Natal session on “New Approaches in Agricultural Water Management Capacity Building” at 25th ICID Congress & 74th IEC Meeting, at Vizag, on Nov.2-8, 2023.
12. Panelist in a Special Technical Session on “Wetland Lands for Resilience” in the 6th World Congress on Disaster Management (WCDM) in Dehradun from 28 Nov. to 1 Dec. 2023.
13. Keynote lecture in a National Conference on “Water and Environment: Challenges and Opportunities for Sustainable Development” Organised by Gujarat Institute of Desert Ecology (GUIDE), Bhuj at National Forensic Sciences University, Gandhinagar, Gujarat on December 18-20, 2023.
14. Chaired a Session at the “SuJalam International Conference” Organized by Deen Dayal Research Institute (DRI) at Ujjain from December 27-29, 2022.
15. 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.
16. Distinguished Chief Guest. In a UBA workshop on “Assembly of Solar Study Lamp” organized by the College of Engineering Roorkee on March 02, 2021.
17. 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.
18. Guest of Honour. In the 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.
19. 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.
20. Moderator and Keynote Speaker in the Session on “Jal Vimarsh: Water and Krishi” in the India International Science Festival (IISF-2020) organized by the 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.
21. Keynote Speaker in the Session on "Jal Vimarsh: Water and Krishi" in the India International Science Festival (IISF-2020) organized by the 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.

22. 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.

23. 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.

24. 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.

25. Chairman of Session entitled "Surface Hydrology and Water Management" in the Hydro 2015 Organized by the Department of Civil Engineering, IIT Roorkee.

STUDENTS AWARDS

2024

1. **Yogesh Kumar Kushwaha** selected as a winner of the India Water Foundation's Water Transversality Global Awards 2024 under Leading Product in Agriculture category! (awarded on 6th December 2024).
2. **Sabyasachi Swain** received the Best Water Resources Student Award 2023 by the Indian Water Resources Society (IWRS) to honor Ph.D. research in water resources, imprinting prosperity and significant societal contributions. (awarded on 18th January 2024).
3. **Gagandeep Singh** received the Best Water Resources Student Award 2023 by the Indian Water Resources Society (IWRS) to honor Ph.D. research in water resources, imprinting prosperity and significant societal contributions. (awarded on 18th January 2024).
4. **Praveen Kalura** received funding of Rs. 1,82,004 from the Science and Engineering Research Board (SERB), Department of Science and Technology, Government of India under the International Travel Scheme (ITS) for participating in the "AGU Chapman Conference on Remote Sensing of the Water Cycle: Sensors to Science to Society", which was held from February 13-16, 2024 in Honolulu, Hawaii, USA.
5. **Das, D.P.** received the best poster presentation award for the paper on "Soil Moisture Retrieval from Dual-Polarized Sentinel-1 SAR Data over Agricultural Regions Using a Water Cloud Model" presented by Das, D.P. and Pandey, A. in the International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
6. **Koradia, A.** received the Best Poster Presentation award for the paper on "Exploring the Dynamics of the Hindon River Basin for Sustainable Agriculture: Deciphering Crops Water Footprint" presented by Koradia, A., Yadav, B., Pandey, A., Chowdary, V. M. and Chandrasekar,K. in the International Conference on Future of Water Resources, January 18-20, 2024 ,organised by IWRS and IIT Roorkee.
7. **Chaurasia, S. K.** received the best poster presentation award for the paper on "Enhancing water use efficiency in Canal Command Area for Sustainable Agriculture" presented by Chaurasia, S. K. and Pandey, A. in the International Conference on Future of Water Resources, 2024, January 18-20, 2024, organized by IWRS and IIT Roorkee.

2023

1. **Sabyasachi Swain** received the 'Excellence in Doctoral Research Award' at Convocation-2022 (held on 06th April 2023) of the Indian Institute of Technology Roorkee for producing the best thesis among all the engineering disciplines of the institute.
2. **Deen Dayal** received the Sivapalan Young Scientist Travel Award (SYSTA) of 2500 Euros from the International Association of Hydrological Sciences (IAHS), Oxfordshire, UK, for participating in the "28th IUGG General Assembly (IUGG2023)" held at Berlin, Germany during July 11 to July 20, 2023.
3. **Deen Dayal** received funding of approximately 1500 Euros (prepaid tickets, accommodation, and local travel) from Abdus Salam International Centre for Theoretical Physics (ICTP), Italy, to attend a workshop on "Climate Information for Risk Assessment and Regional Adaptation from Global Scale Climate Projections to Local Scale Climate Hazards" held at Trieste, Italy during June 05 to June 09, 2023.
4. **Praveen Kalura** received funding of Rs. 1,80,000 to participate as a part-time Research Intern on the project "Estimating & Automatically Extracting Surface Water Extent and Chlorophyll Concentrations". The project titled "Estimating & Automatically Extracting Surface Water Extent and Chlorophyll Concentrations" was completed under the NAV-i-GEE Research Program by IIT Tirupati Navavishkar i-Hub Foundation, and his participation was from January 2023 to August 2023.
5. **Sabyasachi Swain received** 'Best Presentation Award' under the theme Climate, Extreme Weather Events and Natural Hazards in BDCC-2023 Conference, 16-19 February 2023, IIT Kharagpur, India.

2022

1. **Singh, G.** received best Paper presentation award for the paper on "Simulation of 7th February 2021 rock-ice avalanche event in the Rishiganga river valley of Uttarakhand Himalayas' presented by Singh, G. and Ashish Pandey in the International Conference on "Conference on Climate Change & Weather-related extremes (ICCWE-2022)" organized by the Dept., of WRDM, IIT Roorkee during September 19-20, 2022.
2. **Sabyasachi Swain** received the 'Best Presentation Award' under the theme Sustainable Environmental Management at the SISTEEM-2022 Conference, 24-26 March 2022, Tamil Nadu, India.
3. **Sabyasachi Swain** Selected for the International Travel Support (ITS), Science and Engineering Research Board, Department of Science & Technology, Government of India, to participate in the IAHS Scientific Assembly to be held from 29 May to 03 June 2022, Montpellier, France.
4. **Sabyasachi Swain received** a Grant Award (fully funded) to attend the workshop on "Artificial Intelligence for Detection and Attribution of Climate Extremes" from 20 June 2022 to 01 July 2022, held at the International Centre for Theoretical Physics, Trieste, Italy.
5. **Sabyasachi Swain** Selected for the prestigious AGU-Chapman Fellowship of $2000 to participate in the 2022 AGU Chapman Conference on Solving Water Availability Challenges through an Interdisciplinary Framework in Golden, Colorado, USA.
6. **Sabyasachi Swain** Selected (as the only person from India) for the DAAD Fellowship (2050 €) to participate in the 16th International German Summer School on Hydrology (IGSH) – Groundwater and Agriculture, to be held from 07-21 September 2022, at Ruhr-Universität Bochum, Germany.

7. **Deen Dayal** received grant of 1000 USD from American Geophysical Union (AGU), USA to attend the "AGU Fall Meeting - 2022" held at Chicago, IL, USA and Virtual during December 12 to December 16, 2022.
8. **Deen Dayal** received Helmholtz Visiting Researcher Grant of 13,380 Euros from Helmholtz Information & Data Science Academy (HIDA), Berlin, Germany to carry out research on a project entitled "Exploring large data on soil moisture spatial fields to unravel river basins reactions and flood hazard using machine learning techniques" at Helmholtz Centre for Environmental Research - UFZ, Halle, Germany during September 01 to November 30, 2022.
9. **Deen Dayal** received grant of 500 Euros from the Research Institute for Geo-hydrological Protection (IRPI), National Research Council (CNR), Perugia, Italy, to attend the "6th Satellite Soil Moisture Validation and Application Workshop" held at Perugia, Italy during June 07 to June 09, 2022.
10. **Praveen Kalura** received an award of Rs. 1,21,423 as a travel grant to participate in the Water Accounting Plus (WA+) Symposium. The symposium was hosted by the Land and Water Management Department of IHE Delft Institute for Water Education in the Netherlands and took place on July 12-13, 2022.

2021

1. **Singh, G.** received the Best Paper presentation Award for the paper on "Water Budget Monitoring of the Ganga River Basin Using Remote Sensing Data and GIS" presented by **Singh, G. (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.
2. **Sabyasachi Swain** received "AGU Fall Meeting General Student Travel Grant" of $ 1,000 in 2021 for virtual (online) participation.

2020

1. **Deen Dayal** received a grant of 1500 USD from eScience Institute, University of Washington, USA, to attend the "WaterHackWeek-2020" held at eScience Institute, University of Washington, Seattle, Washington, USA, and Virtual from August 31 to September 04, 2020.
2. **Bishal, K.C.** received Department Gold Medal (2019-20) for obtaining the highest CGPA in all M.Tech. courses of WRD&M Department.
3. **Bishal, K.C.** received Dr. Jai Krishna Medal (2019-20) for obtaining the highest CGPA in all M.Tech. courses.

2019

1. **Sabyasachi Swain** received a grant (fully funded) to attend the Fifth Workshop on "Water Resources in Developing Countries: Hydroclimate Modeling and Analysis Tools" from 27th May to 7th June 2019, held at International Centre for Theoretical Physics, Trieste, Italy.
2. **Sabyasachi Swain** received a grant of ~$1600 from the World Climate Research Programme (World Meteorological Organization) to attend the Early Career Researcher Workshop on "Water Cycle in a 1.5° Warmer World: Interdisciplinary Approaches" held at San Francisco, USA on 7th December 2019.
3. **Sabyasachi Swain received** a "Tiny Grant Award" of $125 from AGU Ecohydrology Technical Committee. The award was presented to the four best abstracts on ecohydrology or water-limited environments from the early career researchers, who were presenting in AGU Fall Meeting 2019.

4. **Sabyasachi Swain** received **"AGU Fall Meeting General Student Travel Grant,**" of $1000 in 2019.
5. **Deen Dayal** received a grant of 1125 Euros from Lorentz Center, Leiden University, to attend the "Summer School on Data Science for Dynamical Systems" held at Lorentz Center, Leiden University, Leiden, The Netherlands from July 01 to July 05, 2019.
6. **Santosh S. Palmate** received the Best Water Resources Student Award 2019 from the Indian Water Resources Society (IWRS) to honor Ph.D. research in water resources, imprinting prosperity and significant societal contributions.
7. **Santosh S. Palmate** received travel support from DST, SERB, and the Government of India (GoI) to participate in and present research work at the European Geosciences Union (EGU) General Assembly 2019 in Vienna, Austria.
8. **Gagandeep Singh** received the Orange Knowledge Program (OKP) fellowship in 2019 to participate in a short course on Data Acquisition, Pre-processing, and Modelling using SWAT-2019 at IHE Delft Institute for Water Education, The Netherlands.

2018

1. **Mukpuou, S.** received the Best Poster Paper presentation Award for the paper on " Reference crop evapotranspiration estimation using remote sensing technique" presented by **Mukpuou, S. (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.
2. **Deen Dayal** received funding of 1000 Euros from the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), Darmstadt, Germany, to attend the "International Remote Sensing School for Hydrological application-2018" held at Italian Air Force - Department for Meteorology, Rome, Italy during November 13 to November 16, 2018.
3. **Deen Dayal** received funding of 10000 INR from the Geoscience and Remote Sensing Society (GRSS), IEEE to attend a training course on "Soil Moisture and Agricultural Monitoring using Microwave Remote Sensing" held at Space Applications Centre (SAC), ISRO, Ahmedabad, India during February 07 to February 09, 2018.
4. **Sushil K. Himanshu** received the Best Water Resources Student Award 2018 from the Indian Water Resources Society (IWRS) to honor Ph.D. research in water resources, imprinting prosperity and significant societal contributions.
5. **Manoj Prasad Patel** received the Dr. A.N. Khosla Medal (2017-18) for obtaining the highest CGPA in all M.Tech. Water Resources Development Courses.
6. **Manoj Prasad Patel** received Dr. Jai Krishna Medal (2017-18) for obtaining the highest CGPA in all M.Tech. courses.
7. **Manoj Prasad Patel** received the Department Gold Medal for the session 2017-18 for obtaining the highest C.G.P.A. Amongst the students of M.Tech. (Water Resources Development).
8. **Manoj Prasad Patel** received the Kathpalia Award of Rs. 5000/- for the best dissertation in M.Tech. (Water Resources Development) in the area of Environmental aspects.
9. **Manoj Prasad Patel** received the Laxmi Devi and Shri Bandri Das Cash Prize of Rs 5000/- for the session 2017-18 for obtaining the highest C.G.P.A. Amongst the students of M.Tech. Engineering/M.Arch. courses.

10. **Sushil K. Himanshu** received the Science and Engineering Research Board, Govt. of India travel Award for presenting research work at EWRI, ASCE Conference-2017, Sacramento, USA
11. **Santosh S. Palmate** received fellowship of the World Bank Robert S. McNamara Fellowships Program (RSMFP)-2017 for 8-months research stays in the Kiel University, Germany.
12. **Santosh S. Palmate** received the Early Career Scientist's Travel Support to participate and present research work in the EGU General Assembly 2017 at Vienna, Austria.

2016

1. **Sushil K. Himanshu** received the Bergen Summer Research School-2016 Award (June 2016) for attending the course on 'Modelling the complexities of water, climate, and society' at the University of Bergen, Norway under the campaign 'Water, Climate and Society
2. **Santosh S. Palmate** received a scholarship from DAAD to participate in the International Summer Academy 2016 at the University of Koblenz and Landau, Landau Campus, Germany.
3. **Santosh S. Palmate** received a scholarship from the University of Bergen (UiB) to participate in the Bergen Summer Research School 2016 in Bergen, Norway.

2015

1. **Santosh S. Palmate** received a fellowship from UN-CECAR, United Nations University (UNU), to participate in the Climate Change Downscaling Approaches and Applications (CCDAA)-2015 training program at SLIIT, Colombo, Sri Lanka.

2012

1. **Pratibha Warwade** received German Academic Exchange Services (DAAD) Scholarship for Six months (from 1st July 2012 to December 2012) to pursue Ph.D. at Frankfurt am main, Germany.

2009

1. **Darshna Duhan** received the German Academic Exchange Services (DAAD) Scholarship from September 1, 2008, to May 31, 2009, at Department of Hydrology and Water Resources Engineering, Technical University Darmstadt (Germany).

VISITS ABROAD

1. Visited AIT, Bangkok to attend an International Workshop on Climate-smart Agriculture in Highlands: Best Practices and Lessons Learned during October 28-31, 2024 Sponsored by AIT Bangkok, Thailand.
2. Visited Taichung, Taiwan, Republic of China, to present a paper at the PAWEES-2024 International Conference during October 22-26, 2024.
3. Visited Anaheim, California, from July 28-31, 2024 to present a paper in the ASABE 2024.
4. Visited Texas A&M Agri Life Research Centre, El Paso, TX, from July 21 to 26, 2024, for academic and research discussion.
5. Visited Texas A&M AgriLife Research Black land Research and Extension Center (BREC), Temple on July 19, 2024, for academic and research discussion.
6. Visited the Texas A&M University, College Station, TX, from July 16 to 20, 2024, for academic and research discussion.

7. Visited Kathmandu, Nepal, from September 11-14, 2023, to attend a workshop on South by South Cross Learning Hub Retreat, Organized by the Bill & Melinda Gates Foundation (BMGF).
8. Visited Fukuoka, Japan, from November 14-20, 2022, to present a paper at the PAWEES-INWEPF International Conference 2022 and academic and research discussions at Kyoto University and Kyushu University.
9. Visited Jakarta (Indonesia) from Nov 07-12, 2022, for academic discussion and attended QS Higher Ed Summit: Asia Pacific.
10. Visited Kathmandu, Nepal, from June 08-12, 2022, for academic and research discussion at Tribhuvan University.
11. Visited Nara, Japan, from November 19-24, 2018, to present a paper at the PAWEES-INWEPF International Conference 2018.
12. Visited New Mexico State University, Las Cruces, July 10-13, 2017, for academic and research discussion.
13. Visited the University of Texas, El Paso from July 14-15, 2017, for academic and research discussion.
14. Visited Spokane, Washington, from July 16-19, 2017 to present a paper in the ASABE 2017.
15. Visited Oregon State University, Corvallis from July 20-23, 2017, for academic and research discussion.
16. Visited Vienna, Austria, from April 23-29, 2017, to present a paper in the European Geosciences Union (EGU) General Assembly 2017.
17. Visited Orlando, Florida, from July 17-21, 2016 to present a paper in the ASABE 2016.
18. Visited the Texas A&M Agri Life Research and Extension Centre (Texas A&M University System), Vernon, TX, from July 11 to 16, 2106, for academic and research discussion.
19. Visited Beijing, China, to present a paper at an International Conference on Water Resource and Environment (WRE 2015) from July 24th to 29th, 2015.
20. Visited Lagos, Nigeria for a 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
21. Visited Pattaya (Thailand) to present a paper at the International Conference on Chemical, Biological and Environment Sciences (ICCBES'2014) during Dec. 15-16, 2014.
22. Visited Dallas, Texas, United States of America, to present a paper at the American Society of Agricultural and Biological Engineers's Annual International Meeting from July 27- August 03, 2012.
23. Visited Louisville, Kentucky, the United States of America, to present a paper at the American Society of Agricultural and Biological Engineer's Annual International Meeting from August 5-12, 2011.
24. Visited Taipei, Republic of China, to attend a Study Meeting on Monitoring and Management of Agricultural Water Quality for Green Food Production in the Asia-Pacific Region under an Asian Productivity Organization (APO) sponsored program during Sep. 29-Oct. 03, 2008.
25. 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.

SPONSORED (R&D) PROJECTS COMPLETED (20)

As Principal Investigator (15)

1. Irrigation Efficiency Improvement through On-Farm Water Management. Sponsored by Ministry of Jal Shakti, Department of Water Resources & RD and GR, Govt. of India.
2. Historical Trend Analysis of Ramsar Wetlands in India: A Remote Sensing and Modeling Approach. Sponsored by Space Applications Centre (SAC), ISRO, Ahmedabad.
3. Forecasting Agricultural output using Space Agrometeorology and Land-based Observations (FASAL). Sponsored by the Ministry of Earth Science, Govt. of India, New Delhi.
4. Hydrological experiment and river discharge modeling for SWOT and Sentinel-3A/B missions: upper Ganga River. Sponsored by Space Applications Centre (SAC), ISRO, Ahmedabad.
5. 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.
6. Water Resources Assessment under Climate Uncertainties. Sponsored by ISRO, Department of Space, GOI, Bangalore.
7. Hydrological Experiment for the validation of Scatterometer Derived Hydrological Products and Application for River Basin Management. Sponsored by Space Applications Centre (SAC), ISRO, Ahmedabad.
8. Support to develop the water quality Lab at the Department of WRD&M. Sponsored by IGL, New Delhi, and IIT Roorkee under Matching Grant Scheme-2018.
9. Acoustic Doppler Current Profiler. Sponsored by IIT Roorkee under Matching Grant Scheme-2018.
10. Hydro Surveyor M9. Sponsored by IIT Roorkee under SMILE-2018.
11. Hydrological Response of a River Basin in Changing Climate. Sponsored by Ministry of Water Resources (MoWR), RD&GR, Government of India, New Delhi.
12. Preparation of an Action Plan for Improvement of Irrigation Water Use Efficiency. Sponsored by Ministry of Water Resources (MoWR), Govt. of India New Delhi.
13. Designed and Developed a drip irrigation system for field crops. FIG, IIT Roorkee.
14. Agriculture and Sustainable Life support systems: A case study of Tawang and West Kameng Districts of Arunachal Pradesh. Sponsored by MHRD, Government of India. Landslide Zonation of Dikrong River Basin using Remote Sensing and Geographic Information System. Sponsored by MHRD, Government of India.
15. Study on Basic Hydraulics and Moisture Movement of Drip Emitters. Sponsored by NERIST, Nirjuli, Itanagar (India).

As Co-Principal Investigator (5)

1. Arth Ganga Project. Sponsored by IIM Lucknow under National Mission for Clean Ganga, Ministry of Jalshakti, Govt. of India.
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.
3. Assessment of Sediment Yield from the Tehri Catchment (New). THDC India Limited Bypass Road, Rishikesh.

4. 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.
5. Assessment of Sediment Yield from Tehri Reservoir Catchment. THDC India Limited Bypass Road, Rishikesh.

SPONSORED (RESEARCH & DEVELOPMENT) PROJECTS ON-GOING (14)

Principal Investigator (5)

1. Assessment of Environmental Flows in the Ghaghra And Gomti River Basins. Sponsored by National Mission for Clean Ganga, Ministry of Jalshakti, Govt. of India.
2. SDG Partnership for an equitable future: Resilient food and water systems under global change: An SDG-driven approach for traditional/small rural communities. Sponsored by German Academic Exchange Services (DAAD) under SDG partnership program 2025-2028.
3. Development of course curriculum on Water Auditor. Sponsored by Ministry of Jal Shakti, Department of Water Resources & RD and GR, Govt. of India.
4. Gramin Krishi Mausam Sewa (GKMS). Sponsored by the Ministry of Earth Science, Govt. of India, New Delhi.
5. Unnat Bharat Abhiyan 2.0. Sponsored by National Coordinating Institute, IIT Delhi, Ministry of Education, Govt. of India.

Co-Principal Investigator (9)

1. Developing a comprehensive climate adaptation strategy and a detailed implementation roadmap on disaster management and infrastructure resilience for India's national adaptation plan (Adapt-DMIR).Sponsored by MoEF&C & UNDP, New Delhi
2. Synergistic Integration of Multi-Sensor data for in-season monitoring of Major Crops. Sponsored by NRSC, ISRO, DoS Hyderabad. Sponsored by CSIR New Delhi.
3. Assessing Climate Change Impacts on Soybean Yield in The Drought-Prone Regions of Bundelkhand Using Artificial Intelligence and Dynamic Crop Modeling.Sponsored by CSIR, New Delhi.
4. Empowering Rural Communities: Sustainable Planning for future development in Meerpur and Beladi-Salhapur Village, Haridwar, Uttarakhand. Sponsored by NHPC Limited, Faridabad.
5. Integrated Center for Adaptation for Climate Change, Disaster Risk Reduction and Sustainability (ICARS), IITR Greater Noida Campus. Sponsored by DST, Ministry of Science and Technology, GOI.
6. Water Security Assessment at the River Basin Level Using the Water Footprint Concepts. Sponsored by ISRO, Bengaluru.
7. Development of a web-based GLOF information system: An integrated approach for quantifying flood hazards over Safed Lake, Uttarakhand. Sponsored by ISRO, Bengaluru.
8. Community-Based Managed Aquifer Recharge (CoMAR) in Rural Clusters: A tool for sustainable and safe drinking water supply. Sponsored by Jal Jeevan Mission, Ministry of Jal Shakti, GOI.
9. Waste4Change - Fit-for-purpose water-sensitive design for fast-growing livable cities. Sponsored by DST-NWO call on Urban Water Systems (Bilateral DST-NOW Project).

CONSULTANCY PROJECTS COMPLETED: 61-Completed +3-On-going=64

1. 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].
2. Action plan for watershed development for proposed 2×660 MW Super Critical Thermal Power Project at HTPS Korba West. Client. E.D (Civil-Project-I), CSPGCL, Raipur, Chhattisgarh **[Principal Investigator].**
3. Preparation of Area Drainage Study for proposed 2×660MW SCTPP, CSPGCL Korba West. Client. E.D (Civil-Project-I), CSPGCL, Raipur, Chhattisgarh **[Principal Investigator].**
4. Area Drainage Study for NTPC's Kerendari Coal Mining Project. Client: NTPC Limited, Shared Service Centre - Coal Mining, Ranchi.**[Principal Investigator].**
5. Area Drainage Study for Obra-D Super Thermal Power Project (2×800 MW) in the state of Uttar Pradesh. Client: Meja Urja Nigam Private Ltd.**[Principal Investigator].**
6. Conducting site-specific area drainage Study and submission of final study report to OPGC for Stage-III Expansion Project Unit- 5&6 (2×660 MW) at ITPS, Jharsuguda, Odisha. Client: Odisha Power Generation Corporation Limited (OPGCL), Bhubaneswar, Odisha.[Principal Investigator].
7. 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].**
8. To study and carry out a Hydrological survey and flood assessment/disaster management at GPCL-700 MW Reghanesda, Ultra Mega solar power park, village Reghanesda, District Banaskatha (Gujarat). Client: Gujarat Power Corporation Ltd., Gandhi Nagar.**[Principal Investigator].**
9. Area Drainage Study for Singrauli Super Thermal Power Project Stage-III (2×800 MW).Client: NTPC Ltd.Singrauli Super Thermal Power Station, Shakti Nagar, U.P. **[Principal Investigator].**
10. 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- Raiebareli, Uttar Pradesh **[Principal Investigator].**
11. Certification of Flow Measurement System installed in Satluj river. Client: NJHPS, SJVN Ltd., Himachal Pradesh. **[Principal Investigator].**
12. Technical Evaluation of Micro Irrigation Projects. **Client**: Narmada Valley Development Authority Narmada Bhawan, Bhopal (M.P.) **[Investigator].**
13. 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].**
14. Area Drainage Study for North Karanpura Super Thermal Power Project (3×660 MW) in the State of Jharkhand. **Client:** NTPC Ltd, Noida. **[Principal Investigator].**
15. Area drainage study for proposed Baruni Thermal Power Project in the state of Bihar. **Client:** Talcher Thermal Power Station, NTPC Ltd. **[Principal Investigator]**
16. Conduct of concurrent evaluation study providing LIS to a 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]**

17. Concurrent evaluation study providing LIS to a 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]**
18. 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]**
19. Area Drainage Study for Telangana STPP, (Stage I and Stage II). Client: NTPC Ltd, Noida. **[Principal Investigator]**
20. Preparation of Irrigation Plan to use the Treated Effluent discharge. Client. M/s. Ramaa Shyama Papers Pvt. Ltd. Faridpur, Bareilly. **[Investigator].**
21. 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]**
22. Identification of alternate surface water storage schemes for meeting the water requirement of Deoghar UMPP considering Air Cooled Condenser Technology. Client: M/s PFC Consulting Limited, New Delhi. **[Principal Investigator].**
23. Area Drainage Study for Plant and Ash Dyke for Patratu STPP. Client. NTPC Ltd, Noida. **[Principal Investigator]**
24. 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].**
25. Hydrogeological Study for Telangana Super Thermal Power Project. Client. NTPC Limited, Ramagundam STPP, P.O. Jyoti Nagar, District Karim Nagar-505215, India **[Principal Investigator].**
26. 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].**
27. 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].**
28. Hydrogeological Study for Barethi STPP. Client. NTPC Limited, 4 th Floor, Magneto-Offizo, Labhandi, G E Road, Raipur, Chhattisgarh- 492001, India **[Principal Investigator].**
29. Hydrogeological Study around Lara STPP. Client. NTPC Limited, Lara Super Thermal Power Project, Raigarh, Chhattisgarh-496001, India **[Principal Investigator].**
30. 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]**
31. Area Drainage and Storm Water Conservation Study for Pudimadaka Supper Thermal Power Project (4×1000 MW) **Client:** NTPC Ltd, Noida. **[Investigator]**
32. Area drainage and flood control study for Solar Power Plant at Mithakhari, Port Blair, A&N Islands. NTPC Ltd, Noida. **[Investigator].**
33. 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]**.
34. Preliminary Feasibility Report (PFR) of Artificial Lwali Lake, Pauri block, Pauri. Client: Executive Engineer, Irrigation Division, Srinagar Garhwal, Uttarakhand. **[Principal Investigator].**

35. Water Availability study for Chhattisgarh Ultra Mega Power Project. **Client:** M/s. Power Finance Corporation, New Delhi. **[Investigator]**
36. Area Drainage and Hydrological Study-Gidderbaha Thermal Power Project. **Client:** M/s. Desin Pvt. Ltd., Desin House, New Delhi. **[Investigator]**
37. Site visit and Review of Hydrological, Hydro-geological, and Area drainage study reports for Raigarh Thermal Power Project. **Client:** Visa Power Ltd. Kolkata. **[Investigator]**
38. Water availability Study for Chitrangi Thermal Power Project. **Client:** Chitrangi Power Ltd., Reliance Energy Centre, Santa Cruz. Mumbai. **[Investigator]**
39. Water Availability Study for Ambernath GIP Railway Dam Jhambivali Village, District-Thane, Maharashtra. **Client:** Indian Railway Catering and Tourism Corporation Ltd. (IRCTC), New Delhi 110001. **[Investigator]**
40. Site visit and Review of Study on Area Drainage, Hydrogeology of Tilda TPP. **Client: M/S** GMR Chhatisgarh Energy Private Ltd. **[Investigator]**
41. 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]**
42. 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]**
43. 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]**
44. Mathematical modeling to assess submergence effect of Polavaram Dam. **Client:** Chief Engineer, PP&F, Water Resources Deptt., Bhubaneswar, Orissa. **[Investigator]**
45. Two Purpose Driven Study (PDS) projects under the Hydrology Project Phase II Program. **Client:** Deputy Director Hydrometeorology, Division No.4 Raipur-492001, Chhatisgarh. **[Principal Investigator]**
46. Water and Waste Water Audit. Client: M/s NALCO, Smelter Plant, Nalco Nagar, Angul, Orissa. **[Investigator]**
47. 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]**
48. Area Drainage Study for Plant and Ash Dyke for Gadarwara Super Thermal Power Project (4×660 MW).**Client:** NTPC Ltd, Noida. **[Principal Investigator]**
49. Area Drainage Study for Plant and Ash Dyke for Barethi Super Thermal Power Project (6×660 MW) **Client:** NTPC Ltd, Noida. **[Principal Investigator]**
50. 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]**
51. Water Availability Study of Patratu Reservoir and Related Thermal Power Plants. **Client:** M/s. Power Finance Corporation, New Delhi. **[Principal Investigator]**
52. 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]**
53. 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]**

54. 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]**
55. Area Drainage Study for Plant and Ash Dyke for Bilhaur Super Thermal Power Project (2×660 MW) **Client:** NTPC Ltd, Noida. **[Principal Investigator]**
56. Study on assessment of soil loss in Himalayan watershed. **Client:** Dr. Aman Sharma, Chief Engineer (Envt.), WAPCOS Ltd., Gurgaon. **[Principal Investigator]**
57. Surface Runoff Study for SEL (IPP) at Jharsuguda. Client: Sesa Sterlite Limited, Jharsuguda.Orissa. **[Investigator]**
58. Sensitivity analysis of HEC-RAS Dam break input variables. **Client:** Dr. Aman Sharma, Chief Engineer (Envt.), WAPCOS Ltd., Gurgaon. **[Investigator]**
59. 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]**
60. 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]**
61. 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 [3-Ongoing]

1. Detailed design, drawings & cost estimation of area drainage works of Kerandari Coal Mining Project. **Client:** NTPC Limited, Shared Service Centre - Coal Mining, Ranchi.[**Principal Investigator].**
2. To Study & Carry out Hydrology Survey and Flood Assessment/Disaster Management at Proposed GPCL- 700 MW Raghanesda Ultra Mega Solar Power Park Phase-ll at Village Raghanesda,Taluka-Vav, Dist-Banaskatha (Gujarat). **Client**: Gujarat Power Corporation Ltd., Gandhi Nagar.**[Principal Investigator].**
3. State Specific Action Plan on Water Sector for Odisha. **Client:** Department of Water Resources, Govt. of Odisha.**[Co- Principal Investigator].**

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

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

1. WR- 588 Remote Sensing & GIS Applications in Water System
2. DS-504 Sediment Management in Reservoirs
3. WR -573 Principles & Practices of Irrigation
4. WR- 503 Water Resources Planning & Management
5. WR-576 Operation, Maintenance & Management of Irrigation Systems
6. WR- 583 Remote Sensing & GIS Applications in Agriculture
7. WR-571 Design of Irrigation and Drainage Works
8. WR-522 Environmental Impact Assessment of Water Resources Projects
9. WI -504 On-Farm Development

LABORATORY DEVELOPMENT AT THE DEPARTMENT OF WRD&M, IIT ROORKEE

1. Established demonstration Farm at Toda Kalyanpur Village.
2. Developed a drip irrigation system facility for testing the drip irrigation system in the Department's Demonstration Farm.
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, N. 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 course on " Smart Irrigation System" for M.Tech. and Ph.D. students.
10. Developed a manual for the Agromet Field Unit, IIT Roorkee (in Hindi), "Tools for the preparation of Weather-based Advisory Bulletins" especially for the farmers.

PROFESSIONAL LEADERSHIP

EDITORSHIPS

International (7)

1. **Member, Editorial Board:** Water Science and Technology Library, Springer Nature Switzerland AG. (January 2025-Present)
2. **Member, Editorial Board:** International Journal of Geoinformatics. (**August 2024-Present)**
3. **Guest Editor of the Special Issue**: Agricultural Water Management for a Sustainable Future: Technologies and Strategies. Environmental Monitoring and Assessment Collection. (2024). **Editor (s)** Kothari, K., **Pandey, A.,** Yadav, B., Mohanty, M.P. and Singh, V.P. https://link.springer.com/collections/hibajgajhh
4. **Guest Editor of the Special Issue**: Sustainable Technologies to Quantify Risks from Climate, and Weather-related Disasters. **Environmental Monitoring and Assessment Collection.** (2023). **Editor (s)** Mohanty, M.P. **Pandey, A.,** Behera, M. D. and Singh, V.P. https://link.springer.com/collections/jhccbdedbe
5. **Guest Editor of the Special Issue**: "Water Security for Sustainable Development: Perspectives from India" Roorkee Water Conclave 2022. **Water Security Journal.** Vol. 19 (2023).**Editor (s)** Agarwal, A., Sarkar, A., **Pandey**, **A.,** Kumar, A. Sharma, A.https://www.sciencedirect.com/journal/water-security/special-issue/10BPT5J9X50
6. **Guest Editor of Special Issue:** Soil Erosion and Sediment Yield Modelling, J**. Hydrologic Engineering (ASCE).** June 2015. 20, (6): C2015001. **Editor (s)** Mishra, S.K., **Pandey, A.,** and Singh, V.P. http://dx.doi.org/10.1061/(ASCE)HE.1943-5584.0001191
7. **Guest Editor of Special Issue:** Soil Conservation Service Curve Number (SCS-CN) Methodology, **J. Hydrologic Engineering (ASCE).** November 2012. 17, (11): 1157-

1286.Editor (s) Mishra, S.K., **Pandey, A.,** and Singh, V.P. https://doi.org/10.1061/(ASCE)HE.1943-5584.0000694

National (5)

1. **Co-Editor-in-Chief, Indian Journal of Soil Conservation.** Published by Indian Association of Soil & Water Conservationists. Dehradun. January 2024-till date.
2. **Editor**, **Indian Journal of Soil Conservation.** Published by Indian Association of Soil & Water Conservationists. April 2018-Dec 2023.
3. **Guest Editor** of Special Issue on Challenges in Irrigation Management for Food Security-I, J. **Indian Water Resources Society (IWRS).** 37 (1):2017.
4. **Guest Editor** of Special Issue on Challenges in Irrigation Management for Food Security-II, J. Indian Water Resources Society (IWRS)**.** 37 (2):2017.
5. **Joint Editor**, Indian Water Resources Society**,** Roorkee, June 2007 to August 17, 2011.

Coordination and MoU's

- MoU on Urban Flooding between IIT Roorkee and Central Water Commission, New Delhi (06-06-2024 to 05-06-2029)
- MoU on Water Resources Management between IIT Roorkee and Central Water Commission, New Delhi (06-06-2024 to 05-06-2029)
- MoU between IIT Roorkee and Purdue University, USA(18-01-2024 to 17-01-2029)
- MoU between IIT Roorkee and Kindai University, Japan (17-05-2023 to 16-05-2028)
- MoU between IIT Roorkee and Deendayal Research Institute (DRI) (15-05-2023 to 14-05-2028)
- MoU between IIT Roorkee and Himalayan Environmental Studies And Conservation Organisation (HESCO) (06-06-2022 to 05-06-2027).

SHORT-TERM TRAINING PROGRAMS ORGANIZED (46)

International (15)

1. **International** e-ITEC Course on "River Engineering and Management" at Department of WRD&M, IIT Roorkee, from March 13-15, 2023. Sponsored by the Ministry of External Affairs, Govt. of India. ***[Co-Coordinator]***
2. **International** e-ITEC Course on "Remote Sensing and GIS Applications in Agriculture" at Department of WRD&M, IIT Roorkee, from September 01-03, 2022. Sponsored by the Ministry of External Affairs, Govt. of India. ***[Co-Coordinator]***
3. **International** e-ITEC Course on "Remote Sensing and GIS Applications in Agriculture" at Department of WRD&M, IIT Roorkee, from September 01-03, 2021. Sponsored by the Ministry of External Affairs, Govt. of India. ***[Coordinator]***
4. **International** Training on "Water Audit and Rainwater Harvesting" for South African Nationals Under the Third India Africa Forum Summit (IAFS-III) at the Department of WRD&M, IIT Roorkee from February 18-22, 2019. Sponsored by the Ministry of External Affairs, Govt. of India. **[Coordinator]**
5. **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]**

6. **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]**
7. **International** Training on "HEC-RAS Modeling" at CEC, IIT Roorkee, from 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]**
8. **International** training on "Construction Supervision- Quality Control" from June 1-14, 2013, for PCU, MEW, Islamic Republic of Afghanistan, Kabul. Sponsored by Islamic Republic of Afghanistan, Kabul. **[Co-Coordinator]**
9. **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]**
10. **International** Training on "Modern irrigation Practices" at IIT Roorkee during March 04-15, 2013, for capacity building of the Ministry of Agriculture, Irrigation & Livestock/On-Farm Water Management Project, Islamic Republic of Afghanistan. Sponsored by the Ministry of Agriculture, Irrigation & Livestock/On-Farm Water Management Project, Islamic Republic of Afghanistan. **[Coordinator]**
11. **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]**
12. **International** Training on "Water Resources Engineering" at CEC, IIT Roorkee, from December 07- 28, 2012, for Capacity Building of Afghan Ministry of Energy and Water (MEW) staff as part of the Western Basin Water Resources Management Project. Sponsored by Asian Development Bank and Cowater International Inc., Canada. **[Coordinator]**
13. **International** Training on "Livelihood in River Basin" at CEC, IIT Roorkee from September 27 to October 23, 2012, for Capacity Building of Afghan Ministry of Energy and Water (MEW) staff as part of the Western Basin Water Resources Management Project. Sponsored by Asian Development Bank and Cowater International Inc., Canada. **[Coordinator]**
14. **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]
15. **International** training on "Ground Water Governance in Asia: Theory & Practice" from November 18-December 02, 2007. Sponsored by IWMI, Srilanka. **[Co-Coordinator].**

National (31)

1. Training programme on "Water, Built Environment and Emergency Preparedness". Sponsored by National Health Mission, Odisha. May 13-16, 2024.**[Co-Coordinator].**

2. Training programme on "Water, Built Environment and Emergency Preparedness". Sponsored by National Health Mission, Odisha. May 6-9,2024.**[Co-Coordinator].**
3. Training programme on "Water, Built Environment and Emergency Preparedness". Sponsored by National Health Mission, Odisha. April 29- May 02,2024.[Co-Coordinator].
4. Training programme on "Water, Built Environment and Emergency Preparedness". Sponsored by National Health Mission, Odisha. April 16-19,2024.**[Co-Coordinator].**
5. Training program on "Hydrological Data Collection, Processing and Analysis for Surface Water Projects" under the Institutional Strengthening and Capacity Building Activities for the Water Resources Department from February 01-06, 2023. Sponsored by Irrigation Management Training Institute, Tamilnaidu. **[Co-Coordinator]**
6. Training program on "GIS and Remote Sensing in Water Resources Projects" under the Institutional Strengthening and Capacity Building Activities for the Water Resources Department during January 26-30, 2024. Sponsored by Irrigation Management Training Institute, Tamilnaidu. **[Coordinator]**
7. 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 04-08, 2023. Sponsored by NWA, Central Water Commission, Ministry of Jal Shakti, New Delhi, GOI. **[Coordinator]**
8. Training on "Recent Advancements on Space Technology Applications for Hydro-Climatological Extremes (RASTER 2023)" at CEC, IIT Roorkee during from 11 to 15 September 2023. Sponsored by IIRS Dehradun **[Co-Coordinator]**
9. 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 05-09, 2022. **Sponsored by** NWA**,** Central Water Commission, Ministry of Jal Shakti, New Delhi, GOI. **[Coordinator]**
10. Training on **"Application of SAR Technology in Disaster Management"** at CEC, IIT Roorkee from August 22-26, 2022. Sponsored by IIRS Dehradun [Co-Coordinator]
11. Training on "Technical Issues of Hydropower" at CEC, IIT Roorkee during March 21-25, 2022. **Sponsored by** SJVN Limited Shimla H.P. **[Coordinator]**
12. 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, 2022. **Sponsored by** NWA**,** Central Water Commission, Ministry of Jal Shakti, New Delhi, GOI. **[Coordinator]**
13. Training on "River Training Works" from October 27 to November 01, 2012. **Sponsored by** Applied Research International Pvt. Ltd., New Delhi. **[Co-Coordinator]**
14. Training on "Technical Issues of Hydropower" at CEC, IIT Roorkee from January 21-28, 2019. **Sponsored by** SJVN Limited Shimla H.P. **[Co-coordinator]**
15. Training on "Project Management for River Valley Projects" at CEC, IIT Roorkee from August 20-24, 2018. **Sponsored by** NHPC Ltd. Faridabad. **[Coordinator]**
16. Training on "Slope Stability and Stabilization Techniques, Treatment with Geo-Synthetics for HE Projects" at CEC, IIT Roorkee, from August 10-14, 2018. **Sponsored by** NHPC Ltd. Faridabad **[Co-Coordinator]**
17. 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]**

18. 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]**
19. 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]**
20. Training on "Project Management for River Valley Projects" at CEC, IIT Roorkee, from September 11-16, 2017. **Sponsored by** NHPC Ltd. Faridabad. **[Coordinator]**
21. Training on "Technical Issues of Hydropower" at CEC, IIT Roorkee, from August 19-26, 2017. **Sponsored by** SJVN Limited Shimla H.P. **[Co-coordinator]**
22. Training on "Dam Safety Management Including Instrumentation of Existing Dams" at CEC, IIT Roorkee, from August 7-14, 2017. **Sponsored by** SJVN Limited Shimla H.P. **[Co-Coordinator]**
23. Training on "Assessment of Soil Erosion and Sedimentation Control in Hydro Power Projects" at CEC, IIT Roorkee, from June 19-25, 2017. **Sponsored by** NHPC Ltd. Faridabad. **[Coordinator]**
24. Training on "Geotechnical and Geological investigations under overburden" at CEC, IIT Roorkee, from January 27-29, 2017. **Sponsored by** NHPC Ltd. Faridabad **[Co-Coordinator]**
25. Training on "Dam Safety Management Including Instrumentation of Existing Dams" at CEC, IIT Roorkee, from January 13-15, 2017. **Sponsored by** NHPC Ltd. Faridabad **[Co-Coordinator]**
26. Training on "Operation and Maintenance of Irrigation Schemes" at CEC, IIT Roorkee, from June 11-16, 2012. **Sponsored by** Asian Development Bank, New Delhi. **[Coordinator]**
27. Training on "Irrigation Water Requirement and Scheduling" at CEC, IIT Roorkee, from December 19-24, 2011. **Sponsored by** Asian Development Bank, New Delhi. **[Coordinator]**
28. Training on "Advanced Techniques and Tools for Hydrological Analysis and Design" from 26th to 31st October 2009 at CEC, IIT Roorkee. **Sponsored by** Self-sponsored course. **[Co-Coordinator]**
29. Training on "Correction of Irrigation System Deficiency for Improved Canal Irrigation" from January 28- February 02, 2008. **Sponsored by** Ministry of Water Resources (MoWR), GOI, New Delhi. **[Co-Coordinator]**
30. 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]**
31. International training on "Ground Water Governance in Asia: Theory & Practice" from November 18-December 02, 2007. **Sponsored by** IWMI, Srilanka. **[Co-coordinator]**

SEMINARS/ WORKSHOPS ORGANIZED (11+29=40)

International (11)

1. Organised an INCID-IWRS session on "Smart Agriculture Technologies for Irrigation Water Management" in 25th ICID Congress & 74th IEC Meeting, at Vizag, on Nov.2-8, 2023 [Chairman Organizing Committee].
2. International Conference on "Future of Water Resources" at IIT Roorkee during January 18-20, 2023. **[Chairman Organizing Committee]**

3. Organised an INCID-IWRS session on "Smart Agriculture Technologies for Irrigation Water Management" in 25th ICID Congress & 74th IEC Meeting, at Vizag, on Nov.2-8, 2023 **[Chairman Organizing Committee].**
4. International conference on "Climate and Weather-related Extremes (ICCWE 2022)" during September 19-20, 2022. Organised by the Dept. of Water Resources Development & Management Indian Institute of Technology Roorkee **[Chairman Organizing Committee]**
5. Organised a session on "On Farm Water Management for Future Water Security" in 7 th India Water Week -2022 on November 03, 2022, at Inda Expo Centre, Greater Noida. **[Chairman Organizing Committee].**
6. Roorkee Water Conclave 2022, March 02-04, 2022.**[Organizing Secretary].**
7. International e-Conference on "Water Source Sustainability" at IIT Roorkee during June 18-20, 20. Organsised by the Department of WRD&M IIT Roorkee & Indian Water Resources Society **[Chairman Organizing Committee]**
8. Roorkee Water Conclave 2020, February 26-28, 2020.**[Organizing Secretary].**
9. 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]**
10. International Workshop on "Piano Key Weir for In-Stream Storage and Dam Safety (PKWISD-2012) in Delhi from May 30- June 01, 2012. Sponsored by MoWR, WAPCOS CSIR, etc. **[Organizing Secretary]**
11. 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]**

National (29)

1. Workshop on "Enhancing Water Use Efficiency in Agriculture: Strategies, Technologies, and Field Applications" under the Aegis of Bharat Singh Chair for Water Resources, Organised Jointly by IIT Roorkee and NIH, Roorkee at NIH, Roorkee on April 10, 2025. [Chairman Organizing Committee]
2. National Workshop on "Development of Course Curriculum for Water Auditing in Irrigation Sector ". Sponsored by DoWR,RD&GR, Ministry of Jal Shakti, Govt. of India. March 06, 2025.[Coordinator].
3. Regional Workshop on "Role of Weather Forcasting for Sustainable Agriculture" Organised by GKMS project, IIT Roorkee, Sponsor: Ministry of Earth Sciences, Govt. of India. February 8, 2025. [Chairman Organizing Committee].
4. Workshop on "Impacts of Climate Change on Glacial Lake Outburst Floods (GLOFs)" under the Aegis of Bharat Singh Chair for Water Resources, Organised Jointly by IIT Roorkee and NIH, Roorkee at NIH, Roorkee on December 9, 2024. **[Chairman Organizing Committee]**
5. A Panel discussion on Gross Environment Product (GEP) on October 05, 2024.Organized jointly by Himalayan Environmental Studies and Conservation Organization (HESCO) and IIT Roorkee. **[Organizing Secretary]**
6. Workshop on "Irrigation Efficiency Improvement Through On-Farm Water Management" at IIT Roorkee on March 09, 2024. Sponsored by NWM, Ministry of Jalshakti, Govt. of India. **[Chairman Organizing Committee].**

7. Workshop on “Role of Water Security, Organic farming and Agromet Advisory Services” on March 02, 2024. Organised by GKMS project, IIT Roorkee. [Chairman Organizing Committee].
8. National Workshop on “Role of Community Participation in Sustainable Drinking Water and Sanitation”, Organised by the Department of Water Resources Development and Management, IIT Roorkee. September 15, 2023. **[Chairman Organizing Committee].**
9. Workshop on “Water Innovation” Organised by Department of Water Resources Development and Management, IIT Roorkee, EMBASSY OF ISRAEL, along with TiE Dehradun at IIT Roorkee, May 17, 2023. **[Chairman Organizing Committee].**
10. National Workshop on “On-farm Water Management for Future Water Security”. Organised by the Indian Water Society, Department of Water Resources Development and Management, IIT Roorkee, and CWC, New Delhi. March 20, 2023. **[Chairman Organizing Committee].**
11. National Workshop on “Water Resources Assessment Under Climate Uncertatnaties”. Organised by the Department of Water Resources Development and Management, IIT Roorkee and NRSC, Hyderabad. March 17, 2023, Sponsored by: Research Project Under ISRO Respond Program **[Chairman Organizing Committee].**
12. Farmers Awareness Workshop on “Irrigation Efficiency Improvement Through On-Farm Water Management” at Nagla Aimad, Narsan Haridwar on March 15, 2023. Organised by the Department of Water Resources Development and Management, IIT Roorkee. Sponsored by NWM, Ministry of Jalshakti, Govt. of India. [Chairman Organizing Committee].
13. Farmers Awareness Workshop on Agromet Advisory Services. on October 11, 2022. Organised by GKMS project, IIT Roorkee. **[Chairman Organizing Committee].**
14. National Workshop on “Drinking-Water & Sanitation: Current Situation and Future Challenges”. Organised by the Department of Water Resources Development and Management, IIT Roorkee. July 01, 2022. **[Chairman Organizing Committee].**
15. Regional Farmers Awareness Workshop and Role of Agromet Advisory Services for Uttarakhand. Organised by GKMS project, IIT Roorkee. February 19, 2022. **[Chairman Organizing Committee].**
16. 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]***
17. National Webinar on “Enhancement of Irrigation Water Use Efficiency for Future Food Security” on October 14, 2020. Sponsored by the Indian Water Resources Society (IWRS) and Dept. of Water Resources Development & Management Indian Institute of Technology Roorkee. ***[Organizing Secretary]***
18. 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]*.**
19. Farmer’s awareness workshop on “Micro irrigation Systems" on June 14, 2019, at IIT Roorkee. **[*Organizing Secretary]*.**
20. National Workshop on “Flood Management Under Changing Climate" on February 01, 2019, at IIT Roorkee. **[*Organizing Secretary]*.**
21. National workshop on “Hydropower Development and Management- Thinking Ahead" on April 16, 2017, at IIT Roorkee. **Sponsors: NHPC Ltd. Faridabad [*Organizing Secretary]*.**
22. 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]*.**

23. National 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].***

24. National 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]***

25. National 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]***

26. Brainstorming Session on "Preparation of action plan for improvement of Irrigation Water Use Efficiency" at NIH Roorkee on Feb. 21, 2010. **Sponsored by** Ministry of Water Resources (MoWR), GOI, New Delhi. ***[Co-coordinator]***

27. National 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]***

28. 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]***

29. 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 HEAD, CENTRE FOR SUSTAINABLE RURAL DEVELOPMENT

1. Workshop on "Empowering Rural Communities" for Sustainable Planning for Future development in Meerpur and Beldi-Salhapur,villages, Haridwar, Uttarakhand, on December 13, 2024, at IIT Roorkee. Sponsored by A CSR Initiative of NHPC Ltd.

WORKSHOPS ORGANIZED AS A COORDINATOR, REGIONAL COORDINATING INSTITUTE (RCI)- UNNAT BHARAT ABHIYAN (UBA), IIT ROORKEE (30)

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 Samvvad 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.

25. "Tech4Seva" at Regional Level for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh on July 30, 2022, at IIT Roorkee. Organized by RCI UBA, IIT Roorkee.

26. "Disaster Awareness" for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh on January 28, 2023, at IIT Roorkee. Organized by RCI UBA, IIT Roorkee, and South Asia Alliance of Disaster Research Institutes (SAADRI), IIT Roorkee.

27. Lecture on "Community-Based Water Conservation Techniques" on September 01, 2023. (Keynote Speaker: Padma Shri Uma Shankar Pandey).

28. Workshop on "UBA Orientation Program" for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh on September 02, 2023, at IIT Roorkee. Organized by RCI UBA, IIT Roorkee.

29. Workshop on "Role of Water Security, Organic Farming and Agromet Advisory Services on Sustainable Rural Development" for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh, Farmers and Students on March 02, 2024, at IIT Roorkee. Organized by RCI UBA, IIT Roorkee and GKMS project IIT Roorkee.(Keynote Speakers: Padam Shri Umashankar Pandey, Padam Shree Kanwal Singh Chauhan and Padam Shree Dr Bharat Bhushan Tyagi).

30. Workshop on "UBA Orientation Program" for the Coordinators of UBA Participating Institutes (PIs) of Uttarakhand and West Uttar Pradesh on September 07, 2024, at IIT Roorkee. Organized by RCI UBA, IIT Roorkee.

WORKSHOPS ORGANIZED AS CHAIRMAN, INSTITUTION OF ENGINEERS (INDIA), ROORKEE LOCAL CENTRE (16)

1. "21st Dr. Jai Krishna Memorial Lecture" at the Institution of Engineers (India), Roorkee Local Centre on October 30, 2023. (Keynote Speaker: Prof. Manish Shrikhande, IIT Roorkee).

2. "56th Engineers Day" at the Institution of Engineers (India), Roorkee Local Centre on September 15, 2023. (Keynote Speaker: Prof. P.K. Ramancharla, Director, CBRI, Roorkee, and Prof. R.N. Misra, Former CMD, SJVN Ltd and Professor of Practice, IIT Roorkee)

3. "Royal Charter Day -2023 " at the Department of Water Resources Development and Management, IIT Roorkee on September 02, 2023. (Keynote Speaker: Padma Shri Umashankar Pandey)
4. "World Telecommunication & Information Society Day" at the Institution of Engineers (India), Roorkee Local Centre on May 17, 2023. (Keynote Speaker: Prof. Sudeb Das Gupta, ECE Dept. IIT Roorkee)
5. "World Water Day" at the Institution of Engineers (India), Roorkee Local Centre, on March 22, 2023. (Keynote Speaker: Shri S.K. Shukla, Director Technical (Retd.), THDC India Ltd.
6. "World Engineering Day for Sustainable Development" at the Institution of Engineers (India), Roorkee Local Centre on March 06, 2023. (Keynote Speaker: Prof. R.N. Misra, Former CMD, SJVN Limited)
7. "Energy Conservation Day" at the Institution of Engineers (India), Roorkee Local Centre on December 14, 2022. (Keynote Speaker: Prof. R.P. Saini, IIT Roorkee).
8. "20th Dr. Jai Krishna Memorial Lecture" at the Institution of Engineers (India), Roorkee Local Centre on October 31, 2022. (Keynote Speaker: Prof. Yogendra Singh, IIT Roorkee).
9. "World Standards Day" at the Institution of Engineers (India), Roorkee Local Centre on October 13, 2022. (Keynote Speaker: Prof. Satyendra Mittal, IIT Roorkee).
10. "55th Engineers Day" at the Institution of Engineers (India), Roorkee Local Centre on September 15, 2022. (Keynote Speaker: Prof. C.S.P. Ojha, AS Arya Chair Professor and Professsor, Department of Civil Engineering, IIT Roorkee)
11. "Royal Charter Day -2022 " at the Institution of Engineers (India), Roorkee Local Centre on May 17, 2022. (Keynote Speaker: Dr. S.K. Singh, Chief Scientist & Head PPC Group, CSIR-CBRI, Roorkee)
12. "World Environment Day-2022 " at the Department of Water Resources Development and Management, IIT Roorkee, on June 13, 2022. (Keynote Speaker: Dr. Anand Sharma)
13. "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)
14. "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)
15. "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)
16. "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 Ninety Nine Only (199)

DETAILS OF RESEARCH SUPERVISION

Institute Postdoc Mentoring (02)

1. Dr. Ravindra Kumar Verma, Institute Post-Doctoral Fellow, September 2019- May 2022.
2. Dr. Parul Taneja, Institute Post-Doctoral Fellow, December 11, 2023- April 10,2024.

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 (Ph.D. Program. January 2018 to June 10, 2018.

PH.D. THESES (18-AWARDED)+18-ONGOING (13-FT + 5-PT) = 36)

Sl. No.	Thesis Title	Name of Student	Year of Completion	Other Supervisor
	AWARDED (18)			
1.	Long-Term Prediction of Hydro-Meteorological Variables in Betwa Basin	Mr. Shakti Suryavanshi	**2013**	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**	Prof. S.K. Mishra
4.	Hydrological Modelling of A River Basin Using Multi-Satellite Precipitation Estimates	Mr. Dheeraj Kumar	**2015**	Prof. N. 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**	Prof. S.K.Tripathi
6.	Study of Climate Change and its Impact on Part of Brahmaputra Basin	Ms. Pratibha Warwade	**2016**	Prof. N. Sharma & Prof. Dr. Bodo Ahrens, Goethe, Uni. Frankfurt, Germany
7.	Evaluation of satellite-based precipitation estimates for hydrological modeling	Mr. Sushil K. Himanshu	**2018**	Single
8.	Water quality assessment and pollution status of Upper Ganga Canal	Mr. Tesfamariam A.B.	**2018**	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**	Prof. S.K. Mishra

11.	A Critical Investigation of Drought Characterization Under Climatic and Anthropogenic Alterations	Mr. Sabyasachi Swain	**2023**	Prof. S.K. Mishra
12.	Application of Satellite Precipitation Estimates and Climatic Projections through A Hydrological Framework	Mr. Amar Kant Gautam	**2023**	Single
13.	Flash Flood Vulnerability, Susceptibility & Modeling for Himalayan mountain river basins in Uttarakhand	Mr. Gagandeep Singh	**2023**	Single
14	Soil Conservation Service-Curve Number Methodology Modified for Improved Direct Runoff Estimation	Mr. Nand Kishore Sharma	**2023**	Prof. S.K. Mishra
15.	A Critical Investigation of SCS-CN Methodology for Rainfall-Runoff Modelling	Mr. Ishan Sharma	**2023**	Prof. S.K. Mishra
16.	Hydrological Modelling of a River Basin Assimilating Scatterometer retrieved water fluxes	Mr. Deen Dayal	**2024**	Dr. P.K. Gupta, SAC, Ahamadabad
17.	Effect of Different Nutrient Management on Growth, Yield, and Quality of Rice	Mr. Deepak Maurya	**2024**	Prof. S.K. Tripathi
18.	Investigation of various aspects of sediment yield modelling	Mr.Vikas G. Jadhao	**2024**	Prof. S.K. Mishra
	FULL TIME (13-Ongoing)			
1.	Irrigation Planning and Management using Internet of Things (IoT)	Mr. Yogesh K. Kushwaha	July 2019	Prof. R. Panigrahi, ECE Dept.
2.	Suitability Mapping for Groundwater Zone and Groundwater Recharge in Quiaoit River Watershed using Geospatial Techniques: an Integrated Approach for Sustainable Agriculture	Mr. Julius I. Jimenez	Jan 2022 (Joint Ph.D. program)	Prof. Nitin K. Tripathi, AIT, Thailand
3.	Development of Efficient Agricultural Water Management Framework Under Changing Climate	Mr. Sandeep K. Chourasia	Aug 2020 (P)	Single
4.	Wetlands Management using Remote Sensing and GIS	Mr. Manish K. Rawat	Feb 2021 (P)	Prof. Basant Yadav and Dr. P.K. Gupta, SAC, Ahamadabad
5.	Crop Yield Forecasting Using Advanced Techniques	Mr. Sumit K. Vishwakarma	July 2022	Prof. K. Kothari

6.	Water Security Assessment at the River Basin Level using Water Footprint Concepts	Mr. Koradia Ashishkumar Kanjibhai	Jan 2023 (P)	Prof. Basant Yadav
7.	Hydrological Modeling of Watersheds	Mr. Brooke Legese	July 2023	Prof. Mohit P. Mohanty
8.	Water Resources Management	Mr. Pankaj K. Thakur	July 2024	-
9.	Climate Smart Agriculture	Mr. Rotash Kumar	July 2024	Prof. K. Kothari
10.	Water Management	Mr. Regmi Khem Raj	July 2024	Prof. S.K. Mishra
11.	Glacial lake outburst flood (GLOF) modeling	Ms. Sushmita Saha	Jan 2025	Prof. Mohit P. Mohanty
12.	Intergerated Flood Modeling for Disater Management	Mr Ruchit	Jan 2025	Prof. Mohit P. Mohanty & Prof. Anil K. Gupta, ICARS
13.	Impact of Climate Change on Water Enery Food Nexus	Mr. Sobhit Chaube	Jan 2025	Prof. Kritika Kothari & Prof. Anil K. Gupta, ICARS
	PART TIME (5)			
1.	Application of Remote Sensing And Machine Learning Techniques in Agricultural Water Management	Mr. Dhananjay Paswan Das	On-going (Aug 2020)	Single
2.	Application of Satellite Images for Hydrological Analysis	Mr. C.M. Bhatt	On-going (Feb 2021)	Prof. D. Singh, ECE Dept. and Dr. Prakash Chauhan, IIRS, Dehradun
3.	Study on Crop Yield Forecasting Using Advanced Techniques	Mr. Kapil Bhoutika	On-going (Jul 2021)	Single
4.	Transboundary water resources management through the integration of water accounting plus framework and hydrological modeling: A Comprehensive analysis for Cauvery river basin	Mr. Dilip Barman	On-going (Jul 2022)	Jointly with Prof. M.P. Mohanty
5.	Water Resources Assessment under climate uncertainties	Mr. Praveen Kalura	July 2019 (P)	Dr. V. M.Chowdary, NRSC, Hyderabad

M.TECH. THESIS (104-Completed+ 5-Ongoing =109)

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. Sneh 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 Zeray 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.	Soil loss Assessment using Revised Universal Soil Loss Equation (RUSLE), Remote Sensing and GIS- Case Study of Rwanda	Mr. Rama Robert	2023	Single
89.	Performance Evaluation of Irrigation System Using Remote Sensing and Geographic Information Systems – A Case Study of Nepal	Mr. Lalan Baitha	2024	Single
90.	Feasibility and Sustainability Assessment of Canal Water Fed Micro Irrigation System	Mr. Suzan Karki Chhetri	2024	Single
91.	Delineation of Groundwater Potential Zones Using Remote Sensing / GIS Techniques and Analytical Hierarchy Process (AHP): A Case Study	Mr. Sanjay Kumar Toppo	2024	Single
92.	Estimation of Soil Moisture for Sugarcane Crop Using Optical and Thermal Remote Sensing Data	Mr. Om Bateswar Singh	2024	Single
93.	Understanding the influences of land use change and Climate variability on the natural flow regime	Mr. Anoop Kumar Gaur	2024	Single
94.	Soil erosion modelling under changing land use/ Land cover and	Mr. Bakari M. Sakini (DSR)	2024	Single

	climate using RUSLE model- a case Study of Mabayani catchment in Tanzania			
95.	Wetland Health Assessment Using Remote Sensing: A Case Study on Asan Conservation Reserve	Ms. Akansha Singh	2024	Single
96.	Comparison of Statistical and Machine Learning-Based Approaches to Estimate Yield of Wheat in The Upper Gangetic Plains of India	Mr. Shashank	2024	Single
97.	Assessment of Climate Change Impacts on Rice using DSSAT-Crop Simulation Model in Madhesh Province of Nepal	Mr. Mukesh K. Thakur Lohar	2025	Single
98.	Comparative Analysis of different Machine Learning Algorithms for Future Crop Yield Forecasting using climatic data	Ms. Prativa Paudyal	2025	Single
99.	Performance Evaluation of Irrigation System Using Remote Sensing and Geographic Information System - A Case Study of Banganga Irrigation System, Nepal	Mr. Sunil K. C.	2025	Single
100.	Identification of Groundwater Potential Zones Using Remote Sensing, Geographic Information System, And and Analytical Hierarchy Process in Siraha District of Nepal	Mr. Ranjit Kumar Yadav	2025	Single
101.	Integrated RS-GIS Based Groundwater Potential Zoning Using AHP, TOPSIS, and FR Models in Chitrakoot District, India	Mr. Anubhav Kalshan	2025	Single
102.	Simulation of Soil Erosion Under Projected Climate Scenarios in Hasdeo Bango Basin, Chhattisgarh, India	Ms. Kanchan	2025	Single
103.	Assessment of water resources for Wainganga river basin using remote sensing datasets and water accounting plus (WA+) Framework	Mr. Dharavath Srinu	2025	Single
104.	Design of Drainage Network Using SWMM Model for Chitrakoot City, India	Mr. Ravindra Uday Ghodke	2025	Single

105.	Flood susceptibility mapping using GIS-AHP multi criteria analysis.	Mr. Anurag Patel	2025-26 (Contd..)	Single
106.	Identification of urban flooding hotspots using Remote Sensing and GIS.	Mr. Shivam Kumar	2025-26 (Contd..)	Single
107.	Risk Mapping of West Rapti River Basin (Nepal) By integration of AHP, Remote Sensing and GIS.	Mr. Bal Krishna Budhathoki	2025-26 (Contd..)	Single
108.	Find out the ground water potential of Kathmandu valley using RS and GIS.	Mr. Raju Bhattarai	2025-26 (Contd..)	Single
109.	Enhancing the SCS-CN Method for Runoff Estimation Using Remote Sensing Data for Dynamic Land Use and Soil Moisture Mapping.	Mr. Vishal Shrestha	2025-26 (Contd..)	Single

UNDERGRADUATE THESIS (B.TECH.)

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

RESEARCH PUBLICATIONS (List Enclosed as Annexure-I)

https://topresearcherslist.com/Home/Profile/890200
https://orcid.org/0000-0003-2110-8283
https://scholar.google.com/citations?user=YFimKCQAAAAJ&hl=en

Publications	Published	Accepted	Total	Google	Web of Science	Scopus
Refereed Journals	Int (118) +Nat. (33)	-	151	7586 h-index=47	3592 h-index=35	4297 h-index=38
Conferences	Int (114) +Nat. (16)	-	130	-	-	-
Book Chapters	38	1	39	-	-	-
Books	3 (Txt)+7 (Edt.)=10	-	10	-	-	-

BOOKS AUTHORED (10)

Text Books (3)

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. Irrigation Engineering. Authors: **Pandey, A.** and Mal, B. C.; Published by: Kalyani Publishers, Delhi-110039; ISBN: 978-93-272-5540-7; Year 2023.
3. Canal Irrigation Systems in India - Operation, Maintenance, and Management. Authors: Chaube, U.C., P**andey, A.** and Singh, V.P.**:**Water Sci. Technol. Library (WSTL), Vol. 126 by Springer International Publishing, Book. ISBN-978-3-031-42811-1, Year 2023.

Edited Books (7)

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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): Vol. 116. ISBN-978-3-031-13466-1**;**Year 2022.

BOOK CHAPTERS (38+1=39)

1. Bhoutika, K., Chourasia, S. K. and **Pandey, A.** (2024).Impacts of Climate Change on Agricultural Water Management and Adaptation- Case Studies in India. Guide to Innovated Irrigation and Drainage Management under the Changing Climate, Published by International Commission on Irrigation and Drainage (ICID), **Chapter-8**
2. Barman, D., Verma, R. K., Rongali, G., Mohanty, M. P. and **Pandey, A.** (2024). Impacts of Land Use/Land Cover and Climate Change on Soil Erosion - A Watershed-Based Approach. In: Hydro-Environmental Impact of Climate and Land Use Change on Watersheds for Sustainable Development. Editors (Eldho, T.I and Jha, M.K.), Published by Cambridge Scholars Publishing (CSP), UK.**pp.304-328 Chapter-14**
3. Osama, MH Al-Qaim, Jadhao, V. G. and **Pandey, A.** (2022). Soil Erosion Modeling Using Remote Sensing and GIS. Book Chapter in: Water Science and Technology Library (WSTL): Springer. vol.105, Cham. pp.1-24. https://doi.org/10.1007/978-3-031-14096-9_8
4. 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) **:** Springer. vol.116, Cham. pp.51-62.https://doi.org/10.1007/978-3-031-13467-8_4
5. 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) :Springer.vol.116, Cham. pp.133-144.https://doi.org/10.1007/978-3-031-13467-8_9
6. 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/10.1007/978-3-030-98981-1_15.

7. 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.
8. Rawat, M., **Pandey, A.** and Gupta, P. K. (2022). Geospatial analysis of Glacial lake outburst flood (GLOF). Book Chapter in: Water Science and Technology Library (WSTL), Springer. vol. 115, Cham. pp 141-160.https://doi.org/10.1007/978-3-030-98981-1_6.
9. Gupta, P. K., **Pandey, A.,** Dayal, D., Pradhan, R. and Singh, R. P.(2022). Space-borne Scatterometers for Understanding the Large-scale Land Hydrological Processes. Book Chapter in: Water Science and Technology Library (WSTL), Springer. vol. 115, Cham. pp. 97-121. https://doi.org/10.1007/978-3-030-98981-1_4.
10. **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.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. Singh, G. and **Pandey, A.** (2021). Morphometric Characterization and Flash flood Zonation of a Mountainous Catchment using Weighted Sum Approach. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp.409-428. doi.org/10.1007/978-3-030-90479-1_23.

20. Bhatt, C.M., Thakur, P. K., Singh, D., Chauhan, P., **Pandey, A.** and Roy, A. (2021). Application of Active Space borne Microwave Remote Sensing in Flood Hazard Management. Water Science and Technology Library (WSTL), Springer. vol. 103, Cham. pp.457-482. doi.org/10.1007/978-3-030-90479-1_25.
21. Singh, R., Kanbienaa, D. and **Pandey, A.** (2021). Water Quality Status of Upper Ganga Canal. A. Pandey et al. (eds.), Climate Impacts on Water Resources in India, Water Science and Technology Library (WSTL), vol 95. Springer, Cham. pp.21-34. doi.org/10.1007/978-3-030-51427-3_3.
22. **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.
23. 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.
24. 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.
25. Himanshu, S.K., Pandey, A.,Dayal, D. (2021). Assessment of Multiple Satellite-Based Precipitation Estimates over Muneru Watershed of India. Water Science and Technology Library (WSTL), Springer. vol. 96, Cham. pp. 61-78. doi.org/10.1007/978-3-030-58051-3_5.
26. 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.
27. **Pandey, A.,** Pyasi, R. K., Palmate,S. S. (2021). Assessing Irrigation Water Requirement and its Trend for Betwa River Basin, India. Water Science and Technology Library (WSTL), Springer. vol. 96, Cham. pp.113-133. doi.org/10.1007/978-3-030-58051-3_8.
28. Neupane, S., **Pandey, A.** (2021). Hydrological Modelling of West Rapti River Basin of Nepal Using SWAT Model. Water Science and Technology Library (WSTL), Springer. vol. 96, Water Science and Technology Library, Springer. vol. 96, Cham. pp. 279-302.doi.org/10.1007/978-3-030-58051-3_19.
29. 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.
30. Palmate, S. S., **Pandey, A.** (2021). Effectiveness of best management practices on dependable flows in a river basin using hydrological model SWAT. Water Science and Technology Library (WSTL), Springer. vol. 96, Cham. pp.335-348. doi.org/10.1007/978-3-030-58051-3_22.
31. 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.
32. Singh, G., Pandey, A. (2021). Mapping of Punjab flood using multi-temporal open access synthetic aperture radar data in google earth engine. Water Science and Technology Library (WSTL), Springer. vol. 97, Cham. pp.75-85. doi.org/10.1007/978-3-030-59148-9_5.
33. Swain, S., Mishra, S.K., **Pandey, A.,** Dayal, D. (2021). Identification of meteorological extreme years over central division of Odisha using an index-based approach. Water Science and Technology Library, Springer (WSTL), vol. 97, Cham. pp.161-174. doi.org/10.1007/978-3-030-59148-9_12.

34. Patel, M. P., Sharma, N. and **Pandey, A.** (2021). Research needs for stream power moderation in hilly torrents for disaster mitigation. Water Science and Technology Library (WSTL), Springer. vol. 97, Cham. pp.185-201. doi.org/10.1007/978-3-030-59148-9_14.
35. 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.
36. Suryavanshi, S., **Pandey, A.,** Chaube, U.C., Mishra, S.K., Ojha, C.S.P., Buytaert W. (2017). Integrated water resources management of Ken-Betwa link, (Ed.) Sustainable Water Resource Management, American Society of Civil Engineers. doi.org/10.1061/9780784414767.ch29. pp849-873.
37. 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.
38. Warwade, P., Sharma, N., **Pandey, A.** and Ahrens, B. (2016). Analysis of climate variability in a part of Brahmaputra river basin in India. Book Chapter in "River System Analysis and Management." Published by Springer Nature. pp.113-142. doi.org/10.1007/978-981-10-1472-7_7
39. 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

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: July 06, 2025

Place: Roorkee **(Ashish Pandey)**

ANNEXURE-I

DETAILS OF RESEARCH PUBLICATIONS IN JOURNALS

INTERNATIONAL= 118

1. Kalura, P., **Pandey, A.,** Chowdary, V.M. and Dayal, D.. (2025). A TOPSIS-Based Multi-Criteria Assessment of Hydrologic Model Calibration Using Satellite-Derived Evapotranspiration and Streamflow Data. Hydrological Processes. **DOI: 10.1002/hyp.70191**
2. Vishwakarma, S. K., Kothari, K. and **Pandey, A.** (2025).Intercomparison of Machine Learning Models for Estimating Leaf Area Index of Rice using UAV-based Multispectral Imagery. Physics and Chemistry of the Earth. Vol.140, Oct. 2025, 103977. https://doi.org/10.1016/j.pce.2025.103977.
3. Rawat, M., Das, D. P., **Pandey, A.** and Gupta, P.K. (2025). Characterization and retrieval of snow grain size in the Bhilangana region of the Upper Himalayas using hyperspectral PRISMA data. Appl Geomats. https://doi.org/10.1007/s12518-025-00627-5.
4. Palmate, S.S., **Pandey, A.,** Tigabu, T.B., Mercado-Bettín, D., Fohrer, N. and Paul D. Wagner, P.D. (2025). A conceptual framework to disentangle land use and climate change impacts on water balance components and sediment yield. Environ Dev Sustain . https://doi.org/10.1007/s10668-023-04179-9. Vol. 27 (3):7033-7061.
5. Rawat, M., **Pandey, A.,** Gupta, P.K. Yadav, B. and Patel, J.G. (2025). A novel framework for wetland health assessment using hydro-ecological indicators and landscape metrics. Model. Earth Syst. Environ. 11, 167 (2025). https://doi.org/10.1007/s40808-025-02371-6
6. Vishwakarma, S. K., Bhattarai, B., Kothari, K. and **Pandey, A.** (2025). Mapping crop water productivity of rice across diverse irrigation and fertilizer rates using field experiment and UAV-based multispectral data. Remote Sensing Applications: Society and Environment. Volume 37, January 2025, 101456.https://doi.org/10.1016/j.rsase.2025.101456
7. Jimenez, J., Tripathi, N., **Pandey, A.,** Chao, K. C., Shrestha, S. (2025). Assessment of the Spatiotemporal Dynamics of River Discharge and Groundwater Recharge to Support Sustainable Water Management for Irrigated Agriculture in the Padsan River Watershed. **Earth Sci Inform 18, 203 (2025). https://doi.org/10.1007/s12145-025-01707-1.**
8. Kushwaha, Y.K., Joshi, A. Panigrahi, R.K. and **Pandey, A.** (2024). Development of a Smart Irrigation Monitoring System Employing Wireless Sensor Network for Agricultural Water Management. Journal of Hydroinformatics. https://doi.org/10.2166/hydro.2024.241
9. Das, D. P. and **Pandey, A.** (2024). Soil Moisture Retrieval from Dual-Polarized Sentinel-1 SAR Data over Agricultural Regions Using a Water Cloud Model. Environ Monit Assess 197, 52 (2025). https://doi.org/10.1007/s10661-024-13510-4
10. Taneja, P. and **Pandey, A.** (2024). Deployment of Intelligent Irrigation Monitoring System with Android app for Machine Learning Prediction. Environ Monit Assess 196, 1235 (2024). https://doi.org/10.1007/s10661-024-13438-9
11. Kumre, S.K., Swain, S.; Amrit, K.; Mishra, S. Kumar and **Pandey, A.** (2024). Linking Curve Number with environmental flows: A novel approach. **Environ Sci Pollut Res (2024). https://doi.org/10.1007/s11356-024-35303-5.**
12. Bahita T.A., Swain S., Jha P.K., Palmate, S. and **Pandey A.,** (2024). Numerical modelling of pollutant dispersion affecting water quality of Upper Ganga Canal (Roorkee City, India). **Int. J. Environ. Sci. Technol. (2024). https://doi.org/10.1007/s13762-024-06054-0.**

13. Chourasia, S.K. Chhetri, S. K. and **Pandey, A.** (2024). Evaluating the Need and Feasibility of Micro Irrigation Systems for Sustainable Irrigation. Environ Monit Assess **196, 957 (2024). https://doi.org/10.1007/s10661-024-13091-2.**
14. Kalura, P., **Pandey, A.** Chowdary, V.M. and Dayal, D.. (2024). Evaluating hydrological responses of satellite precipitation products over an Indian Tropical Catchment through a distributed physical model. Hydrological Process. 38 (9). e15275.https://onlinelibrary.wiley.com/doi/10.1002/hyp.15275
15. Kushwaha, Y.K., Panigrahi, R.K. & **Pandey, A.** (2024). Performance analysis of capacitive soil moisture, temperature sensors and their applications at farmer's field. Environ Monit Assess 196, 793 (2024). https://doi.org/10.1007/s10661-024-12946-y.
16. Dayal, D., **Pandey, A.,** Gupta, P. K., and Kalura, P. (2024). Investigating the Utility of Satellite-based Precipitation Products for Simulating Extreme Discharge Events: An Exhaustive Model-driven Approach for a Tropical River Basin in India. Environ Monit Assess 196, 608 (2024). https://doi.org/10.1007/s10661-024-12746-4.
17. Sharma, I., Mishra, S.K., Pandey, A., Aragaw, H.M. and Singh, V.P. (2024). Investigating an empirical approach to predict sediment yield for a design storm: a multi-site multi-variable study. Environ Dev Sustain (2024). https://doi.org/10.1007/s10668-024-04832-x
18. Sharma, I., Swain, S., Mishra, S.K. and **Pandey, A.** (2024). Investigating climate and land use change impacts on design flood estimation over Indian tropical catchments. **Trop. Ecol. (2024).** https://doi.org/10.1007/s42965-024-00323-2.
19. Bhat, A. H., Dayal, D., **Pandey, A.**, Murthy, G.S. (2024). Performance Evaluation of Canal Irrigation System at The Tertiary Level of Upper Ganga Canal Using Remote Sensing. **Trop. Ecol. (2024). https://doi.org/10.1007/s42965-024-00324-1**
20. Das, D.P., Kothari, K. and **Pandey, A**. (2024). Comprehensive Analysis of Spatiotemporal Variability of Rainfall-based Extremes and their Implications on Agriculture in the Upper Ganga Command Area. Environ Monit Assess 196, 111 (2024). https://doi.org/10.1007/s10661-023-12265-8
21. Agarwal, A., Sarkar, A., **Pandey, A.,** Kumar, A., & Sharma, A. (2023). Editorial of "Water security for sustainable development". Water Security, 20, 100157.https://doi.org/10.1016/j.wasec.2023.100157
22. Himanshu, S.K., **Pandey, A.,** Karki, K.,Pandey, R.P., palmate, S and Datta, A. (2023). Assessing the Applicability of Variable Infiltration Capacity (VIC) Model using Remote Sensing Products for the Analysis of Water Balance: Case Study of the Tons River Basin, India. J Indian Soc Remote Sens (2023). https://doi.org/10.1007/s12524-023-01768-z
23. Patidar, N.,Yadav, B., Kumar, S., Raj, A., Krishan, G.; Singh, S., Deka, B., Jeong, S.; Pandey, A., Matsuno, Y., Singh, R.D. (2023). A web-enabled tool for site suitability mapping using Google Earth Engine (GEE) and Multi-criteria Decision Analysis (MCDA). Water Resour Manage (2023). https://doi.org/10.1007/s11269-023-03621-x
24. Singh, G., Rawat, M. and **Pandey, A.** (2023). Debris flow simulation and modeling of the 2021 flash flood hazard caused by a rock-ice avalanche in the Rishiganga River valley of Uttarakhand. Environ Monit Assess (2023) 195:1118. https://doi.org/10.1007/s10661-023-11774-w
25. Singh, G. and **Pandey, A.** (2023).Climate change induced disasters and highly vulnerable infrastructure in Uttarakhand, India: current status and way forward towards resilience and long-term sustainability. Sustainable and Resilient Infrastructure. 9 (2), 145–167. https://doi.org/10.1080/23789689.2023.2253409.

26. Jadhao, V., **Pandey, A.,** Mishra, S. K. (2023). Sediment Modeling Using A Laboratory-Scale Rainfall Simulator and Laser Precipitation Monitor. Environmental Research. **237 (1): 116859**
27. Verma, R. K., **Pandey, A.,** Verma, S. and Mishra, S. K. (2023). A Review of Environmental Flow Studies in India with Implementation Enabling Factors and Constraints. Ecohydrology & Hydrobiology. https://doi.org/10.1016/j.ecohyd.2023.06.006.
28. Dayal, D., **Pandey, A.** Gupta, P.K. and Himanshu, S.K. (2023). Multi-criteria evaluation of satellite-based precipitation estimates over agro-climatic zones of India. Atmospheric Research. Volume 292, (2023). 106879.https://doi.org/10.1016/j.atmosres.2023.106879
29. Swain, S., Mishra, S.K., Pandey, A. et al. Characterization and assessment of hydrological droughts using GloFAS streamflow data for the Narmada River Basin, India. Environ Sci Pollut Res (2023). https://doi.org/10.1007/s11356-023-27036-8.
30. Jadhao, V.G., Pandey, A. & Mishra, S.K. Modeling of rain erosivity employing simulated rainfall and laser precipitation monitor. Model. Earth Syst. Environ. (2023). https://doi.org/10.1007/s40808-023-01727-0
31. Verma, R. K., **Pandey, A.,** Mishra, S. K. and Singh, V.P.(2023).A Procedure for Assessment of Environmental Flows Assessment Incorporating Inter- and Intra-Annual Variability in Dam-Regulated Watersheds.**Water Resources Management. 37 (8), 3259–3297 (2023)**
32. Singh, G., Rawat, M. and Pandey, A. (2023).Investigation of the flash flood event caused by a massive rock-ice avalanche in the Himalayan river valleys of Rishiganga and Dhauliganga, Uttarakhand, through hydrodynamic modeling perspectives. **Nat Hazards (2023). 117, 2935–2962.**
33. Sharma, N. K., Verma, R. K., Verma, S., Mishra, S. K. and **Pandey, A.**(2023). SCS-CN model further modified by incorporating rainfall intensity and retention parameter temporally decaying with soil moisture for more versatile applications. **Paddy Water Environ (2023). 21, 307–324 (2023)**
34. Himanshu, S.K., **Pandey, A.**,Madolli, M.J.,Palmate, S.S., Kumar, A. Patidar, N. and Yadav, B. (2023). An Ensemble Hydrologic Modeling System for Runoff and Evapotranspiration Evaluation over an Agricultural Watershed. J Indian Soc Remote Sens 51, 177–196 (2023). https://doi.org/10.1007/s12524-022-01634-4.
35. Swain, S., Mishra, S. K. and Pandey, A.. (2022).Assessing spatiotemporal variation in drought characteristics and their dependence on timescales over Vidarbha Region, India.Geocarto International. 37:27, 17971-17993, DOI: 10.1080/10106049.2022.2136260
36. Sharma, I., Mishra, S. K., **Pandey, A.** and Kumre, S. (2022). A Modified NRCS-CN Method For Eliminating Abrupt Runoff Changes Induced By The Categorical Antecedent Moisture Conditions . Journal of Hydro-environment Research (Springer): 44: 35-52.
37. Swain, S., Mishra, S. K., **Pandey, A.,** Dayal, D., & Srivastava, P. (2022). Appraisal of historical trends in maximum and minimum temperature using multiple non-parametric techniques over the agriculture-dominated Narmada Basin, India. Environmental Monitoring and Assessment. Springer. 194(12):893.
38. Swain, S., Mishra, S. K., **Pandey, A.,** Pandey, A. C., Jain, A., Chauhan, A., & Badoni, A. K. (2022).Hydrological modelling through SWAT over a Himalayan catchment using high-resolution geospatial inputs. Environmental Challenges. Elsevier. Vol. 8, 100579
39. Sharma, I., Mishra, S. K. and **Pandey, A.** (2022). Can slope adjusted Curve Number models compensate runoff underestimation in steep watersheds?: A study over experimental plots in India.Physics and Chemistry of the Earth. 127, 103185

40. 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.
41. 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. Theor Appl Climatol 149, 931–943 (2022). https://doi.org/10.1007/s00704-022-04091-8
42. 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.
43. Palmate, S. S., Wagner, P. D., Fohrer, N., & **Pandey, A.** (2022).Assessment of uncertainties in modelling land use change with an integrated cellular automata – markov chain model. Environmental Modeling and Assessment Journal.(2021). 27, 275–293 (2022).
44. Swain, S., Mishra, S.K., **Pandey, A.** & Dayal, D. (2022). Spatiotemporal Assessment of Precipitation Variability, Seasonality and Extreme Characteristics over a Himalayan Catchment. Theor Appl Climatol 147, 817–833 (2022). https://doi.org/10.1007/s00704-021-03861-0
45. Singh, G. and **Pandey, A.** (2022). 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. 37 (25) :9132-9159
46. Bahita T.A., Swain S., Pandey, P.K., **Pandey A**. (2021). Assessment of heavy metal contamination in livestock drinking water of Upper Ganga Canal (Roorkee City, India). Arab J Geosci 14, 2861 (2021).
47. Swain, S., Mishra, S.K., Pandey, A. **and Kalura, P.** Inclusion of groundwater and socio-economic factors for assessing comprehensive drought vulnerability over Narmada River Basin, India: A geospatial approach. **Appl Water Sci 12, 14 (2022).**
48. 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.
49. Singh, G. and **Pandey, A.** (2021). Evaluation of Classification Algorithms for Land Use Land Cover Mapping in the Snow-fed Alaknanda River Basin of the Northwest Himalayan Region. Appl Geomat 13, 863–875.
50. 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.
51. 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.
52. 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**.**
53. Sharma, I., Mishra, S. K. and **Pandey, A.** (2021). Simple procedure for design flood estimation incorporating duration and return period of design rainfall. **Arab J Geosci 14, 1286 (2021).**
54. Pandey, A., Bishal K.C., Kalura, P., Chowdary, V. M., Jha, C.S., and Cerdà, A. (2021). A Soil Water Assessment Tool (SWAT) modeling approach to prioritize soil conservation management in river basin critical areas coupled with future climate scenario analysis. Air, Soil, and Water Research Journal (SAGE). 14: 1–17, **https://doi.org/10.1177/11786221211021395.** (2021)

55. Verma, R.K., Verma, S., Mishra, S. K.and **Pandey, A.** SCS-CN based Improved Models for Direct Surface Runoff Estimation from Large Rainfall Events. Water Resour Manage. 35:2149–2175. **DOI:** 10.1007/s11269-021-02831-5. (2021)

56. Dayal, D., Gupta, P.K. and **Pandey, A.** Streamflow Estimation using Satellite-Retrieved Water Fluxes and Machine Learning Technique over Monsoon-dominated Catchments of India. Hydrological Sciences Journal. 66:4, 656-671, (2021). DOI: 10.1080/02626667.2021.1889557.

57. Swain, S., Mishra, S.K. & **Pandey, A.** A detailed assessment of meteorological drought characteristics using simplified rainfall index over Narmada River Basin, India. Environ Earth Sci 80, 221, (2021). **DOI**.org/10.1007/s12665-021-09523-8.

58. Swain, S., Mishra, S. K. and **Pandey, A.** (2020).Assessment of meteorological droughts over Hoshangabad district, India. In IOP Conference Series: Earth and Environmental Science, Earth Environ. Sci. 491 012012. DOI 10.1088/1755-1315/491/1/012012

59. Himanshu, S. K., **Pandey, A.** Yadav, B. and Gupta, A. Evaluation of Best Management Practices for Sediment and Nutrient Loss Control Using SWAT Model. Soil & Tillage Research. (2019): 192:42-58.

60. Pandey, A. and Palmate, S. S. Assessing Future Water-Sediment Interaction and Critical Area Prioritization at Sub-Watershed Level for Sustainable Management. Paddy and Water Environment. (2019):17(3):373-382.

61. Mishra, S.K., S.K. Kumre, **Pandey, A.**, 'SCS-CN method revisited in perspective of Strange data,' Int. J. Hydrology, MedCrave, Open Access, (2019).Vol. 3, Issue 6, pp. 488-498.

62. Himanshu, S. K., **Pandey, A.** and Patil, A., Hydrologic Evaluation of TMPA-3B42V7 precipitation dataset over an Agricultural Watershed using the SWAT Model. 23(4): 0501800, 2018. ASCE's Journal of Hydrologic Engineering. **doi: 10.1061/(ASCE)HE.1943-5584.0001629.**

63. Dhami, B., Himanshu, S.K., **Pandey, A.** Gautam, A., Evaluation of the SWAT model for water balance study of a mountainous snowfed river basin of Nepal. Environ Earth Sci Vol. 77: 21, 2018.

64. Pandey, A. and Palmate, S. S., Assessments of spatial land cover dynamic hotspots employing MODIS time-series datasets in the Ken River Basin of Central India. Arab J Geosci. 11: 479. (2018),doi:10.1007/s12517-018-3812-z.

65. Darshana, D., **Pandey, A.** and Srivastava, P., Rainfall variability and its association with El Niño Southern Oscillation in Tons River Basin, India. Meteorology and Atmospheric Physics. p. 405-425, vol. 130(4), August/2018. **DOI: 10.1007/s00703-017-0525-x**

66. Himanshu, S.K., **Pandey, A.** and Yadav, B.**,** Ensemble Wavelet-Support Vector Machine Approach for Prediction of Suspended Sediment Load Using Hydro-meteorological Data. ASCE's Journal of Hydrologic Engineering. p. 05017006, vol. 22(7), 2017**. DOI: 10.1061/(ASCE)HE.1943-5584.0001516.**

67. Bharti, B., **Pandey, A.,** Tripathi, S.K. and Kumar, D., Modelling of runoff and sediment yield using ANN, LS-SVR, REPTree and M5 model. Hydrology Research. p. nh2017153, vol. **48(6), 2017: 1489–1507. DOI: 10.2166/nh.2017.153.**

68. Kumar, D., Gautam, A., Palmate, S.S., **Pandey, A.**; Suryavanshi, S., Rathore, N., Sharma, N., Evaluation of TRMM Multi-Satellite Precipitation Analysis (TMPA) Against Terrestrial Measurement Over a Humid Sub-Tropical Basin, India. Theoretical and Applied Climatology. p. 783-799, vol. 129(3-4), 2017. **doi:10.1007/s00704-016-1807-9.**

69. Himanshu,S. K., **Pandey, A.** and Shrestha, P., Application of SWAT in an Indian River Basin for modelling runoff, sediment and water balance. Environmental Earth Sciences. p. 3, vol. 76(1), 2017. **DOI: 10.1007/s12665-016-6316-8.**

70. Himanshu, S.K., **Pandey, A.** and Yadav, B.**,** Assessing the Applicability of TMPA-3B42V7 Precipitation Dataset in Wavelet-Support Vector Machine Approach for Suspended Sediment Load Prediction. Journal of Hydrology. p. 103-117, vol. 550, 2017. **DOI: 10.1016/j.jhydrol.2017.04.051.**

71. Suryavanshi, S., **Pandey, A.** and Chaube, U.C., Hydrological simulation of the Betwa river basin (India) using the SWAT model. Hydrological Sciences Journal. p. 960-978**,** vol. 62(6), 2017. **DOI:10.1080/02626667.2016.1271420.**

72. Palmate, S. S., **Pandey, A.,** Kumar, Dheeraj, Pandey, R. P. and Mishra, S.K., Climate change impact on forest cover and vegetation in Betwa Basin, India. Applied Water Science. p. 103-114, vol. 7(1), 2017. **DOI: 10.1007/s13201-014-0222-6.**

73. Palmate, S. S., **Pandey, A.** and Mishra, S.K., Modelling Spatiotemporal Land Dynamics for a Trans-Boundary River Basin Using Integrated Cellular Automata and Markov Chain Approach. Journal of Applied Geography. p. 11-23, vol. 82, 2017. **DOI.10.1016/j.apgeog.2017.03.001.**

74. Lal, M., Mishra, S.K., Pandey, A., Pandey, R.P., Chaudhary, A., Jha, R.K., Paudel, B. ; Sah, S. P., Shreevastava, A.K. and Kumar, Y., Evaluation of SCS–CN Methodology Using Data from Agricultural Plots. Hydrogeology Journal. p. 151-167, vol. 25(1), 2017. **10.1007/s10040-016-1460-5.**

75. Acharya, S., **Pandey, A.**, Mishra, S.K. and Chaube, U.C., GIS Based Graphical User Interface For Irrigation Management. Water Science and Technology: Water Supply. p. 1536-1551, vol. 16(6), 2016. **DOI: 10.2166/ws.2016.081.**

76. Kumar, D., **Pandey, A.,** Sharma, N. and Flügel, W.A., Daily Suspended Sediment Simulation Using Machine Learning Approach. Catena: p. 77-90, vol. 138, 2016. **DOI 133: 10.1016/j.catena.2015.11.013.**

77. Pandey, A., Himanshu, S.K., Mishra, S.K. and Singh, V.P., Physically based soil erosion and sediment yield models revisited. Catena. p. 595-620, vol. 147, 2016. **DOI: 10.1016/j.catena.2016.08.002.**

78. Pandey, A., Chaube, U.C., Mishra, S.K. and Kumar, D., Assessment of reservoir sedimentation using remote sensing and recommendations for desilting Patratu Reservoir, India. Hydrological Sciences Journal. p. 711-718, vol. 61(4) 2016. **DOI.org/10.1080/02626667.2014.993988.**

79. Kumar, D., **Pandey, A.,** Sharma,N. and Flügel, W.A., Evaluation of TRMM-Precipitation with Raingauge Observation Using Hydrological Model J 2000. ASCE's Journal of Hydrologic Engineering. p. E5015007, vol. 22(5), 2015. **DOI:10.1061/(ASCE)HE.1943-5584.0001317.**

80. Lal, M., Mishra, S.K. and **Pandey, A.**, Physical verification of the effect of land features and antecedent moisture on runoff curve number. Catena. p. 318-327, vol. 133, 2015. **DOI.org/10.1016/j.catena.2015.06.001.**

81. Pandey, A., Mishra, S.K. and Gautam, A., Soil Erosion Modeling Using Satellite Rainfall Estimates. J. Water Resource and Hydraulic Engg. p. 318-325, vol. 4(4), 2015. **DOI: 10.5963/JWRHE0404002**

82. Kumar, D., **Pandey, A.,** Sharma,N. and Flügel, W.A., Modelling suspended sediment using Artificial Neural Networks and TRMM-3B42 Version 7 Rainfall Dataset. ASCE's Journal of Hydrologic Engineering. p. C4014007, vol. 20(6), 2014. **DOI: 10.1061/(ASCE)HE.1943-5584.0001082. 20(6).**

83. Darshana and **Pandey, A.**, Statistical downscaling of temperature using three techniques in the Tons River basin in Central India**.** Theoretical and Applied Climatology. p. 605-622, vol. 121(3-4), 2015. **DOI:10.1007/s00704-014-1253-5.**

84. Pandey, A., Lalrempuia, D. and Jain, S.K., Assessment of Hydropower Potential Using Spatial Technology and SWAT Modeling in the Mat River of Southern Mizoram, India. Hydrological Sciences Journal. p. 1651-1665, vol. 60(10), 2015. **DOI.org/10.1080/02626667.2014.943669.**

85. Gajbhiye, S., Mishra, S.K. **Pandey, A.**, Simplified sediment yield index model incorporating parameter curve number. Arabian Journal of Geosciences. p. 1993-2004, vol. 8(4), 2015**. https://doi.org/10.1007/s12517-014-1319-9.**

86. Gajbhiye, S., Mishra, S.K. **Pandey, A.**, Relationship between SCS-CN and Sediment Yield. Applied Water Science. p. 363-370, vol. 4(4), 2014. **DOI 10.1007/s13201-013-0152-8.**

87. Mishra, S.K., Chaudhary, A., Shrestha, R., **Pandey, A.,** Lal, M., Experimental verification of the Effect of Slope and land use on SCS Runoff Curve Number. Water Resources Management. p. 3407-3416, vol. 28(11)2014. **DOI 10.1007/s11269-014-0582-6. 2014, 28(11):3407-3416.**

88. Goyal, M. K., Bharti, B., Quilty,J., Adamowski, J., **Pandey, A.**, Modeling of daily pan evaporation in sub-tropical climates using ANN, LS-SVR, Fuzzy Logic, and ANFIS. Expert Systems with Applications. p. 5267-5276, vol. 41(11), 2014. **DOI.org/10.1016/j.eswa.2014.02.047.**

89. Suryavanshi, S., **Pandey, A.,** Chaube, U.C. and Joshi, N., Long Term Historic Changes in Climatic Variables of Betwa Basin, India. Theoretical and Applied Climatology. p. 403-418, vol. 117(3-4), 2014. **DOI 10.1007/s00704-013-1013-y.**

90. Murty, P.S., **Pandey, A.,** Suryavanshi, S., Application of Semi distributed hydrological model for basin level water balance of the Ken basin of Central India. Hydrological Processes. p. 4119-4129, vol. 28(13), 2014. **DOI: 10.1002/hyp.9950.**

91. Gajbhiye, S., Mishra, S.K. **Pandey, A.**, Prioritizing erosion-prone area through morphometric analysis: an RS and GIS perspective. Applied Water Science. p. 51-61, Vol. 4(1), 2014. **DOI 10.1007/s13201-013-0129-7.**

92. Mishra, S.K., Gajbhiye, S. and **Pandey, A.**, Estimation of design runoff curve numbers for Narmada watersheds (India). J. Applied Water Engineering and Research. p. 69-79, vol. 1(1), 2013. **DOI: 10.1080/23249676.2013.831583**

93. Darshana, **Pandey, A.** and Pandey, R. P., Analysing Trends in Reference Evapotranspiration and Weather Variables in the Tons River Basin in Central India. Stochastic Environmental Research and Risk Assessment. p. 1407-1421, vol. 27(6), 2013. **DOI 10.1007/s00477-012-0677-7.**

94. Darshana, **Pandey, A.** Gahalaut, K.P.S. and Pandey, R. P., Spatial and temporal variability in maximum, minimum and mean air temperatures at Madhya Pradesh in central India. Comptes Rendus Geoscience. p. 3-21, vol. 345(1), 2013. **https://doi.org/10.1016/j.crte.2012.10.016.**

95. Darshana and **Pandey, A.**, Statistical analysis of long term spatial and temporal trends of precipitation during 1901-2002 at Madhya Pradesh, India. Atmospheric Research. p. 136-149, vol. 122, 2013. **https://doi.org/10.1016/j.atmosres.2012.10.010.**

96. Jadhav, A., **Pandey, A.** and Bharti, B., Spatial soil erosion and sediment yield modeling of a watershed using GIS. International Agricultural Engineering Journal (IAEJ). p. 82-89, vol. 22(3-4), 2012.

97. Jena, S.K., Tiwari, K. N., **Pandey, A.** and Mishra, S. K., RS and GIS based evaluation of distributed and composite curve number (CN) techniques. ASCE's Journal of Hydrologic Engineering. p. 1278-1286, vol. 17(11), 2012. **DOI: 10.1061/(ASCE)HE.1943-5584.0000651.**

98. Dabral, P. P., Pandey, P. K., **Pandey, A.,** Singh, K. P. and Singh, M. S., Modelling of wetting pattern under trickle source in sandy soil of Nirjuli, Arunachal Pradesh (India). Irrigation Sciences (Springer). p. 287-292, vol. 30(4), 2012. **DOI:10.1007/s00271-011-0283-3.**

99. Duhan, D., **Pandey, A.,** Ostrowski,M. and Pandey, R. P., Simulation and optimization for planning and management of irrigation system: A case study. Irrigation and Drainage. p. 178-188, vol. 61(2), 2012. **DOI: 10.1002/ird.633.**

100. **Pandey, A.,** Chowdary, V.M., Mal, B.C. and Dabral, P. P., Remote sensing and GIS for identification of suitable sites for soil and water conservation structures. Land degradation & development. p. 359-372, vol. 22(3), 2011. **DOI: 10.1002/ldr.1012.**

101. **Pandey,** A., Behra,S., Pandey, R. P. and Singh, R.P., Application of GIS for Watershed Prioritization and Management-A Case Study. International Journal of Environmental Science Development & Monitoring. p. 25-42, vol. 2(1), 2011.

102. Pandey, R.P., **Pandey, A.,** Galkate, R., Byun, H. and Mal, B.C., Integrating hydro-meteorological and physiographic factors for assessment of vulnerability to drought. Water Resources Management. p. 4199-4217, vol. 24(15), 2010. **DOI:10.1007/s11269-010-9653-5.**

103. **Pandey, A.,** Zoremsangi, M., Kashyap, P.S., and Dabral, P.P., A field study on performance evaluation and moisture distribution of drip emitter in hills of Uttarakhand, India. J. Applied Irrigation Sciences. p. 17-37, vol. 45(1), 2010.

104. **Pandey, A.,** Mathur, A., Mishra, S.K. and Mal, B.C., Soil Erosion Modeling of a Himalayan Watershed Using RS and GIS. Environ. Earth Sciences (Springer). p. 399-410, vol. 59(2), 2009. **DOI: 10.1007/s12665-009-0038-0.**

105. **Pandey, A.,** Chowdary, V.M., Mal, B.C. and Billib, M., Application of the WEPP model for prioritization and evaluation of best management practices in an Indian watershed. Hydrol. Process. p. 2997-3005, vol. 23(21), 2009. **DOI: 10.1002/hyp.7411.**

106. **Pandey, A.,** Chowdary, V.M. and Mal, B.C., Sediment Yield Modelling of an Agricultural Watershed Using MUSLE, Remote Sensing and GIS. J. Paddy Water Environment (Springer). p. 105-113, vol. 7(2), 2009. **DOI**: **10.1007/s10333-009-0149-y.**

107. Pandey, V. K., Panda, S.N., **Pandey, A.** and Sudhakar, S., Evaluation of effective management plan for an agricultural watershed using AVSWAT model, remote sensing and GIS. Environmental Geology (Springer). p. 993-1008, vol. 56(5), 2009. **DOI: 10.1007/s00254-008-1201-8.**

108. Dabral, P.P., Baithuri, N. and **Pandey, A.**, Soil erosion assessment in a hilly catchment of north eastern India using USLE, GIS and remote sensing. Water Resour. Management (Springer). p. 1783-1798, vol. 22(12), 2008. **DOI: 10.1007/s11269-008-9253-9.**

109. **Pandey, A.,** Chowdary, V.M., Mal, B.C. and Billib, M., Runoff and sediment yield modeling from a small agricultural watershed in India using the WEPP model. J. Hydrology (Elsevier). p. 305-319, vol. 348(3), 2008. **DOI: doi.org/10.1016/j.jhydrol.2007.10.010**

110. Pandey, V. K., **Pandey, A.** and Panda, S.N., Effect of Landuse / Landcover changes on hydrological response of agricultural watershed – A Case Study using remote sensing technique. Asian J. Geoinformatics. p. 3-9, vol. 8 (2), 2008.

111. Dabral, P.P., **Pandey, A.,** Baithuri, N. and Mal, B.C., Stochastic modelling of rainfall in humid region of north east India. Water Resour. Manage (Springer). p. 1395-1407, vol. 22(10), 2008. **DOI: 10.1007/s11269-007-9232-6**

112. **Pandey, A.** Dabral, P.P., Chowdary, V.M. and Yadav, N.K., Landslide hazard zonation using remote sensing and GIS: a case study of Dikrong river basin, Arunachal Pradesh, India. Environmental Geology (Springer). p. 1517–1529, vol. 54(7), 2008. **DOI: 10.1007/s00254-007-0933-1**

113. Dabral, P.P. and **Pandey, A.** Morphometric analysis and prioritisation of a eastern himalayan river basin using satellite data and GIS. Asian J. Geoinformatics. p. 3-14, vol. 7(3), 2007.

114. **Pandey, A.,** Chowdary, V.M. and Mal, B.C. Identification of critical erosion prone areas in the small agricultural watershed using USLE, GIS and Remote Sensing. Water Resour. Management (Springer). p. 729–746, vol. 21(4), 2007. **DOI: 10.1007/s11269-006-9061-z**

115. Pandey, V. K., **Pandey, A.** and Panda, S.N., Application of Remote Sensing and GIS for Watershed Characetrization– A case study of Banikdih Watershed (Eastern India). Asian J. Geoinformatics. p. 3-16, vol. 7 (1), 2007.

116. **Pandey, A.,** Dabral, P.P., Kumar, D. and Billib, M., Moisture distribution of drip emitters in sandy soil-A laboratory study. J. Applied Irrigation Sciences. p. 21-33, vol. 41 (1), 2006.

117. **Pandey, A.,** Chowdary, V.M., Mal, B. C. and Dabral, P. P., Estimation of surface water potential of agricultural watershed using geographic information system. Asian J. Geoinformatics. p. 29-36, vol. 5(4), 2005.

118. **Pandey, A.** and Dabral, P.P., Estimation of runoff for hilly catchment using satellite data and GIS. J. Indian Soc. Remote Sensing, p. 235-240, vol. 32 (2), 2004.

NATIONAL (33 Nos.)

1. Singh, G. and Pandey, A. Spatial Prediction of Flash Floods using Susceptibility Modeling and Geospatial Technology: A Review". Journal of Geomatics.p. 209-220;Vol.15(2)

2. Lal, M., Mishra, S.K. and Pandey, A. Empirical evaluation of Soil Conservation Service Curve Number inspired sediment yield model. J. Soil Conservation India, p. 142-150, vol. 16 (2)

3. Lal, M., Mishra, S.K. and Pandey, A., Plot scale assessment of effect of watershed features on runoff and sediment generation in Uttarakhand, India. Indian J. Dryland Agric. Res. and Dev., p.50-55, vol. 32(2), 2017

4. Pandey, A., Status of Irrigation Efficiency in India. Annual Technical Volume (2015-16) on "Traditional Irrigation Systems in India" by The Institution of Engineers (India), Civil Engineering Division Board. p. 85-92, 2016. ***A certificate of appreciation by the Institution of Engineers (India).***
5. Pandey, A., Lalrempuia, D., Jain, S.K. and Mishra, S.K., 'Spatial technology and SWAT modelling approach for assessment of hydropower potential,' THDC HYDRO-TECH, In House Journal, p. 49-53, vol. 4(2), 2016.
6. Koomullil, Deepa, S., Chaube, U .C. and Pandey, A., Revisiting the Useful Life Computation of Gobindsagar (Bhakra) Reservoir. ISH Journal of Hydraulic Engineering. p. 115-123, vol. 22(2), 2016.
7. Magusi, F. Pandey, A. and Chaube, U. C., Estimation of irrigation water requirement by using ETo calculator and CROPWAT software for Mahiga Irrigation Scheme in Tanzania. Hydrology Journal (IAH), p.59-74, vol.38&39(1-4),2015&2016
8. Vijay Kumar, PG, Mishra, S.K. and Pandey, A., Computation of Dam break Flood Disaster Risk Index. J. Indian Water Resour. Soc. p. 41-50, vol. 35(2), 2015.
9. Gajbhiye, S., Mishra, S.K. Pandey, A., Hypsometric analysis of Shakkar river catchment through geographical information system. J. Geological Society of India. p. 192-196, vol. 84 (2), 2014.
10. Jha, R.K, Mishra, S.K. and Pandey, A., Experimental verification of the effect of slope, soil and AMC of a fallow land on Runoff Curve Number. J. Indian Water Resour. Soc. p. 40-47, vol. 34(2), 2014.
11. Acharya, S., Pandey, A. and Chaube, U.C., Use of Geographic Information Systems in Irrigation management: A Review. J. Indian Water Resour. Soc. p. 32-39, vol. 34(2), 2014.
12. Paudel, H. and Pandey, A., Comparative study of ETO Estimation methods for the water balance estimation–A case study of Sikta irrigation project. J. Indian Water Resour. Soc. p. 42-50, vol. 33(4), 2013.
13. Dhami, B.S. and Pandey, A., Comparative review of recently developed hydrologic models. J. Indian Water Resour. Soc. p. 34-42, vol. 33(3), 2013.
14. Champathangkham, S., and Pandey, A., Hydrological Modeling of Xebangfai River basin in LAO PDR using SWAT Model. J. Indian Water Resour. Soc. p. 13-23, vol. 33(2), 2013.
15. Shrestha, R.K, Mishra, S.K. and Pandey, A., Curve Number Effected by Slope of Experimental plot having maize crop. J. Indian Water Resour. Soc. p. 42-50, vol. 33(2), 2013.
16. Choudhary, A., Mishra, S.K. and Pandey, A., Experimental Verification of the Effect of Slope on Runoff and Curve Numbers. J. Indian Water Resour. Soc. p. 40-46, vol. 33 (1), 2013.
17. Jena, S.K., Tiwari, K. N. and Pandey, A., Runoff Estimation by Distributed Curve Number Technique using Remote Sensing and GIS. J. Indian Water Resour. Soc. p. 31-38, vol. 30(1), 2010.
18. Tripathi, S.K., Singh, M. and Pandey, A., Analysis of Agroclimatic extremes for crop cultivation and diversification. J. Indian Water Resour. Soc. p. 34-42, vol. 28(4), 2008.
19. Dabral, P.P. and Pandey, A., Frequency analysis for one day to seven consecutive days of annual maximum rainfall for the District of North Lakhimpur, Assam. J. Institution Engineers (I) (Agril. Engg. Div.). p. 29-34, vol. 89, 2008. (Awarded by Certificate of Merit).

20. Shrivastava, S.K., Rai, R.K. and Pandey, A., Assessment of Drought for humid areas of Assam. J. Indian Water Resour. Soc. p. 26-31, vol. 28 (2), 2008.
21. Tripathi, S.K., Singh, M. and Pandey, A., Climate change at Roorkee (Uttarakhand) – a case study. J. Indian Water Resour. Soc. p. 19-28, vol. 28 (1), 2008.
22. Dabral, P.P., Pandey, A. and Debbarma, S., Soil loss estimation of the Dikrong river basin using IRS-IB LISS II satellite data and GIS. J. Institution Engineers (I) (Agril. Engg. Div.). p. 44-51, vol. 88, 2007.
23. Bharti, B., Pandey, A., Mal, B.C., Pandey, R.P. and Mishra, S.K., Spatial Distribution of Soil Loss using M-M-F Model, Remote Sensing and GIS. Sci-fronts, An Annual J. of Multiple Sciences. p. 35-46, vol. 3, 2009.
24. Pandey, A., Dabral, P. P., Saha, S. and Chakraborty, S., Decision support system for prioritization and watershed management. Hydrology J. (IAH).) p. 41-57, vol. 30 (1-2), 2007. (Adjudged as the Indian Association of Hydrologists Best Paper Award for the year 2007).
25. Tripathi, S.K., Singh, M. and Pandey, A., Agroclimatic variability analysis of Roorkee, Uttarakhand. J.Indian Water Resour. Soc. p. 24-30, vol. 27(3-4), 2007.
26. Sahu, A.K., Pandey, A., Mishra, S.K., Determination of coefficient of discharge of sharp-crested weir and spillway under laboratory conditions, Sci-fronts, An Annual J. of Multiple Sciences. p. 59-63, vol. 1, 2007.
27. Sahu, A.K., Pandey, A., Sun, B.F. and Salam. R., Water quality assessment of Dikrong river and Nirjuli stream. J. Poll. Res., p. 333-335, vol. 25(2), 2006. [Cited by:2]
28. Pandey, A., Dabral, P.P., Jha, P., Hawaibam, R. and Kumar, D., Hydraulic performance of drip emitters under laboratory condition. J. Soil Conservation India, p. 184-188, vol. 4 (3-4), 2005.
29. Pandey, A., Chowdary, V.M. and Mal, B.C., Morphological analysis and watershed management using geographic information system. Hydrology Journal (IAH), p. 71-84, vol. 27(3-4), 2004. [Cited by:20]
30. Pandey, A., Chowdary, V.M. and Mal, B.C., Hypsometric analysis of watershed using geographic information system. J. Soil Conservation India. p. 123-127, vol. 3 (3-4), 2004. [Cited by:4]
31. Pandey, A. and Sahu, A.K., Estimation of runoff using IRS-1 B LISS-II data. Indian J. Soil Cons. p. 58-60, vol. 32(1), 2004. [Cited by:2]
32. Pandey, A., Rajput, G.S. and Shrivastava, S.K., Effect of drip discharge on soil moisture distribution in Clay Soils of Madhya Pradesh - A case study. Indian J. Soil Cons. p. 248-252, vol. 31(3), 2003. [Cited by:4]
33. Tiwari, K.N., Singh, A., Mal, P.K. and Pandey, A. Effect of crop geometry on yield and economics of okra (Abelmoschus Esculentus (L), Monech.) under drip irrigation. J. Institution Engineers (I) (Agril. Engg. Div.), p. 9-12, vol. 82, 2001.

Details of Research Publications in Conferences

International Conferences (114)

1. *Kumar, R., Niroula, K., Karki, A., Kothari, K., Chaudhary, S., **Pandey, A.** (2025). Utilizing High-Resolution UAV Imagery for Estimation of Soil Moisture in Hilly Agricultural Environments. Presented at the ICID- Indo-Global Irrigation Summit 2025.
2. *Chourasia, S. K., Sunil, K. C. , and **Pandey, A.** (2025). Performance Evaluation of Irrigation System Using RS and GIS – A Case Study of Nepal. Presented at the ICID- Indo-Global Irrigation Summit 2025, New Delhi, during June 24- 25, 2025
3. Koradia, A., *Yadav, B., **Pandey, A.,** Chowdary, V. M. and Chandrasekar, K., Assessing Variability in Crop Water Footprint Estimation Across Different Approaches and Scales for Sustainable Agriculture. Presented in PAWEES -2024 in Taichung, Taiwan, during October 23-25, 2024.
4. ***Pandey, A.,** Rawat, M. and Gupta, P.K., Impacts of Dynamic Land Use/Land Cover Change and Landscape Fragmentation Processes on The Biodiversity Of Natural Habitat: A Case Study of the Bakhira Wildlife Sanctuary, India. Presented in PAWEES -2024 in Taichung, Taiwan, during October 23-25, 2024.
5. ***Pandey, A.,** Kalura, P. and Chowdary, V.M., Evaluating the Efficacy of Best Management Practices (BMPS) in Agricultural Dominated River Basin Under Climate Change Scenarios. Presented in ASABE Annual International Meeting-2024, in Anaheim, California in the United States of America. Paper No. 2400040, July 28- 31, 2024.
6. *Kushwaha, Y., Panigrahi, R., and **Pandey, A**. WSN-Based Irrigation Scheduling Model for Sugarcane Crops, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-17492, 2024.
7. Bhoutika, K., *Chourasia, S.K., Barman, D. and **Pandey, A.** (2024). Correlation and Regression-Based Approach. Remote Sensing Indices as Indicators of Agricultural Drought and Crop Yield. 3rd Roorkee Water Conclave, 2024, March 03-06, 2024, organized by IIT Roorkee and NIH Roorkee.
8. *Kalura, P., **Pandey, A.,** Chowdary, V. M., and Deen Dayal. (2024). Addressing In-Situ Data Scarcity in Hydrological Modelling: A Multivariate Calibration Approach Using Remote Sensing Datasets. 3rd Roorkee Water Conclave, 2024, March 03-06, 2024, organized by IIT Roorkee and NIH Roorkee.
9. *Kushwaha, Y.K., Panigrahi, R.K. and **Pandey, A.** (2024). Irrigation Scheduling in Wheat Crop Using Wireless Sensor Network. 3rd Roorkee Water Conclave, 2024, March 03-06, 2024, organized by IIT Roorkee and NIH Roorkee.
10. *Koradia, A., Yadav, B., **Pandey, A.,** Chowdary, V. M. and Chandrasekar, K. (2024). Estimation of the Water Footprint of Agriculture Crops Using the Remote Sensing Approach. 3rd Roorkee Water Conclave, 2024, March 03-06, 2024, organized by IIT Roorkee and NIH Roorkee.
11. *Kushwaha, Y. K., Panigrahi, R.K. and **Pandey, A.** (2024). Irrigation Scheduling in Wheat Crop using Wireless Sensor Network. Roorkee Water Conclave 2024, March 03-06, 2024, at IIT Roorkee.
12. Bhoutika, K., *Chourasia, S., Barman, D. and **Pandey, A.** (2024). Correlation and Regression-Based Approach: Remote Sensing Indices as Indicators of Agricultural Drought and Crop Yield. Roorkee Water Conclave 2024, March 03-06, 2024, at IIT Roorkee.

13. *Kalura, P., **Pandey, A.**, Chowdary, V.M., and Dayal, D. (2024). Addressing In-Situ Data Scarcity in Hydrological Modelling: A Multivariate Calibration Approach Using Remote Sensing Datasets. Roorkee Water Conclave 2024, March 03-6, 2024, at IIT Roorkee.
14. *Kalura, P., **Pandey, A.,** Chowdary, V.M., and Dayal, D. (2024). Strategies for Transboundary Water Management: Remote Sensing based data insights into the Godavari Basin's resources using Water Accounting Plus (WA+) framework. AGU Chapman Conference. Remote Sensing of the Water Cycle: Sensors to Science to Society. 13-16 February 2024 | Honolulu, HI,USA
15. *Chourasia, S. K. and **Pandey, A.** (2024). Enhancing water use efficiency in Canal Command Area for Sustainable Agriculture. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
16. *Koradia, A., Yadav, B., **Pandey, A.,** Chowdary, V. M. and Chandrasekar, K. (2024). Exploring the Dynamics of the Hindon River Basin for Sustainable Agriculture: Deciphering Crops Water Footprint. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
17. *Dhananjay, D. P. and **Pandey, A.** (2024). Soil Moisture Retrieval from Dual-Polarized Sentinel-1 SAR Data over Agricultural Regions Using a Water Cloud Model. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
18. *Jimenez, J.I., Tripathi, N.K., **Pandey, A.**, Mozumder, C., Himanshu, S.K. (2024). Quantifying the Spatio-Temporal Distribution of Groundwater Recharge in the Quiaoit River Watershed (QRW) in Northwestern Philippines. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
19. *Kalura, P., Dayal, D., **Pandey, A.,** Chowdary, V.M. (2024). Evaluating the Effectiveness of Satellite-Based Precipitation Products in Simulating Hydrological Responses to Precipitation using Variable infiltration capacity (VIC) model. International Conference on Future of Water Resources, 2024, January 18-20, 2024, organized by IWRS and IIT Roorkee.
20. *Rawat, M., **Pandey, A.,** Yadav, B. and Gupta, P. K. (2024). Evaluation of Spatial and Temporal Variation of Hydrological and Landscape Dynamics of Kabartal Wetland. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
21. *Vishwakarma, S. K., Kothari, K. and **Pandey, A.** (2024). Evaluation of Different Irrigation Methods and Variable Rates of Irrigation Systems on Wheat Crop for Sustainable Water Management. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
22. *Kushwaha, Y. K., Panigrahi, R.K. and **Pandey, A.** (2024). Soil Moisture Prediction Using Machine Learning Algorithms for Smart Agriculture Applications in India. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
23. *Thakur, P. K., Rawat, M., Pandey, A. and Gupta, P. K. (2024). Assessment And Monitoring Of Wetland Loss And Fragmentation: A Case Study Of Keoladeo National Park. International Conference on Future of Water Resources, 2024, January 18-20, 2024, organized by IWRS and IIT Roorkee.
24. Dilip, B., *Singh, G., Mohanty, M. P. and **Pandey, A.** (2024). Soil Erosion Modelling in the Transboundary Kamla River Basin: A Comparative Analysis of RUSLE, InVEST-SDR, and

MUSLE Models for Informed Conservation Strategies. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.

25. *Taneja, P., Kushwaha, Y. K. and **Pandey, A.** (2024). Deployment of Intelligent Irrigation Monitoring System with Android app for Machine Learning Prediction. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
26. * Karkee, C. S., Chourasia, S. K. and **Pandey, A.** (2024). Assessment of Canal Conditions For Adoption of Micro Irrigation In Canal Command. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
27. *Baitha, L., Chourasia, S.K, Barman, D., **Pandey, A.** (2024). Integrating Remote Sensing Data with Irrigation System Performance Evaluation for Sustainable Water Resource Management. International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
28. *Kumar, R., Mishra, S., Singh, K. and **Pandey, A.** (2024). Evaluation of Agrometeorological indices in relation to water stress and its management in American cotton (Gossypium hirsutum L.). International Conference on Future of Water Resources, 2024, January 18-20, 2024 , organized by IWRS and IIT Roorkee.
29. ***Pandey, A.** and Bhoutika, K. (2023). Optimization and Sensitivity Analysis of Irrigation Water Requirements Considering Economic Benefits of Farmers. 25th ICID Congress & 74th IEC Meeting, Vizag, Nov.1-8, 2023.
30. *Chourasia, S.K. and **Pandey, A.** (2023). Improvement in Physical Crop Water Productivity Using Micro Irrigation in the Canal Command Area. 25th ICID Congress & 74th IEC Meeting, Vizag, Nov.1-8, 2023.
31. *Kushwaha, Y. K., **Pandey, A.** and Panigarhi, R. (2023).Smart Agriculture Management System Using IoT-based Module.25th ICID Congress & 74th IEC Meeting, Vizag, Nov.1-8, 2023.
32. *Dayal, D., Pandey, A., Gupta, P. K. (2023): Hydrological model calibration using satellite retrieved soil moisture: The impact on discharge predictions, XXVIII General Assembly of the International Union of Geodesy and Geophysics (IUGG) (Berlin 2023). https://doi.org/10.57757/IUGG23-0073
33. *Mishra, S. K.,*Swain, S. and Pandey, A. (2023). Assessment of meteorological drought characteristics during 1980-2020 over the Marathwada Region, India. EGU, General Assembly: April 23-28,2023. EGU23-1669.
34. *Sharma, I., Mishra, S. K.,and Pandey, A. (2023). A USLE and SCS-CN coupled approach for design sediment yield prediction. EGU, General Assembly: April 23-28,2023. EGU23-110745.
35. *Swain, S., Mishra, S. K., Pandey, A. (2023). Improving Numerical Weather Prediction-Based Short-To-Medium Range Precipitation Forecasts Using LSTM. 3rd International Workshop on "Biodiversity and Climate Change" at IIT Kharagpur during Febraury 16-19, 2023.
36. *Gautam, A. K., and Pandey, A. Investigating the impact of Climate change on hydrology in the Upper Sheonath River. AGU Fall Meeting 2022.(Online poster prsentation)
37. *Singh, Gagandeep, and **Pandey, A.** "Debris Flood Modeling and Simulation: A Case Study of the Rock-ice Avalanche induced Flash Flood Hazard in Chamoli, on 7th February 2021" AGU Fall Meeting 2022. (Online poster prsentation)
38. *Bhoutika , K. , Pandey, A. (2022). Temperature Variability Impact on Wheat Yield in India-A Case Study of South-West Uttarakhand. AGU Fall Meeting 2022, Chicago, USA, GC34H-01. (Online poster presentation)

39. *Das, D.P., Kothari, K., **Pandey, A.** (2022). Assessment of Spatio-Temporal Variability of Green and Blue Water Evapotranspiration for Wheat Crop over Upper Ganga Command Area. AGU Fall Meeting 2022, Chicago, USA, H25O-1288. (Online poster presentation)

40. *Kushwaha, Y.K., Panigrahi, R.K., and **Pandey, A.** "Smart Irrigation Management Using IoT-based Network" AGU Fall Meeting, Chicago, USA, 2022. (Online poster presentation)

41. *Dayal, D., **Pandey, A.,** and Gupta, P. (2022). Assessment of Meteorological Drought using Long-Term Satellite Precipitation Estimates over Ganga River basin, India. AGU Fall Meeting 2022, Chicago, USA, (Abstract ID: 1191005).

42. *Swain, S., Mishra, S. K., **Pandey, A.** (2022). Assessing the impacts of climatic and socio-economic changes on drought vulnerability of a transboundary river basin in India. AGU Fall Meeting 2022, Chicago, USA, H52L-0613. (Online poster presentation)

43. *Sharma, I., Mishra, S., & **Pandey, A.** Application of SWAT model for the assessment of LULC and climate change on the hydrology of Ashti Catchment, India. AGU Fall Meeting 2022, Chicago, USA, H15K-0925. (Online poster presentation)

44. *Kalura, P., Pandey, A. , Chowdary, V.M and Raju, P.V. (2022).Spatio-temporal analysis of groundwater levels in the Tons river basin, India. ISRS-ISG 2022 Symposium at Hyderabad.

45. *Pandey, A., Paswan, D.P., Semwal, A. and Chourasia, S. (2022). Investigation of Different Vegetation Descriptors for Soil Moisture Estimation Using a Water Cloud Model (WCM). In PAWEES2022 International Conference, Fukuoka, Japan, November 17-18, 2022.

46. *Verma, R. K., Barman, R.D., Kalura, P. and Pandey, A. (2022). Revised Hydrologic Indicators for Estimating Extreme Water Conditions of Environmental Flow under Changing Land use and Climate. In International Conference on Climate and Weather-related Extremes 2022. Organised by Department of WRD&M, IIT Roorkee.Abstract No.: 0925

47. *Paswan, D.P., Kothari, K. and Pandey, A. (2022). Analysis of long-term spatiotemporal rainfall variability and extreme characteristics using high-resolution atmospheric data over the Upper Ganga Command Area. In International Conference on Climate and Weather-related Extremes 2022. Organised by Department of WRD&M, IIT Roorkee.Abstract No.: 2080

48. *Swain, S., Mishra, S.K., Pandey, A. and Nandi, S. (2022). Evaluation and bias-correction of a satellite-based precipitation estimate for drought assessment utilities. In International Conference on Climate and Weather-related Extremes 2022. Organised by Department of WRD&M, IIT Roorkee. Abstract No.: 3532

49. *Singh, G., Rawat, M. and Pandey, A. (2022). Simulation of 7th February 2021 rock-ice avalanche event in the Rishiganga river valley of Uttarakhand Himalayas. In International Conference on Climate and Weather-related Extremes 2022. Organised by Department of WRD&M, IIT Roorkee.Abstract No.: 4629

50. *Dayal, D., Pandey, A. and Gupta, P.K. (2022). Efficacy of Satellite Precipitation Products for extreme discharge simulation: An exhaustive model-driven approach for a tropical river basin in India. In International Conference on Climate and Weather-related Extremes 2022. Organised by Department of WRD&M, IIT Roorkee. Abstract No.: 6503

51. *Pandey, A., Barman, D. and Verma, R.K. (2022). Assessment of Climate Change and LULC changes on Soil Erosion using RUSLE: A Case Study. Presented in an online Workshop on soil erosion for Europe -Emerging Challenges-20-22 June 2022.(Virtual Presentation on June 20, 2022)

52. Swain, S., Mishra, S. K., & Pandey, A. (2022). Evaluation of meteorological drought characteristics under climate change over the agriculture-dominated Marathwada Region, India. In: The XIth Scientific Assembly of the International Association of Hydrological

Sciences (IAHS 2022), 29 May-03 June 2022, Montpellier, France. (Abstract ID: IAHS2022-327)

53. Swain, S., Nandi, S., Mishra, S. K., & Pandey, A. (2022). Integrating satellite-based soil moisture to improve the accuracy of real-time precipitation and streamflow estimates. In: The 6th Satellite Soil Moisture Validation and Application Workshop, 07-09 June 2022, Perugia, Italy.

54. Dayal, D., **Pandey, A.,** and Gupta, P. K. (2022). Hydrological Model Calibration using ASCAT Derived Soil Moisture: The Impact on Discharge Predictions. 6th Satellite Soil Moisture Validation and Application Workshop 2022, Perugia, Italy, 07–09 June 2022.

55. Dayal, D., **Pandey, A.,** and Gupta, P. (2022). A Comprehensive Evaluation of SM2RAIN-GPM Precipitation Product over India. EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-518. https://doi.org/10.5194/egusphere-egu22-518, 2022.

56. Singh, G. and **Pandey, A.** (2022). Identification of flash flood susceptible zones in a highly complex topography and altitude dependent climatically sensitive Himalayan River Basin. EGU, General Assembly. ID: EGU22-153 (Virtual Presentation on May 24, 2022)

57. 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)

58. Swain, Sabyasachi, Mishra, S.K., and **Pandey, A.** (2021). Assessment of Drought Characteristics under Climate Change over the Agriculture-dominated Marathwada Region, India. PAWEES 2021 International Conference. (Virtual Presentation on October 29, 2021)

59. 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

60. 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.

61. 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.

62. 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).

63. 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).

64. 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).

65. Swain, S., Mishra, S.K. and **Pandey, A.** Assessment of droughts and their linkage to environmental flow conditions over a large Indian river basin. EGU, General Assembly: May 4-8, 2020 EGU2020-1048 (On-line presentation, May 7, 2020).

66. Swain, Sabyasachi, Ishan Sharma, S. K. Mishra, **Pandey, A.**, Kumar Amrit, and Vikrant Nikam. "A Framework for Managing Irrigation Water Requirements under Climatic Uncertainties over Beed District, Maharashtra, India." In World Environmental and Water Resources Congress 2020: Water Resources Planning and Management and Irrigation and Drainage, pp. 1-8. Reston, VA: ASCE, 2020.

67. Palmate, S. S. and **Pandey, A.** Assessment of historical hydrologic alteration due to dam construction in upper Godavari River basin. Abstract No. EGU2019-1614. EGU General Assembly during April 07-12, 2019 at Vienna, Austria.

68. 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.

69. Sharma, I., Mishra, S.K., **Pandey, A.,** Swain, S., Kumre, S. and Dayal, D. A Novel Procedure for Computing Antecedent Soil Moisture using SCS-CN Method. Abstract No.RWC-122, Roorkee Water Conclave 2020 during February 26-28, 2020 at IIT Roorkee.

70. Guptha, G. C., **Pandey, A.** and K. S. Kasiviswanathan. Assessment of SuDS in an Urban Drainage System of Gurugram city using SWMM. Abstract No.RWC-151, Roorkee Water Conclave 2020 during February 26-28, 2020 at IIT Roorkee.

71. Kalura, P., **Pandey, A.** and Chowdary, V. M. Trend Analysis of Precipitation and Temperature Over Tons River Basin, India. Abstract No.RWC-176, Roorkee Water Conclave 2020 during February 26-28, 2020 at IIT Roorkee.

72. Swain, S. Mishra, S.K. and **Pandey, A.** NDVI-based Vegetation Change Detection Over An Indian Reservoir Catchment. Abstract No.RWC-209, Roorkee Water Conclave 2020 during February 26-28, 2020 at IIT Roorkee.

73. Swain, Sabyasachi, Surendra Kumar Mishra, and **Pandey, A.**. "Spatiotemporal Characterization of Meteorological Droughts and Its Linkage with Environmental Flow Conditions." *AGU Fall Meeting* 2019 (2019): H13O-1959.

74. Dayal, Deen, S. Swain, A. K. Gautam, S. S. Palmate, **A. Pandey,** and S. K. Mishra. "Development of ARIMA Model for Monthly Rainfall Forecasting over an Indian River Basin." In World Environmental and Water Resources Congress 2019: Watershed Management, Irrigation and Drainage, and Water Resources Planning and Management, pp. 264-271. Reston, VA: ASCE, 2019.

75. Swain, Sabyasachi, Deen Dayal, **Pandey, A.**, and S. K. Mishra. "Trend Analysis of Precipitation and Temperature for Bilaspur District, Chhattisgarh, India." In World Environmental and Water Resources Congress 2019: Groundwater, Sustainability, Hydro-

Climate/Climate Change, and Environmental Engineering, pp. 193-204. Reston, VA: ASCE, 2019.

76. ***Pandey, A.** and Palmate, S. S., Assessing Future Water-Sediment Interaction and Critical Area Prioritization at Sub-Watershed Level for Sustainable Management. Presented in PAWEES-INWEPF International Conference 2018 at Nara, Japan during November 18-24, 2018. Paper No. WG3_02_2808036.

77. Jha, R., ***Pandey, A.** and Ale, S., Performance Evaluation of Canal Irrigation System. Presented in ASABE/ISAE 2018 Global Water Security for Agriculture and Natural Resources Conferences in Hyderabad, India during October 3-6, 2018. Paper No. GWS-0035

78. **Pandey, A.,** *Dayal, D., Palmate, S.S., Mishra, S.K. and Pandey, R.P., Long Term Historic Changes in Temperature and Potential Evapotranspiration over Betwa River Basin. Presented in International Conference on Sustainable Technologies for Intelligent Water Management (STIWM), IIT Roorkee, India, February 16-19, 2018.

79. **Pandey, A.,** Pyasi, R.K. and *Palmate, S.S., Assessment of Irrigation Water Requirement and its Trend in Betwa River Basin, India. Presented in International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

80. *Himanshu, S.K., **Pandey, A.** and Dayal, D., Assessment of Multiple Satellite-Based Precipitation Estimates over Muneru Watershed of India. Presented in International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

81. *Mukpuou, S., **Pandey, A.** and Chowdary, V. M., Reference Crop Evapotranspiration Estimation Using Remote Sensing Technique. Presented in International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

82. *Neupane, S. N. and **Pandey, A.**, Hydrological Modelling of West Rapti River Basin of Nepal Using SWAT Model. Presented in International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

83. *Dhakal, D., Sharma, N. and **Pandey, A.**, Review of Flow Simulation Methods in Alluvial River. Presented in International Conference on STIWM, India, February 16-19, 2018.

84. *Jadhao, V., Bhattarai, R., **Pandey, A.** and Mishra, S. K., Laboratory Performance Evaluation of A Rainfall Simulator. Presented in International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

85. *Kumre, S. K., Mishra, S. K. and **Pandey, A.**, SCS-CN Method Revisited in Perspective of Strange Data. Presented in International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

86. *Lal, M., Mishra, S. K. and **Pandey, A.**, Revisiting the Antecedent Moisture Content Based Curve Number Formulae. Presented in International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

87. *Patel, M. P., Sharma, N. and **Pandey, A.**, Research needs for stream power moderation in Hilly torrents for Disaster mitigation. International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

88. *Singh, R., Kanbienaa, R. and **Pandey, A.**, Water Quality Status of Upper Ganga Canal. Presented in International Conference on STIWM, IIT Roorkee, India, February 16-19, 2018.

89. Dayal, Deen**, Pandey, A.,** Sushil Kumar Himanshu, and Santosh S. Palmate. "Long Term Historic Changes of Precipitation and Aridity Index over an Indian River Basin." In World Environmental and Water Resources Congress 2018: Groundwater, Sustainability, and Hydro-Climate/Climate Change, pp. 262-272. Reston, VA: ASCE, 2018.

90. Himanshu, Sushil Kumar, **Pandey, A.**, and **Deen Dayal.** "Evaluation of Satellite-Based Precipitation Estimates over an Agricultural Watershed of India." In World Environmental and Water Resources Congress 2018: Watershed Management, Irrigation and Drainage, and Water Resources Planning and Management, pp. 308-320. Reston, VA: ASCE, 2018.

91. *Palmate, S.S., Wagner, P.D., **Pandey, A.** and Fohrer, N., Effects of land use change on the water resources of the Basoda basin using the SWAT model. Presented in International SWAT conference 2018, IIT Madras, India, January 8-12, 2018.

92. *Himanshu, S.K. and **Pandey, A.,** Evaluation of TRMM-based Multi-satellite Precipitation Analysis (TMPA) for Suspended Sediment Load Simulation over a South-West Indian Watershed. World Environment & Water Resources Congress at Sacramento, California, United States of America, May 21-25, 2017.

93. Abdelfattah, A. A., ***Pandey, A.** and Palmate, S. S., Evaluation of Temperature Based Evapotranspiration Models in Subtropical Humid Climate of India. Presented in ASABE Annual International Meeting-2017, Spokane, Washington in the United States of America. Paper No. 1700533, July 16-19, 2017.

94. *Pandey, A. and Palmate, S. S., Assessment of Land Degradation and Greening in Ken River Basin of Central India. Presented in EGU2017-3846, Vienna, Austria, April 23-28, 2017.

95. *Palmate, S. S. and **Pandey, A.,** Monitoring crop land greening and degradation using remotely sensed MODIS time-series data. Presented in EGU2017-1284., Vienna, Austria, April 23-28, 2017.

96. *Gautam, A.K. and **Pandey, A.,** Validation of High Resolution Orbital Precipitation Over Upper Mahanadi River Basin, India. Presented in AGU Fall Meeting at San Francisco. December 12-16, 2016.

97. Dhami, B. S., ***Pandey, A.** and Gautam, A.K., Snowmelt Runoff Modeling and Impact of Climate Change in the Himalayan River Basin. Presented in ASABE Annual International Meeting-2016, Orlando, Florida in the United States of America. Paper No. 2460606, July 17-21, 2016.

98. *Himanshu, S.K., **Pandey, A.** and Palmate, S.S., Derivation of Nash Model Parameters from Geomorphological Instantaneous Unit Hydrograph for a Himalayan River using ASTER DEM. International Conference on Structural Architectural and Civil Engineering, U.A.E. Dubai, November 21-22, 2015

99. Pyasi, R. K. and ***Pandey, A.,** Assessment of temperature based equations for ETo estimation by FAO Penman-Monteith Method for Betwa Basin, Central India. Presented in International

Conference on Chemical, Biological and Environment Sciences (ICCBES'2014), Pattaya (Thailand).pp.92-96.Paper No.1214049, Dec. 15-16, 2014.

100. *Kumar, D., **Pandey, A.**, Sharma, N. and Flügel, W.A., Hydrological Evaluation of TRMM-Based Multi-Satellite Precipitation with Raingauge Observation Using J2000 Hydrological Model. ASCE-EWRI Weather Radar and Hydrology-2014, International Symposium held in the Washington, DC Metropolitan Area. April 7-10, 2014.

101. *Drashna and **Pandey, A.,** Stream flow trends and its associations to El Nino Southern Oscillation (ENSO) in the Tons River Basin. Hydro Predict-2012. 3rd International Interdisciplinary Conference on Predictions for Hydrology, Ecology, and Water Resources Management: Water Resources and Changing Global Environment, Vienna, Austria, September 24-27, 2012.

102. ***Pandey, A.** and Paudel, H., Trend Analysis of Rainfall and Run-off and its Significance in Irrigation Planning-A Case Study of Sikta Irrigation. Presented in ASABE Annual International Meeting-2012, in Dallas, Texas in the United States of America. Paper No. 121340579, July 29-August 01, 2012.

103. *Suryavanshi, S., **Pandey, A.** and Chaube, U.C., Calibration and validation of the ARC-SWAT model for runoff estimation in sub-catchment of upper Betwa basin, India. The 1st EIT International Conference on Water Resources Engineering, 156-162., Petchaburi, Thailand, August 18-19, 2011.

104. *Pandey, A. and Jadhav, A., Sediment yield modeling of a watershed using GIS. Presented in ASABE Annual International Meeting-2011, Louisville, Kentucky in the United States of America. Paper No. 1110495, August 7-10, 2011.

105. *Pandey, A., Bharti, B., Mal, B.C. and Pandey, R., Quantification of Soil Loss Using MMF Model, GIS and Remote Sensing. Presented in International Conference on Food Security and Environmental Sustainability-2009, IIT Kharagpur, West Bengal (India), December 17-19, 2009.

106. *Pandey, R.P., Pandey, V. K., **Pandey, A.,** Chaudhari, R. M., Analysis of Meteorological Droughts For Chhattisgarh Region In India. Presented in International Conference on Food Security and Environmental Sustainability-2009, IIT Kharagpur, West Bengal (India), December 17-19, 2009.

107. *Pandey, R. P., **Pandey, A.**, Galkate, R., Xalxo, P., and Mal, B.C., Integrated Assessment of Vulnerability to Drought. Presented in International Conference on Food Security and Environmental Sustainability-2009, in IIT Kharagpur, West Bengal (India), Dec 17-19, 2009.

108. *Pandey, A., Behra, S., Pandey, R.P. Jain, M.K. and Jain, R.K., Morphometric Analysis and Watershed Management of RET River Using GIS and Remote Sensing. Accepted for presentation in ASABE Annual International Meeting-2009, in Reno, Nevada in the United States of America, June 21-24, 2009.

109. Pandey, A., Mathur, A. *Mal. B.C. and Chowdary, V. M., Sediment yield estimation of A Himalayan Watershed Using RS, GIS and MMF Model. Accepted for presentation in ASABE

Annual International Meeting-2009, in Reno, Nevada in the United States of America, June 21-June 24, 2009.

110. *Pandey, A., Watershed Management Using GIS and Remote Sensing and GIS. Presented in the Indo-German Symposium on Education and Research in Sustainability., Indian Institute of Technology Madras (India), September 8 - 9, 2008.

111. 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.

112. *Pandey, A., Chowdary, V.M. and Mal, B.C., Morphological study of watershed using geographic information system, Presented and published in International Conference on Emerging Technologies in Agricultural and Food Engineering (ETAE), pp.34-40, at IIT, Kharagpur, (India), Natural Resources Engineering and management and Agro environmental Engineering. December 14-17, 2004.

113. Pandey, A., Chowdary, V.M., Mal, B.C. and *Dabral, P. P., Estimation of runoff for agricultural watershed using SCS curve number and GIS. Presented and Published in 6th Annual International conference -Map India, New Delhi, Jan. 28-31, 2003.

114. *Pandey, A. and Sahu, A.K., Estimation of runoff using remote sensing and geographic information system, Presented and published in International Conference on Hydrology and Watershed Management, Vol. (II): 509-512., at JNTU, Hyderabad, India, Dec. 18-20, 2002.

Note: *Presenter

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.
3. *Koomullil, S. D., Chaube, U. C. and **Pandey, A.**, Sedimentation of Bhakra Reservoir and Sustainability of Water Utilization. Abstract published in Proc. India Water Week, pp.178-179 Water management for sustainable Development. January 13-17, 2015.
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.

7. *Bharti, B., **Pandey, A.,** Mal, B.C. and Pandey, R.P., Spatial distribution of soil loss using USLE, remote sensing and GIS. Accepted for presentation at XLIV ISAE Convention, New Delhi. January 28-30, 2010.
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.
9. *Pandey, R.P., **Pandey, A.,** Choubey, V.K., Singh, O., Pandey, V.K. and Singh, R.P., Influence of Morphological factors on Meteorological Drought Characteristics. Published in the Proceeding of National Seminar on Conservation and Restoration of Lakes, pp. 49-64, at NEERI, Nagpur, Maharashtra, October 16-17, 2008.
10. ***Pandey, A.,** Debbarma, S. and Dabral, P.P., Identification of landslide regions using remote sensing and GIS Technique. Abstract published in the 40th annual convention and Symposium of ISAE, pp 4.47, TNAU, Coimbatore, SWC-2006-MI:2007.
11. ***Pandey, A.** and Debbarma, S., Roof water harvesting and management of rainwater, National seminar on rainwater harvesting and management for sustainable Agriculture, pp.29, NERIST, Nirjuli, March 25-26, 2006.
12. ***Pandey, A.,** Debbarma, S. and Pant R.M., Traditional Rainwater-India's Perspective. National seminar on rainwater harvesting ad management for Sustainable pp. 34-35, NERIST, Nirjuli, March 25-26, 2006.
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.
14. ***Pandey, A.**, Estimation of sediment yield from small agricultural watershed, Presented and Abstract published in the Proceeding of National Seminar on Impact of Increasing Human Population on Natural Resources, pp. 13, Banaras Hindu University, Varanasi, India, October 16-18, 2003.
15. ***Pandey, A.** and Rajput G. S., Effect of drip discharge and planting geometry on soil moisture distribution in tomato. Abstract published in the XXXIV annual convention of ISAE, CCS Harayana Agricultural University, Hisar, 1999.
16. *Tiwari, K. N., Singh, A, Mal P. K. and **Pandey, A.**, Effect of crop geometry on yield and economics of okra under drip irrigation. Abstract published in the XXXIV annual convention of ISAE, CCS Harayana Agricultural University, held at Hisar, 1999.

Note: *Presenter