

## CURRICULUM VITAE

### Dr. VIPIN KUMAR

#### OFFICIAL ADDRESS:

Asst. Professor & HEAD I/C, DEPARTMENT OF GEOLOGY,  
Doon University, Dehradun, Uttarakhand, 248001, India

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### EXPERIENCE

- Asst. Professor & Head I/C (2022-present): Doon University, Dehradun, India
- Project Scientist-II (2021-2022): HNB Garhwal University, Srinagar, India
- Post Doc. (FNRS) Fellow (2020-2021): University of Liege, Liege, Belgium
- Research Fellow (NET-JRF) (2014-2019): Wadia Institute of Himalayan Geology, Dehradun, India
- Engineering Geologist (2012-2013): Cengrs Geotechnica Pvt. Ltd. Noida, India

### EDUCATION

- Ph.D. Geology (2015-2019): Wadia Institute of Himalayan Geology, India/HNB Garhwal University, India
- M.Sc. Geology (2010-2012): University of Delhi, Delhi, India
- B. Sc. Geology (2007-2010): Aligarh Muslim University, Aligarh, India

### AWARDS/FELLOWSHIPS/GRANT

- PI, Project (2024-2028): UK Research and Innovation, **United Kingdom**/Ministry of Earth Sciences, **India**
- Co-Coordinator (Science Promotion), Dehradun, UCOST, Govt. of Uttarakhand, **India**
- Bursary Grant (2024): International Geographical Congress, **Ireland**
- Co-PI, Project (2022-2023): Department of Science & Technology, Govt. of India, **India**
- Young Geomorphologists Grant (2022): International Association of Geomorphologists, **Portugal.**
- International Travel Grant (2022): Science & Engineering Research Board (SERB), **India**
- Post Doc. Fellowship (2020): National Scientific Research Fund (FNRS), **Belgium**
- Best Paper (2019): International Workshop on Climate Change & Extreme Events, IIT Mandi, **India**
- All India Rank-19; NET-JRF (2014): Council of Scientific & Industrial Research (CSIR), **India**
- Institute Research Fellowship (2014): Wadia Institute of Himalayan Geology, DST, **India**

### TRAINING

- UAV-Motorcraft License Training (2025): Directorate General of Civil Aviation, Government of India
- Monitoring and modeling of large landslides (2018): Chengdu University of Technology, China
- Introduction to Landslide Site Mapping (2017): Indian Institute of Technology, Kanpur, India
- Landslide Hazards and Related Phenomena (2016): National Institute of Technology, Hamirpur, India
- Rock-Engineering for the Hilly Regions (2015): Indian Institute of Technology, Roorkee, India

### INTEREST:

Engineering Geology/ Georisk/Disaster Risk Reduction

### SKILLS:

UAV Mapping & data Processing, Slope & Hydro-dynamic Modeling, Geophysical (ERT/GPR) Mapping & data Processing

## PUBLICATIONS

1. **Kumar, V.,** Chauhan, N., Srivastav, A.K., Sundriyal, Y., Sinha, R., Negi, R., Gupta, V., Verma, A., Puniya, M. and Devrani, R., **2026.** Dharali debris flow on 5 August 2025, Uttarakhand: event reconstruction and geomorphic implications. *Current Science* (00113891), (3).
2. Jamir, I., **Kumar, V\*.,** Melo, R., Lee, W.Y. and Kariminejad, N., **2026.** Quantifying landslide risk: a critical reassessment of slope stability and human settlement impacts. In *Quantitative Geomorphology in the Artificial intelligence Era* (pp. 219-232). Elsevier. **\*Corresponding author.**
3. Kariminejad, N., Desir, G., Hosseinalizadeh, M., Domazetović, F., **Kumar, V.** and Quesada-Román, A., **2026.** A multidisciplinary approach to understanding and mitigating erosional landforms. In *Quantitative Geomorphology in the Artificial intelligence Era* (pp. 283-300). Elsevier.
4. Sundriyal, Y, Kaushik, S, **Kumar, V\***, Dimri, A.P., Chauhan, N, Kumar, S, Rana, N. **2025.** Uttarakhand: A Hotspot For Extreme Events? *JGSI*, 101 (7): 1120–1126. doi.org/10.17491/jgsi/2025/174210.**\*Corresponding author.** (Q2), IF. 1.4
5. Sonkar, G., Rana, N., Kumar, H., Sharma, S., **Kumar, V.** and Sundriyal, Y., **2025.** Assessing flash flood hazard and buildings exposure in the Himalayan upland region: a case study of Gangotri Town, India. *Zeitschrift für Geomorphologie*.10.1127/zfg/2025/0800. (Q2), IF. 1.8
6. Chauhan, N, **Kumar, V\***, Sundriyal, Y., Kaushik, S., Subramanian, S.S., Melo, R., Rana, N. **2024.** Debris Flow in Indian Himalaya: A Threat to Emerging Infrastructure. *Bulletin of Engineering Geology and the Environment*, 83, 428. **\* Corresponding author.** (Q1), IF. 4.2
7. Negi, R., Sati, S.P., Sharma, V., Samanta, M., **Kumar, V.,** Puniya, M.K., Rana, S.S. and Kanungo, D.P., **2024.** Evaluating instability & failure pattern of landslides, Giri valley, Northwest Himalaya, India. *Bulletin of Engineering Geology and the Environment*, 83(7), 271.(Q1), IF. 4.2
8. Kariminejad, N., Biglarfadafan, M., **Kumar, V.,** Jamir, I., Shafaie, V. and Pourghasemi, H.R., **2024.** Review of multi-hazards research with the basis of soil erosion. In *Advanced Tools for Studying Soil Erosion Processes* (pp. 295-306). Elsevier.
9. Upreti, P., Sahay, A. and **Kumar, V., 2024.** Large Dams and Developmental Dilemma: Watershed Management and Sustainable Livelihood Practices in Rim Areas of Tehri Dam, Uttarakhand, India. In *Recent Advancements in Sustainable Agricultural Practices: Harnessing Technology for Water Resources, Irrigation and Environmental Management* (pp. 247-265). Singapore: Springer Nature Singapore.
10. Jamir, I., **Kumar, V.,** Ojha, A.K., Gupta, V., Martha, T.R. and Griffiths, D.V., **2024.** Evaluating failure regime of an active landslide using instability and rockfall simulation, NW Himalaya. *Environmental Earth Sciences*, 83(8), 256. (Q2), IF. 3.0
11. Sundriyal, Y., Kumar, S., Chauhan, N., Kaushik, S., **Kumar, V.,** Rana, N. and Wasson, R., **2024.** An integrated approach of machine learning and remote sensing for evaluating landslide hazards and risk hotspots, NW Himalaya. *Remote Sensing Applications: Society and Environment*, p.101140. Q1. IF. 4.7.
12. Sundriyal, Y., **Kumar, V\*.,** Chauhan, N., Kaushik, S., Ranjan, R. and Punia, M.K., **2023.** Brief communication: The Northwest Himalaya towns slipping towards potential disaster. *Natural Hazards and Earth System Sciences*, 23(4), 1425-1431. (Q1), **\* Corresponding author.** IF. 4.3
13. **Kumar, V.,** Sundriyal, Y.P., Chauhan N., Puniya, M. Kaushik, S., Kumar, S., Bagri, D.S., Rana, N., **2023.** Ascertaining the potential causes of a hillslope failure associated with human settlement; a case study from Alaknanda valley, Uttarakhand, NW Himalaya, India. *Journal of Geological Society of India*, 99, 1141-1148. (Q2), IF. 1.3
14. Sundriyal, Y., **Kumar, V\*.,** Khan, F., Puniya, M.K., Kaushik, S., Chauhan, N., Bagri, D.S. and Rana, N., **2023.** Impact of potential flood on riverbanks in extreme hydro-climatic events, NW Himalaya. *Bulletin of Engineering Geology and the Environment*, 82(196), 1-18. **\* Corresponding author.** (Q1), IF. 4.2
15. **Kumar V.,** Cauchie L., Mreyen, A.S., Micu, M., Havenith, H.B. **2021.** Evaluating landslide response in seismic and rainfall regime: A case study from the SE Carpathians, Romania. *Nat. Hazards Earth Syst. Sci.*, 21 (2), 3767-3788. (Q1), I.F. 4.337
16. **Kumar V.,** Jamir I., Gupta V., Bhasin R., **2021.** Inferring Potential landslide damming using slope stability, geomorphic constraints and run-out analysis; case study from the NW Himalaya. *Earth Surface Dynamics*, 9, 351-377. (Q1), I.F. 4.813
17. Luirei K., Bhakuni SS, Longkumer L., **Kumar V.,** Jamir I., **2020.** Geomorphic assessment of the factors contributing to the evolution of landforms, Ukhalduhanga, Kosi River valley, Kumaun Himalaya. *Geoscience Journal*. DOI: 10.1007/s12303-020-0034-7. (Q2), I.F. 2.237
18. Jamir I., Gupta V., Thong GT. and **Kumar V., 2019.** Litho-tectonic and precipitation implications on landslides, Yamuna valley, NW Himalaya. *Physical Geography*. (Q2), I.F. 2.086
19. **Kumar V.,** Gupta V., Jamir I. and Chatteraj S.L., **2019.** Evaluation of potential landslide damming: Case study of Urni landslide, Kinnaur, Satluj valley, India. *Geoscience Frontier*, 10 (2), 753-767. (Q1), I.F. 6.853
20. **Kumar V.,** Gupta V., and Sundriyal Y.P., **2019.** Spatial interrelationship of landslides, litho-tectonic, and precipitation regime, Satluj valley, Northwest Himalaya. *Geological Journal*, 54, 537-551. (Q1), I.F. 2.489
21. **Kumar V.,** Gupta V., and Jamir I., **2018.** Hazard Evaluation of Progressive Pawari Landslide Zone, Kinnaur, Satluj Valley, Higher Himalaya, India. *Natural Hazards*, 93 (2), 1029-1047. (Q1), I.F. 3.656
22. Shukla, T., Mehta, M., **Kumar, V.,** Nainwal, H.C., and Dobhal, D.P., **2017.** Application of the Schmidt-hammer with relative-age dating of moraine boulders - a case study from Mandakini River valley, central Himalaya, India. *Himalayan Geology*, 38 (2), 184-192. (Q2), I.F. 1.293
23. Jamir, I., Gupta, V., **Kumar, V.,** and Thong, G. T., **2017.** Evaluation of potential surface instability using finite element method in Kharsali Village, Yamuna Valley, Northwest Himalaya. *Journal of Mountain Science*, 14(8), 1666-1676. (Q2), I.F. 2.071
24. Gupta V., Jamir I., **Kumar V.,** and Devi M., **2017.** Geomechanical characterization of slopes for assessing rockfall hazards between Janki Chatti and Yamunotri Temple, Yamuna Valley, Higher Himalaya, India. *Himalayan Geology*, 38 (2), 156-170. (Q2), I.F. 1.293
25. Gupta V., Bhasin R.K., Kaynia A.M, **Kumar V.,** Saini A.S., Tandon R.S. and Pabst T., **2016.** Finite element analysis of failed slope by shear strength reduction technique: a case study for Surabhi Resort Landslide, Mussoorie Township, Garhwal Himalaya. *Geomatics, Natural Hazards and Risk*, 7 (5), 1677-1690. (Q1), I.F. 3.528
26. Gupta V., Nautiyal H., **Kumar V.,** Jamir I., and Tandon R.S., **2016.** Landslide- hazards around Uttarkashi Township, Garhwal Himalaya, after the tragic flash flood in June 2013. *Natural Hazards*, 80, 1689-1707. (Q1), I.F. 3.656

## PROJECTS

1. **Title:** Dynamic risk for cascading Himalayan Hazards (United Kingdom-India Collaborative Project) **2024-2028**, Ministry of Earth Sciences, India
2. **Title:** Assessment of Impact of Climate Change on the Geodiversity in Uttarakhand Himalaya for five most Disaster-prone districts of Uttarakhand including vulnerability and Risk Assessment: Implication for Sustainable Development and Policy Making. **2020-2023**, DST (Govt. of India)

## CONVENER/COORDINATOR

1. **Role:** Convener  
**Workshop:** National Seminar on Uttarakhand Himalaya: Challenges & Solutions in the Paradigm of Changing Climate  
**Day and venue:** 9 Feb. **2023**, Doon University, Dehradun  
**Participants:** Students from various public and private schools of Dehradun  
**Funding Agency:** HDFC Bank Pvt. Ltd., PNB Bank Ltd., and Doon University, Dehradun
2. **Role:** Convener  
**Workshop:** Brainstorming session on the NW & Central Himalayan Natural Disasters  
**Day and venue:** 26<sup>th</sup> March **2023**, Doon University, Dehradun  
**Participants:** Researchers and Students from various universities of Uttarakhand  
**Funding Agency:** Uttarakhand State Council for Science and Technology, Dehradun, Uttarakhand, India
3. **Role:** Coordinator  
**Workshop:** Advanced Drone Mapping & 3D model generation  
**Day and venue:** 28-29<sup>th</sup> August **2023**, Doon University, Dehradun  
**Participants:** Students from Geology, Geography, Computer Science, and Design Departments of Doon University  
**Funding Agency:** Doon University, Dehradun, India
4. **Role:** Coordinator  
**Workshop:** National Seminar on "Traditional Practices of Disaster Management in Uttarakhand Himalaya"  
**Day and venue:** 9 Feb. **2024**, Doon University, Dehradun  
**Participants:** Students from various public and private schools of Dehradun  
**Funding Agency:** Doon University, Dehradun
5. **Role:** Convener  
**Workshop:** National Seminar on "Natural Hazards in the Himalayas: Prediction, Mitigation, and Support"  
**Day and venue:** 20-21 March **2024**, Doon University, Dehradun  
**Participants:** Academicians/Industrialists/Students from various regions of India.  
**Funding Agency:** Doon University, Dehradun and Pan India Consultants, India.
6. **Role:** Convener  
**Workshop:** National Seminar on "Himalaya: Landscape, People, and Livelihood"  
**Day and venue:** 10 Feb. **2025**, Doon University, Dehradun  
**Participants:** Academicians/Industrialists/Students from various regions of India.  
**Funding Agency:** Doon University, Dehradun
7. **Role:** Convener  
**Workshop:** International Stakeholders meet on "Dynamic Risk for Cascading Himalayan Hazards"  
**Day and venue:** 22 March. **2025**, Doon University, Dehradun  
**Participants:** Academicians/Researchers from India & United Kingdom.  
**Funding Agency:** MoES, Govt. of India
8. **Role:** Coordinator  
**Workshop:** 5th Indian Institute of Geomorphologists (IGI)-Young Geomorphologists Forum (YGF)'s Intensive Training Programme on Advanced Mapping Techniques in Geomorphology & Land Use/Land Cover Planning  
**Day and venue:** 02-06 June **2025**, Doon University, Dehradun  
**Participants:** PhD/Post Doc Students from various regions of India.  
**Funding Agency:** Pan India Consultants, Vision IAS, Govt of Uttarakhand, Doon University, Dehradun
9. **Role:** Convener  
**Workshop:** National Seminar on "Role of Geoscience in Sustainable Development and Disaster Risk Reduction"  
**Day and venue:** 09-10 Feb. **2026**, Doon University, Dehradun  
**Participants:** Academicians/Industrialists/Students from various regions of India.  
**Funding Agency:** Doon University, Dehradun