

FACULTY PROFILE

Name	Dr. Narendra Kumar Patel	
Designation	Assistant Professor	
Department	Department of Applied Geology	
School	ENGINEERING AND TECHNOLOGY (EAT)	
Date of holding Present Post	December 2, 2024	
Date of birth	22/04/1988	
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ResearchGate: <https://www.researchgate.net/profile/Narendra-Patel-10>

Google Scholar: https://scholar.google.com/citations?hl=en&user=kUz94_YAAAAJ

Website: <https://narendrap9.wixsite.com/narendra>

EDUCATIONAL QUALIFICATION (UG ONWARDS):

Post Doctorate

- **Swiss ESKAS Fellow - Swiss Government Excellence Scholarships**, University of Bern, Switzerland (September 2023- December 2024).
- **Defence Research and Development Organisation (DRDO)** Sponsored projects, Indian Institute of Technology Roorkee, India (August 2021- August 2023).

Ph.D. Indian Institute of Technology Roorkee, Roorkee, (India) (2020)
(Topic: Tectonic and climatic influence on terminal fans associated with basement faults in the Ganga plain)

M.Tech. Indian Institute of Technology, Kharagpur, (India) (2014)

M.Sc. University of Allahabad, Allahabad, Uttar Pradesh (India) (2011)

B.Sc. University of Allahabad, Allahabad, Uttar Pradesh (India) (2009)

FIELD OF SPECIALIZATION AND RESEARCH INTEREST:

- Unmanned aerial vehicle (UAV), Geomorphology, Remote Sensing & GIS, Sedimentology, Quaternary Geology

PROFESSIONAL CAREER PROFILE:

- **Assistant Professor**- Department of Applied Geology, Dr. Harisingh Gour University (A Central University), Sagar, Madhya Pradesh, India (December 2024 – Continue)
- **Post Doctoral Fellow**- University of Bern, Switzerland (September 2023- December 2024)
Indian Institute of Technology Roorkee, India
Project Assistant (Earth Sciences) (August 2021- August 2023)

SCHOLARSHIPS / AWARDS / HONOURS:

- Awarded Swiss Government Excellence Scholarship for Postdoc (2023-2024)
- Awarded MHRD (Ministry of Human Resource Development) fellowship during PhD (2014-2019)
- Awarded MHRD fellowship during Master of Technology (2012-2014)
- INQUA -2019 Conference Travel Grant
- JpGU-2018 Conference Travel Grant

SUPERVISION / GUIDANCE: M.Tech./ PH.D. / PDF / RA

- (i) PDF / RA Supervised:
- (ii) Ph.D. Supervised
- (iii) Ph.D. Scholars working:
- (iv) M. Tech. Supervised

ACADEMIC VISITS TO ABROAD:

- Switzerland (September 2023-November-2024)
- Austria (April 2024)
- Ireland (July 2019)
- United States of America (December 2018)
- Japan (May-2018)

RESEARCH PROJECT: Completed/Ongoing

LABORATORY RESPONSIBILITIES

- **Co-Officer In-charge** – Photogeology and Remote Sensing laboratory, Department of Applied Geology, Dr. Harisingh Gour University, Sagar, Madhya Pradesh, (India), since December 2024

ADMINISTRATIVE / ACADEMIC RESPONSIBILITIES

- Core Committee Member of the International Collaboration Cell, Dr. Harisingh Gour Vishwavidyalaya, Sagar, Madhya Pradesh (India) since January 2025

EDITORIAL RESPONSIBILITIES

MEMBERSHIP OF PROFESSIONAL SOCIETIES:

RESEARCH PAPER PUBLICATION IN PEER-REVIEWED JOURNALS:

1. **Patel NK**, Schlunegger F, Mair D, Pati P, Prado AH, Garefalakis P, Choudhory RK. 2024. Supply and human control on grain size patterns along the Yamuna River in the Indian Himalaya. **Geomorphology (GEOMOR-14583)**
2. Verma AK, **Patel NK**, Pati P, Jaiswal MK, Kashyap R, Narzary B. 2024. Geomorphic evolution of the craton derived Sone megafan in the southern Ganga plain: A tectono-climatic interplay, **Catena**. (<https://doi.org/10.1016/j.catena.2023.107636>)
3. Aswal RS, Prasad M, **Patel NK**, Srivastav AL, Egbueri JC, Kumar GA, Ramola RC. 2023. Occurrences, sources and health hazard estimation of potentially toxic elements in the groundwater of Garhwal Himalaya, India. **Scientific Reports**. (<https://doi.org/10.1038/s41598-023-40266-7>)
4. Jakhmola RP, Dash C, Singh S, **Patel NK**, Verma, AK, Pati P, Awasthi AK, Sharma JN. 2023. Holocene Landscape Evolution of Brahmaputra River Valley in the Upper Assam Basin (India) as deduced from Soil-Geomorphic Studies. **Quaternary Science Reviews**. (<https://doi.org/10.1016/j.quascirev.2023.108243>)
5. **Patel NK**, Pati P. 2022. Evolution of terminal fans in the Indo-Gangetic foreland basin: A process-response model. **Geomorphology**. (<https://doi.org/10.1016/j.geomorph.2022.108483>)
6. **Patel NK**, Pati, P. 2022. Mapping of the buried paleochannels on the terminal fans in the western Ganga plain: A geomorphological and Ground Penetrating Radar-based approach. **Journal of the Geological Society of India**. (<https://link.springer.com/article/10.1007/s12594-022-2010-5>)
7. Dash C, Seong YB, Pati P, **Patel NK**. 2022. Geomorphological Characterization of Shallow Sub-surface Deformation Structures along the Densely Populated Regions of Mahanadi Delta: East Coast of India. **Journal of the Korean Geographical Society**. (<https://www.dbpia.co.kr/Journal/articleDetail?nodeId=NODE11100841>)
8. **Patel NK**, Pati P, Verma AK, Dash C, Gupta A, Sharma V. 2020. Seismicity around the Mahendragarh-Dehradun basement fault in the western Ganga Plain, India: A neotectonic perspective. **International Journal of Earth Sciences**. (<https://link.springer.com/article/10.1007/s00531-020-01826-8>)
9. Dash C, Jaiswal MK, Pati P, **Patel NK**, Singh AK, Shah RA. 2020. Fluvial response to late

- Quaternary sea level changes along the Mahanadi delta, east coast of India. **Quaternary International**. (<https://doi.org/10.1016/j.quaint.2020.07.033>)
10. Pati P, Verma AK, Dash C, **Patel NK**, Gupta A, Sharma V, Jakhmola RP, Parkash B, Awasthi AK, Saraf AK. 2019. Influence of neotectonism on geomorphology and depositional architecture of the Gandak megafan, middle Ganga plain, India. **Geomorphology**. (<https://doi.org/10.1016/j.geomorph.2018.11.029>)
 11. Pati P, Acharya V, Verma AK, **Patel NK**, Jakhmola RP, Dash C, Sharma V, Gupta A, Parkash B, Awasthi AK. 2018. Holocene tectono-geomorphic evolution of Haryana plains, Western Ganga plain, India. **Arabian Journal of Geosciences**. (<https://link.springer.com/article/10.1007/s12517-018-3714-0>)
 12. Sharma V, Pati P, Dora ML, **Patel NK**, Dash C, Alam P, Verma AK, Gupta A. 2018. Paleoweathering and paleoclimatic reconstructions using Neoproterozoic paleosol in the eastern margin of the Pranhita-Godavari basin, India. **Journal of the Geological Society of India**. (<https://doi.org/10.1007/s12594-018-0982-y>)

BOOK / BOOK CHAPTER PUBLISHED

- Singh, V., Prasad, M., Aswal, R.S., Shrivastava, U., Sharma, T., **Patel, N.K.**, 2025. An overview of renewable energy sources: technologies, applications and role of artificial intelligence. In: Computer Vision and Machine Intelligence for Renewable Energy Systems. Elsevier, pp. 1–14
<https://doi.org/10.1016/B978-0-443-28947-7.00001-X>
- Patel, N.K.**, Pati, P., 2022. Geomorphic Response of the Solani River Basin to Neotectonics: A Study from the Western Himalayan Foothills, India. In: Himalayan Neotectonics and Channel Evolution. Springer, pp. 111–131. https://doi.org/10.1007/978-3-030-95435-2_4

SEMINAR / CONFERENCE / WORKSHOP: Organized/attended

- Patel NK**, Schlunegger F, Mair D, Pati P, Prado AH, Garefalakis P. 2024. Human impact on material transport along the Yamuna River in the western Himalaya India: Insights from UAV survey. 22nd Swiss Geoscience Meeting, Basel, Switzerland
- Patel NK**, Schlunegger F, Mair D, Pati P, Prado AH. 2024. Human impact on grain size variations of river gravel bars in the western Himalaya: Insights from a UAV survey. European Geosciences Union (EGU) Vienna, Austria
- Patel, N.K.** and Pati, P. 2019. Neotectonic control on Solani river basin in the western part of the Himalayan foothills, India. International Union for Quaternary Research (INQUA) Dublin Ireland
- Patel, N.K.** and Pati, P. 2019. Morphotectonic study of warm climatic terminal fans in the Yamuna-Ganga Interfluvium of the Ganga plain, India. American Geophysical Union (AGU) Fall Meetings.
- Patel, N.K.**, Pati, P. and Verma, A. K. 2018. Seismotectonic study of the basement fault in the western Ganga plain, India: A neotectonic approach. American Geophysical Union (AGU) Fall Meetings

- Patel, N.K.,** Pati, P. and Verma, A. K. **2018.** Different phases of Solani River rejuvenation at Himalayan foothills: Implication of Himalayan Tectonics and climate change. Japan Geoscience Union Meeting (JpGU)-2018
- Patel, N.K.,** Pati, P. and Verma, A. K. **2017.** Remote sensing and GPR based paleochannel mapping on Holocene terminal fans in the Ghaggar-Yamuna interfluvium, India: A neotectonic perspective. International Proceedings in Geo-spatial Technologies and Earth Resources (GTER-2017). Publishing House for Science and Technology, Hanoi, ISBN 978-604-913-618-4
- Patel, N.K.,** Pati, P. **2017.** Paleochannel mapping of terminal fans in the Ghaggar-Yamuna interfluvium and its tectono-climatic implication. National Geo-Research Scholar Meet-2017. WIHG Dehradun, India

Workshop/Short Courses-

- Attended a short course on “Ore geology and Mineral Exploration by Dr. Balram Chattopadhyay, Ex Dy. DG, Geological Survey of India (November 2010)
- Participated in workshop on “Acquisition, processing and interpretation of seismic reflection data for oil and gas exploration on 8-9th March 2014, organised by the Department of Geology and Geophysics, Indian Institute of Technology Kharagpur
- Participated in workshop on “Geochronology” November 16-17, 2017 organised by Inter University Accelerator Center (IUAC) New Delhi, India
- Participated in workshop on “Isotope in Earth, Ocean and Atmospheric Sciences” February, 18-20, 2019 at CSIR-NIO, Goa, India

Field Experience

- Supervision of field work to Master's students in Outer and Lesser Himalaya, India.
- Supervision of field work to Master's students in Pranhita Godavari Rift basin, India.
- Geological field trip to proterozoic sedimentary basin in parts of Uttar Pradesh and Madhya Pradesh, states of India.
- Electrical resistivity survey in parts of Prayagraj District, Uttar Pradesh, India.
- Field work and study of stromatolites in Salkhan Fossil Park, Sonbhadra district, Uttar Pradesh, India.
- Visit to Northern Coal Field (Kakari Coal Mine), Renukoot, Uttar Pradesh, India.

Analytical skills

- Data analysis tools: ArcGIS, Google Earth Engine, Python Basics, Surfer®, CorelDraw, Agisoft
- Experience in operating scanning electron microscope (SEM, JEOL-JSM 6490, and ZEISS EVO 50) at IIT Kharagpur
- Experience in operating Raman spectroscopy (RENISHAW) at IIT Kharagpur
- Experience in operating Petrological Microscope at IIT KGP and IIT Roorkee
- Experience in operating Ground penetrating radar (GPR) at IIT Roorkee

INVITED TALK DELIVERED