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#### EDUCATION

- 2012-2018** Doctor of Philosophy (PhD) in Glacial Paleoclimate and Geochemical/ Isotopic Studies (Wadia Institute of Himalayan Geology/ HNB Garhwal University, India)
- Title:** Late Quaternary glacial and climatic records from Dokriani and Chorabari glaciers of Uttarakhand Himalaya using optically stimulated luminescence and stable isotope techniques.
- 2011** Master of Science (M.Sc.) with Applied Geology (India)
- 2009** Bachelor of Science (B.Sc.) with Physics, Mathematics and Geology (India)
- 2006** Intermediate (10+2) with Mathematics (India)
- 2004** High School (10th) with Science (India)

#### ACADEMIC EXPERIENCE

- Dept. of Earth Sciences, IIT Kanpur Postdoctoral Associate** Since 5/2019
- Glacier-weathering-carbon feedbacks investigations for aquatic CO<sub>2</sub> emissions
  - Presented first detailed inorganic carbon budget from the Himalayan glacierized basins
  - Hydrological modelling for calculating snow/Ice/precipitation/GW fractions in runoff
  - Teaching assignment for IITK communication course
  - Advisor: Indra Sekher Sen (Associate Professor, IITK)

- Dept. of Earth Sciences, IIT Kanpur Project Scientist** 2018-2019
- Establishing an high altitude observatory for continuous monitoring of Ganga river status-quo
  - Laboratory development and installation of QQQ-ICPMS instrument
  - Highlighted the prominent role of sulphide oxidation driving atmospheric CO<sub>2</sub> cycling in the glacial meltwater streams of the Himalaya

#### TEACHING EXPERIENCE

- Dept. of Earth Sciences, IIT Kanpur Postdoctoral Associate** Since 8/2021
- Teaching assignment for IITK communication course

- Dept. of Earth Sciences, BSNV PG College, University of Lucknow** 2011-2012
- Delivering lectures over graduate level students
  - Conducting class assignments and practical

#### PEER REVIEWED PUBLICATIONS

- Year: 2021**
20. Sarwar Nizam, Indra S Sen, **Tanuj Shukla**, & David Selby, (2021). Melting of the Chhota Shigri Glacier, Western Himalaya, Insensitive to Anthropogenic Emission Residues: Insights from Geochemical Evidence. **Geophysical Research Letters**, e2021GL092801.
19. Nilendu Singh, Jayendra Singh, Vikram Sharma, Achim Bräuning, A.P. Dimri, A.L. Ramanathan, Anil K. Gupta, Reet Kamal Tiwari, Joyeeta Singh Chakraborty, Pankaj Chauhan, **Tanuj Shukla**, Mohit Singhal, Suman Rawat, Shefali Agarwal, and P. Raja (2021). Climate-driven acceleration in forest evapotranspiration fueling extreme rainfall events in the Himalaya. **Environmental Research Letters**, (Accepted).
18. **Tanuj Shukla**, Indra S Sen. "Preparing for the floods at Third pole". **Science Magazine** 372(6539), 232-234.
17. **Tanuj Shukla**, Indra S. Sen, Soumita Boral, Sanjeet Sharma. A Time-Series Record during COVID-19 Lockdown Shows the High Resilience of Dissolved Heavy Metals in the Ganga River. **Environmental Science & Technology Letters** 8(4), 301-306.
16. **Tanuj Shukla**, Vinit Kumar, Manish Mehta, Bahadur S. Kotlia, Meenakshi, Suraj Mal. Size-dependent chemical depletion of sediments in glacial environments: a case study of Mandakini valley, central Himalaya, India. **Hydrological Sciences Journal** 66(3), 373-388.
15. Vinit Kumar, **Tanuj Shukla**, Manish Mehta, D. P. Dobhal, Mahendra Pratap Singh Bisht, and Srikrishna Nautiyal. "Glacier changes and associated climate drivers for the last three decades, Nanda Devi region, Central Himalaya, India." **Quaternary International** 575, 213-226.

**Year: 2020**

14. Sarwar Nizam, Indra S Sen, **Tanuj Shukla**, David Selby. Osmium isotope and trace elements reveal melting of Chhota Shigri Glacier, western Himalaya, insensitive to anthropogenic emission residues. **The Cryosphere Discussions**, 1-51.
13. **Tanuj Shukla**, Shipika Sundriyal, Indra Sekher Sen. Contemporary inorganic carbon fluxes from rapidly changing glacierized watersheds of the Himalaya **Journal of Hydrology**, 587, 124972.
12. Vinit Kumar, Ajay Mishra, Manish Mehta, **Tanuj Shukla**, Anil Kumar. "Chronology and climate sensitivity of the post-LGM glaciation in the Dunagiri valley, Dhauliganga basin, Central Himalaya, India. **Boreas**, 49(3), 594-614.
11. **Tanuj Shukla**, Manish Mehta, D P Dobhal, Archana Bohra, Bhanu Pratap, Anil Kumar. Late-Holocene climate response

and glacial fluctuations revealed by the sediment record of the monsoon-dominated Chorabari Lake, Central Himalaya. **The Holocene** 30(7), 953-965.

10. Shipika Sundriyal, **Tanuj Shukla**, Lakhendra Tripathi and DP Dobhal. Characterization of natural vs. anthropogenic source of trace elements in wet deposition at Dokriani Glacier, Central Himalaya, India. **Environmental Science and Pollution Research**, 27(3), 3462-3472.

**Year: 2019**

9. **Tanuj Shukla**, Vinit Kumar, Manish Mehta. "Response of the Himalayan glacial cycles to multiple equilibrium of climate system: A review. **Quaternary International**, 507, 4-14.
8. **Tanuj Shukla**, Shipika Sundriyal, Lukasz Stanchik, Manish Mehta. Carbonate and Silicate weathering in glacial environments and its relation with CO<sub>2</sub> cycles in Himalayas. **Annals of Glaciology**, 59(77), 159-170.

**Year: 2018**

7. Shipika Sundriyal, **Tanuj Shukla**, Lekhendrar Tripathi, D P Dobhal, Sameer Kumar Tiwari, and Uday Bhan. "Deposition of atmospheric pollutant and their chemical characterization in snow pit profile at Dokriani Glacier, Central Himalaya." **Journal of Mountain Science** 15 (10), 2236-2246.
6. **Tanuj Shukla**, Manish Mehta, Manoj K. Jaiswal, Pradeep Srivastava, D P Dobhal, H C Nainwal, Atul K. Kumar. Late Quaternary glaciations history of Monsoon dominated Dingad basin, central Himalaya, India. **Quaternary Science Reviews**, 181, 43-64.

**Year: 2017**

5. Mehta, Manish, **Tanuj Shukla**, Rakesh Bhambri, Anil K. Gupta, and D. P. Dobhal. Terrain changes, caused by the 15–17 June 2013 heavy rainfall in the Garhwal Himalaya, India: A case study of Alaknanda and Mandakini basins. **Geomorphology**, 284, 53-71.
4. Tanuj Shukla, Manish Mehta, Vipin Chauhan, H C Nainwal, DP Dobhal. Application of Schmidt Hammer with relative age dating of moraine boulders, A study from Mandakini valley, central Himalaya. **Himalayan Geology**, 38(2), 184-192.

**Year: 2016**

3. Amit Kumar, Anupam A Gokhale, **Tanuj Shukla**, & D. P. Dobhal. Hydroclimatic influence on particle size distribution of suspended sediments evacuated from debris-covered Chorabari Glacier, upper Mandakini catchment, central Himalaya. **Geomorphology**, 265, 45-67.
2. Manish Mehta, D P Dobhal, **Tanuj Shukla**, Anil K Gupta. Instability Processes Triggered by Heavy Rain in the Garhwal Region, Uttarakhand, India. Springer International Publishing: Climate Change, Glacier Response, and Vegetation Dynamics in the Himalaya Contributions Toward Future Earth Initiatives. Singh, RB, Schickhoff, Udo, Mal, Suraj (Eds.)

**Year: 2014**

1. **Tanuj Shukla**, Jai Ram Yadav, Shipika Sundriyal. "Field training at Glaciology: A way to touch feel and understand" news article **Current Science**, 107 (11), 1785.

#### AWARDS & ACHIEVEMENTS

- 2014 Junior Research Fellowship from Council of Science and Industrial Research (India)
- 2014 Graduate Aptitude Test in Engineering fellowship for research (India)
- 2019 Guest investigator fellowship at Woods Hole Oceanographic Institute, USA
- 2019 Postdoctoral Research Fellowship at Indian Institute of Technology Kanpur
- 2021 Journal front Cover article for Environmental Science and Technology Letters

#### IMPACT & CITATIONS

Researcher ID (AAO-3444-2020) shows contribution in terms of citations, 133 times (h-index 7, source: Google Scholar) from all around the world, and in highly reputed journals such as Journal of Hydrology, Climate of the Past, Boreas, Global and Planetary Change, Geophysical Research Letters and others.

#### REVIEWER ACTIVITY

Geophysical Research Letters, Environmental Research Letters, Theoretical and Applied Climatology, Environmental Earth Sciences, Journal of Geological Society of India, Himalayan Geology

#### ACADEMIC REFERENCES

- |   |   |
|---|---|
| Dr. Dwarika P Dobhal,   | Prof. Indra Sekher Sen  |
| Retired senior Scientist (Ph.D. advisor)  | Associate Professor   |
| Wadia Institute of Himalayan Geology,   | Indian institute of technology, Kanpur  |
| Dehradun, Uttarakhand, India  | Kalyanpur, Uttar Pradesh, India   |
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