

DR. PANKAJ CHAUHAN, WIHG, DEHRADUN, INDIA



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

RESEARCH GROUP: Artificial intelligence center of excellence in geoscience

FIELD OF SPECIALIZATION: Hydro-geomorphology & natural hazards, Glacial Hydrology, Climate change, Information Technology, Remote sensing & GIS

EDUCATION:

2014 Ph.D. Hydrology, H.N.B. Garhwal University, Srinagar

Garhwal 2012 M.Sc. Geo-informatics, VMRF, Salem, TN

2006 M.Sc. Information Technology, H.N.B. Garhwal University, Srinagar

Garhwal 2004 Higher Diploma in Software Engineering, APTECH

(Infotech_Pvt. Ltd, D.Dun 2002 Masters in Geography, H.N.B. Garhwal University, Srinagar Garhwal

PROFESSIONAL EXPERIENCE:

Scientist –B at Wadia Institute of Himalayan Geology, Dehradun (2020)

Tech. Officer (Jr) & (PI, SERB Project) at Wadia Institute of Himalayan Geology

(2018) Tech. Officer (Jr) at Centre for Glaciology, Wadia Institute of Himalayan

Geology (2013) Jr. & Sr. Tech. Asstt. at Computer & Networking section WIHG, Dehradun (2007)

JRF/ SRF at Forest Survey of India (2006)

GIS expert, at Geo-spatial data center, Survey of India, Dehradun (2003)

VISITING POSITIONS:

Speaker, in August, 2020 of AICTE Sponsored, (Training and Learning Academy) Faculty Development Program (FDP) on Sustainable Engineering, Organized by Gaya of Civil Engineering, Gaya.

TEACHING EXPERIENCE: NIL

SERVICES:

a. Supervision/Guidance to Ph.D. Students:

b. Training: NA

c. Teaching: NA

d. Membership:

- Membership of Institute of Indian Geographers, Dept. of Geography, University of Pune-411007 (India).
- Life time Membership of “The International Society for Environmental Information Sciences” 4246 Albert Street, Suite 413, Regina, Saskatchewan S4S 3R9, Canada.
- Member of IAWEEES (International Association for Water, Environment, Energy, and Society, India. (Reg. No. IAWEEES2020001176).

e. Editorial Board:

- Peer Reviewer of the 6th International Conference on Water Resource and Environment (WRE 2020).

f. International/National Seminars/Workshop:

- Co-convenor of 5th National Geo-Research Scholars Meet (NGRSM) “(e-conference I Digital Lectures I e-Queries) “Earth Sciences for Sustainable Development” during **July 22nd - 23rd 2021**, at Wadia Institute of Himalayan Geology (WIHG), in virtual mode.
- Member of local organizing committee in 3rd Triennial Congress of Federation of Indian Geosciences Association (FIGA) on Geosciences of Himalaya for Sustainable Development during 16-18 November, 2022 at WADIA INSTITUTE OF HIMALAYAN GEOLOGY (An Autonomous Institute of Dept. of Sci. & Tech., Govt. of India) 33, General Mahadev Singh Road Dehradun - 248001 (Uttarakhand)

g. External Research Fund received & Project Handled:

- **Principal Investigator (PI)** in the DST, SERB funded project, titled “Hydrological cycle analysis in valleys of Pindari-Kafni glaciers, Kumaun Himalaya” 2016-2020 (**Cost Rs. 20 Lakh**).
- Worked as an associate in the DST young scientist project, titled 'micrometeorological measurements and modelling experiments in the Pindari glacier' 2015-2018 (**Cost Rs. 25 Lakh**).

h. Member of important Committees:

- Member, Stores & Purchase, non-consumable physical verification committee **(2021-22)**
- Member of WIHG internal purchasing committee **(2021-22)**.
- Committee Member for inspection of items to be procured through GEM/ store. Order dated **2021-22**.
- Acted as a evaluator for 29th National Children Science congress (NCSC) **2021-22** held at KV, IIP, Mohakkampur, Dehradun.
- Member of Physical verification of consumable and non-consumable store items **(2022-23)**.
- Chairman, of technical evaluation committee for AMC of computer and peripherals in **2022**.

AWARDS/FELLOWSHIPS/HONORS/MEMORIAL LECTURES:

a. Awards/Medals/Prizes:

- **ONGC scholarship** for meritorious student **(2002)**
- Wadia Institute's **Best Worker Awards** continuous from **(2009 to 2013)**
- B V Ramana best paper award by Association of Agrometeorologists Gujarat, India for the year **(2018)**
- "Best scientist of the year" award 2020, from Shri Paramhans Education & Research Foundation, Delhi **(2020)**

b. Fellowships:

c. Memorial Lectures:

d. Recognition/Honors:

COUNTRIES VISITED: Kathmandu (Nepal)

NATIONAL/INTERNATIONAL (outside CSIR-NGRI) COLLABORATION:

1. Dr. Reet Kaml Tiwari, IIT Ropar, India
2. Dr. S.K Srivastava, IIRS, Dehradun, India
3. Dr. Christoph Mayer, [University of Tübingen](#), Germany
4. Dr. Rizwan Ahmad, AMU, India

5. Dr. Vikram Kumar Gaya Engineering Collage, Bihar, India
6. Dr. Sudhir Kumar Singh, Allahabd Unversity, Prayagraj U.P).
7. Dr. M.E. Akiner, University, Antalya, Turkey
8. Prof. Ram L. Ray, *Prairie View A&M University* TX 77446, US

Inside WIHG Collaborator:

PATENT -NA

SCHOLARSHIPS AWARDED, GATE NA

Ph.D. Advisor: Prof. DD Chauniyal, HNB Garhwal University, Srinagar Garhwal

LIST OF PUBLICATIONS

(a) SCI Papers:

Published:

- Singh, D., Vardhan, M., Sahu, R., Chatterjee, D., **Chauhan, P.** and Liu, S., **2022**. Machine learning based streamflow prediction in a hilly catchment for future scenarios using CMIP6 data. **Hydrology and Earth System Sciences**, pp.1-41. (IF 6.617)
- Kumar, N., Singh, S.K., Singh, P.K., Gautam, D.K., Patle, P., Pandey, H.K., **Chauhan, P.**, **2022**. Water accounting of a trans-boundary river basin using satellite observations and WA+ framework. **Physics and Chemistry of the Earth, Parts A/B/C**, p.103343. (IF 3.311)
- **Chauhan, P.**, Sain, Kalachand., Mehta, M., and Singh S.K., **2022**. An investigation of cloudburst, triggered landslides and flash floods in Arakot Region of Uttarkashi District, Uttarakhand India. **Geological Society of India**, (IF 1.459)
- **Chauhan, P.**, Malviya, D., Sain, K., Ray, R.L., Singh, S.K. and Singh, D., **2022**. Assessing the vulnerability of watersheds to environmental degradation in the Lesser Himalayan region using satellite data and a series of models. **Geocarto International**, pp.1-28 (IF 4.889). <https://doi.org/10.1080/10106049.2022.2142958>
- **Chauhan, P.**, Akiner, M.E., Sain, K. and Kumar, A., **2022**. Forecasting of suspended sediment concentration in the Pindari-Kafni glacier valley in Central Himalayan region considering the impact of precipitation: using soft computing approach. *Arabian Journal of Geosciences*, 15(8), pp.1-18. (IF 1.827)
- Nilendu Singh and **Pankaj Chauhan** et al. **2022**. Tree isotopic records suggest seasonal importance of moisture dynamics over glacial valleys of the Central Himalaya. **Frontiers in Earth Science**, June 2022. (IF 3.498).
- Singh, N., Singh, J., Gupta, A.K., Bräuning, A., Dimri, A.P., Ramanathan, A.L., Sharma, V., Tiwari, R.K., Chakraborty, J.S., **Chauhan, P.** and Shukla, T., **2021**. Climate-driven acceleration in forest evapotranspiration fuelling extreme rainfall events in the Himalaya. **Environmental Research Letters**, 16(8), p.084042.(IF 6.793).

- Ahluwalia, R.S., Rai, S.P., Meetei, P.N., Kumar, S., Sarangi, S., **Chauhan, P.** and Karakoti, I., **2021**. Spatial-diurnal variability of snow/glacier melt runoff in glacier regime river valley: Central Himalaya, India. *Quaternary International*, 585, pp.183-194. (IF 2.13)
- Vikram Kumar, Sumit Sen, **Pankaj Chauhan** **2020**. Geo-morphometric prioritization of Aglar micro watershed in Lesser Himalaya using GIS approach. *Modeling Earth Systems and Environment*, pp.1-11. (IF 0.83)
- Jayendra Singh, Nilendu Singh, **Pankaj Chauhan**, Ram R. Yadav, Achim Bräuning, Christoph Mayr and Tanupriya Rastogi **2019**. Tree-ring $\delta^{18}O$ records of abating June-July monsoon rainfall over the Himalayan region in the last 273 years. *Quaternary International*, 532, pp.48-56. (IF 1.952)
- Nilendu Singh, MohitSinghal, SudershanChhikara, Indira Karakoti, **Pankaj Chauhan** and D. P. Dobhal **2019**. Radiation and energy balance dynamics over a rapidly receding glacier in the central Himalaya. *International Journal of Climatology*, DOI: 10.1002/joc.6218 (IF 3.601)
- Rizwan Ahmed, **Pankaj Chauhan** and SK Srivastava **2018**. Groundwater Study in Eastern Dehradun Valley and adjoining area using Remote Sensing & GIS Observation. *Journal of Himalayan Geology*. Vol. 39, No.02 ISSN: 0971-8966. (IF 0.40)
- P. Raja, Nilendu Singh, C. V. Srinivas, Mohit Singhal, **Pankaj Chauhan**, Maharaj Singh & N. K. Sinha **(2017)**. Analyzing energy–water exchange dynamics in the Thar desert. *Journal of Climate Dynamics*. DOI 10.1007/s00382-017-3804-9 (IF. 4.2)
- **Pankaj Chauhan**, Nilendu Singh, Devi DattChauniyal, Rajeev Ahluwalia and MohitSinghal **(2017)**. Differential behavior of a lesser Himalayan watershed in extreme rainfall regimes. *Journal of Earth System Science*. 126:22, DOI 10.1007/s12040-017-0796-0. (IF. 1.423)
- Reet Kamal Tiwari, P. K. Garg, Aparna Shukla, Rajiv S. Ahluwalia, Nilendu Singh, **Pankaj Chauhan**, **2016**. A geomorphic and morphometric analysis of surface ice velocity variation of different valley type glaciers. International conference on LandSurface and Cryosphere Remote Sensing III, part of *SPIE Asia-Pacific Remote Sensing*, April- 4-7, 2016, edited by Reza khanbilvardi, AswagoshGanju, A.S. Rajawat, Jing M Chen at Space Application Centre, Ahmedabad, India. (IF. 0.937)
- **Pankaj Chauhan**, Devi Datt Chauniyal, Nilednu Singh, Reet Kamal Tiwari. **2016**. “Quantitative geomorphometric and land cover based micro-watershed prioritization in the Tons river basin of the lesser Himalaya“. *Journal of Environmental Earth Sciences* 75:498. DOI 10.1007/s12665-016-5342-x. (IF: 1.765).

(b) Non-SCI Articles: NA

(c) Chapter in Books:

- **Chauhan, P.** and Ahmad, R., 2022. Hydrological Response of Factors Affecting Rainfall Water Discharge and Water Balance: A Case Study of Tons Watershed. In Water Quality, Assessment and Management in India (pp. 129-155). Cham: **Springer International Publishing**. *Book chapter*

(d) Books-authored/Edited volume:

(e) Abstract volume:

- **Pankaj Chauhan**, Vikarm Gupta and DP Dobhal “Cloudburst Triggered Flash Flood and Landslides on August 18th, 2019 in Arakot Region” 14th Uttarakhand State Science and Technology Congress 2019-20, **during 27-29th February, 2020.**
- **Pankaj Chauhan**, Nilendu Singh, Devi Datt Chauniyal, Rajeev Ahluwalia and Mohit Singhal **(2015)**. Differential behaviour of a lesser Himalayan watershed in extreme rainfall regimes. 30th Himalayan Karakoram-Tibet (HKT) workshop at WIHG, Dehradun, from **6-8 October, 2015.**

(f) Reports/Other Documents:

(g) Articles in Proceeding Volumes