

NOWRAD ALI

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Education

Master of Science (MS) in Geology, University of Peshawar, Pakistan — 2018

Final grade: 4.0 / 4.0

Master's Thesis: *Sedimentological investigations of the Upper Paleogene strata, northern Sulaiman Range, Pakistan: Implications for early Himalayan evolution.*

Awards and Distinctions

- Merit Certificate for securing 2nd position in BS Geology
- Higher Education Commission (HEC), Pakistan — Scholarship for students from FATA and Balochistan (MS in Geology)
- American Association of Petroleum Geologists (AAPG) — Grant-in-Aid for PhD research (€2,000)
- Higher Education Commission (HEC), Pakistan and DAAD (Germany), Overseas PhD Fellowship

Research Interest

Tectonic and structural evolution of the western Himalayas. I use an integrated approach combining sedimentary basin analysis, sediment provenance (detrital geochronology and isotopic tracers), and low-temperature thermochronology. My work focuses on constraining the timing, kinematics, and style of the India–Asia collision, and on quantifying exhumation, deformation, and fold-thrust belts development in the north western Himalayas.

Experience

- Doctoral student at the University of Potsdam since April 2022 (Thesis Title: ***Unravelling the timing of India-Asia collision and Spatio-temporal evolution of the western Himalayan fold and thrust belt, Pakistan***).
- Guest Researcher, Geoscience Centre of the University of Göttingen, Department of Structural Geology and Geothermal Energy, Germany (Since December 2025)
- Guest Researcher, Institute of Geosciences, University of Potsdam (2023-24)
- Research Assistant, Institute of Geosciences, University of Potsdam (2022-23)

- Lecturer at the Department of Geology, University of Peshawar, Pakistan, September 2013 till date.
- Attachment as a Research Assistant in SRMIHP (Source Rock Mapping and Investigation for Hydrocarbon Potential in FATA) at National Center of Excellence in Geology, UOP. 5th February 2012 to 4th September 2012.

Courses Taught

Undergraduate (BS Geology): Sedimentology, Structural Geology, Sequence Stratigraphy, Mineralogy, Optical Mineralogy, Igneous–Sedimentary–Metamorphic Petrology, Sedimentary Depositional Systems

Graduate (MS in Geology): Sedimentary Geology, Tectonics of Northern Pakistan (Himalayas), Clastic Sedimentology, Techniques in Field Geology.

Researchgate link: https://www.researchgate.net/profile/Nowrad_Ali

Google Scholar:

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

Peer-Reviewed Journal Articles

2026

1. **Ali, N.**, Sobel, E. R., Bernhardt, A., Ghani, H., Sajid, M., Mohibullah, M., Gerdes, A., Stammeier, J. A., Glodny, J. Sedimentary Constraints Support a ~56 Ma India-Asia Collision Onset Along the Western Margin: Insights from the Sulaiman-Katawaz Region. 2026. Accepted in Basin Research. Manuscript ID: 9997267.
2. Ahmed, F., Khan, A., **Ali, N.**, Zafar, M., ul-Haq, I., Khan, M. A. 2026. Microfacies and Diagenetic Synthesis of the Late Early-Middle Eocene Kirthar Formation, Waziristan, Pakistan: Implications for Reservoir Characterization. Accepted for publication in Carbonates and Evaporites Journal.

2025

3. Hanif, M., Sabba, M., Abbasi, I.A. **Ali, N.**, et al. Inferring paleoenvironmental changes from integrated facies analysis of the late Paleocene-early Eocene succession, Salt Range, Pakistan. *Carbonates Evaporites* 40, 60 (2025).
4. **Ali, N.**, Hanif, M., Mohibullah, M., Khan, A., Orakzai, A., Hashmi, S. I. (2025). On the Transition from Remnant Tethys Sea to Foreland Basin During the Late Paleogene in the Western Himalayas, Pakistan. *Geological Journal*, 0, 1–29.

5. Sajid, M., Wiedenbeck, M., Arif, M., Glodny, J., **Ali, N.**, Ghani, H., and Stammeier, J. A. (2025). Tectono-magmatic evolution of the Indian crust in western Himalayas during Paleoproterozoic: Insights from Nanga Parbat and Indus syntaxis in northern Pakistan. *Gondwana Research*, 137, 299–317.

2024

6. Anjum, M. N., Hidayat, H., **Ali, N.**, Iqbal, U., and Yazdi, A. (2024). Petrographic, Mineralogical and Geo-mechanical Characteristics of Marble from Mohmand District, Pakistan: Implications for its Use in Construction Industry. *International Journal of Economic and Environmental Geology*, 15(1), 33–40.

2023

7. Ullah, S., Hanif, M., Radwan, A. E., Luo, C., Rehman, N. U., Ahmad, S., Latif, K., **Ali, N.**, Thanh, H. V., Asim, M., and Ashraf, U. (2023). Depositional and diagenetic modeling of the Margala Hill Limestone, Hazara area (Pakistan): Implications for reservoir characterization using outcrop analogues. *Geoenergy Science and Engineering*, 224, 211584.

2022

8. Ullah, S., **Ali, N.**, Latif, K., Iqbal, S., Tahir, M., Hussain, H. S., Turab, S. A., Mumtaz, A., and Mohibullah, M. (2022). Paleoenvironments and sequence stratigraphy of the Early Jurassic Datta Formation, Chichali Nala, Surghar Range, Pakistan. *Himalayan Geology*, 43(1A), 111–121.
9. Ahmad, W., Zeb, S. F., **Ali, N.**, Latif, K., Siyar, S. M., Khan, S. Petrophysical modelling of the Cretaceous Lower Goru Formation, Lower Indus Basin, Pakistan. *Journal of Himalayan Earth Sciences*. 2022. 55, 2, 57-67.
10. Anjum, M. N., Nazeer, A., Daud, F., Bhatti, A. H., Ahmad, S., **Ali, N.**, Rehman, G. Mineralogical and reservoir characteristics of well cutting samples of sandstone of the Permian Tobra Formation from Adhi Field, Potwar Basin, Pakistan. *Pakistan Journal of Hydrocarbon Research*. 2022. 25, 21-34.

2021

11. Wadood, B., Khan, S., Li, H., and **Ali, N.** (2021). The Late Permian clastic-dominated carbonate shelf, Northwestern Pakistan: Implications for palaeoenvironments, palaeoclimate, and reservoir modelling. *Geological Journal*, 56(10), 4947–4975.

12. Hanif, M., Sabba, M., **Ali, N.**, Rahman, M. U., Ali, F., and Swati, M. A. F. (2021). A multi-proxy based high-resolution stratigraphical analysis of the possible Palaeocene–Eocene boundary interval, Salt Range, Pakistan. *Geological Journal*, 56(1), 434–456.

2020

13. Rizwan, M., Hanif, M., **Ali, N.**, and Ur Rehman, M. (2020). Microfacies analysis and depositional environments of the Upper Cretaceous Fort Munro Formation in the Rakhi Nala Section, Sulaiman range, Pakistan. *Carbonates and Evaporites*, 35(4), 1–20.

2019

14. Özcan, E., Hohenegger, J., Yücel, A. O., Kaygılı, S., **Ali, N.**, and Hanif, M. (2019). Baculogypsina Sulaimanensis N. Sp. (calcarinidae) from the Priabonian of Sulaiman Range, Pakistan: a Possible Ancestor For the Recent Baculogypsina Sphaerulata. *Journal of Foraminiferal Research*, 49(4), 423–433.
15. Özcan, E., Yücel, A. O., Erbay, S., Less, G., Kaygılı, S., **Ali, N.**, & Hanif, M. (2019). Reticulate Nummulites (N. fabianii Linage) and Age of the Pellatispira-Beds of the Drazinda Formation, Sulaiman Range, Pakistan. *International Journal of Paleobiology & Paleontology*, 2(1), 1–10.

2018

16. Özcan, E., Saraswati, P. K., Yücel, A. O., **Ali, N.**, and Hanif, M. (2018). Bartonian orthophragminids from the Fulra Limestone (Kutch, W India) and coeval units in Sulaiman Range, Pakistan: a synthesis of shallow benthic zone (SBZ) 17 for the Indian Subcontinent. *Geodinamica Acta*, 30(1), 137–162.
17. **Ali, N.**, Özcan, E., Yücel, A. O., Hanif, M., Hashmi, S. I., Ullah, F., Rizwan, M., and Pignatti, J. (2018). Bartonian orthophragminids with new endemic species from the Pirkoh and Drazinda formations in the Sulaiman Range, Indus Basin, Pakistan. *Geodinamica Acta*, 30(1), 31–62.
18. Babar, N., Mohibullah, M., Kasi, A. K., **Ali, N.**, and Khan, A. (2018). Foraminiferal Biostratigraphy of the Eocene Kirthar Formation, western Sulaiman Fold-Thrust Belt. *Journal of Himalayan Earth Sciences*, 51(2A), 66–77.
19. Anjum, M. N., **Ali, N.**, Rehman, Z. U., Ghayas, M., Ahmad, W. Rock Aggregate Potential of Limestone Units in the Khyber Formation, Pakistan. *Int. J. Econ. Environ. Geol.* Vol. 9 (4) 26-33, 2018.

20. Hashmi, S. I., Jan, I. U., Khan, S., **Ali, N.** Depositional, diagenetic and sequence stratigraphic controls on the reservoir potential of the Cretaceous Chichali and Lumshiwal formations, Nizampur Basin, Pakistan. 2018. JHES. V. 51, 2A, 2018. 44-65.

2016

21. Özcan, E., **Ali, N.**, Hanif, M., Hashmi, S. I., Khan, A., Yücel, A. O., and Abbasi, I. A. (2016). A new Priabonian Heterostegina from the eastern Tethys (Sulaiman Fold Belt, West Pakistan): Implications for the development of eastern Tethyan Heterostegines and their paleobiogeography. *Journal of Foraminiferal Research*, 46(4), 393–408. <https://doi.org/10.2113/GSJFR.46.4.393>.
22. Özcan, E., Saraswati, P. K., Hanif, M., **Ali, N.** (2016). Orthophragminids with new axial thickening structures from the Bartonian of the Indian subcontinent. *Geologica Acta*, 14(3), 283–298.
23. Khan, I., Ahmad, S., Arif, M., and **Ali, N.** (2016). Impact of diagenetic and depositional fabric on reservoir quality; a synthesis from Late Cretaceous and Early Paleocene sandstones in Eastern Sulaiman Range, Pakistan. *Arabian Journal of Geosciences*, 9(5), 1–22. <https://doi.org/10.1007/S12517-016-2372-3>
24. Khan, M., Arif, M., **Ali, N.**, Yaseen, M., Ahmed, A., and Siyar, S. M. (2016). Petrophysical parameters and modelling of the Eocene reservoirs in the Qadirpur area, Central Indus Basin, Pakistan: implications from well log analysis. *Arabian Journal of Geosciences*, 9(5), 1–18. <https://doi.org/10.1007/S12517-016-2373-2>.
25. Saddique, B. **Ali, N.**, Jan, I. U., Hanif, M., Shah, S. A., Saleem, I., Faizi, M. M., Arafat, M. Y. 2016. Petrophysical analysis of the reservoir intervals in Kahi-01 well, Kohat Sub-Basin, Pakistan. JHES, 2016. 49 (1), 30-40.

2015

26. Özcan, E., Hanif, M., **Ali, N.**, and Yücel, A. O. (2015). Early Eocene orthophragminids (Foraminifera) from the type-locality of Discocyclina ranikotensis Davies, 1927, Thal, NW Himalayas, Pakistan: Insights into the orthophragminid palaeobiogeography. *Geodinamica Acta*, 27(4), 267–299. <https://doi.org/10.1080/09853111.2015.1026795>.
27. Jamal, T., Azhar, R., Haneef, M., Saboor, A., **Ali, N.**, Swati, M. A. F., Uddin, Z. Microfacies and Diagenesis of Chorgali Formation, Buchal Kalan area, Chakwal, Pakistan. JHES, 2015. 48 (1), 14-25.

28. Saboor, A., Ali, F., Ahmad, S., Haneef, M., Hanif, M., Imraz, M., **Ali, N.**, Swati, M. A. F., Zahid, M., Sadiq, I. A preliminary account of the middle Jurassic plays in the Najafpur Village, southeastern Hazara, Khyber Pakhtunkhwa, Pakistan. JHES, 2015. 48 (1), 41-49.

List of Selected International Conference Contributions

1. GeoMinKöln 2022, Cologne, Germany. The late Paleogene remnant sea to foreland basin sedimentation along the western margin of the Himalayas: Insights into early Himalayan evolution. *Presenter*
2. GeoBerlin 2023, Berlin, Germany. Kinematic analysis of a left step-over along the dextral Kallar Kahar Fault, Salt Range, Pakistan. *Presenter*
3. EGU General Assembly 2024, Vienna, Austria. First constraints on the timing of structural evolution of the northern Sulaiman fold–thrust belt, Pakistan. *Presenter*
4. Working Group on Sediment Generation Conference 2024, London, UK. On the transition from the remnant Tethys Sea to a foreland basin in the western Himalayas. *Presenter*
5. AGU Fall Meeting 2024, Washington, DC, USA. Dynamic interplay: Tracing sedimentary records alongside tectonic evolution in the western Indian Plate's axial fold–thrust belt. *Co-presenter*
6. Geo4Göttingen 2025, Göttingen, Germany. Reevaluating the India–Asia collision in the Pakistani western Himalayas: Sedimentary evidence for a ~56 Ma onset. *Presenter*
7. 37th Himalaya–Karakoram–Tibet Workshop (HKT 37), Torino, Italy, 2025. Reevaluating the India–Asia collision in the Pakistani western Himalayas: Provenance shifts and sedimentary constraints indicating a collision age of ~56 Ma. *Presenter*
8. 38th IAS Meeting 2025, Huelva, Spain. India–Asia collision in the western Himalayas: Insights from the Mesozoic and Cenozoic sedimentary record of the Indus Basin (Pakistan). *Presenter*
9. AGU Fall Meeting 2025, New Orleans, USA (online). Re-evaluating the India–Asia collision in the Pakistani western Himalayas: Sedimentary evidence for a ~56 Ma onset. *Presenter*

Comments, Discussions & Replies (Peer-Reviewed)

2026

1. **Ali, N.**, Hanif, M., Mohibullah, M., Khan, A., Orakzai, A., Hashmi, S. I. (2026). Reply to Comment on “On the Transition from Remnant Tethys Sea to Foreland Basin During the Late Paleogene in the Western Himalayas, Pakistan”. Accepted for publication in Geological Journal.

International workshops, courses

1. Short course “*Detrital geochronology and thermochronology*” at the University of Milano-Bicocca (Italy) from 17th January to 2nd February 2022.
2. “*Introduction to Secondary Ion Mass Spectrometry in the Earth Sciences*” conducted in Potsdam, Germany at the Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences from 17 to 21 April 2023.
3. “*Introduction to Plate kinematics reconstructions and GPlates*” conducted in Berlin, Germany at the Freie Universität Berlin, Institute of Geological Sciences from 24 to 28 July 2023.
4. Block course on “*2D/3D Kinematic Modeling using Move Suites*” from 9 to 15th September, 2023 at the Geoscience Center, Department of Structural Geology and Geodynamics, University of Göttingen, Germany.
5. Short course on “*Sedimentary Provenance Analysis*” from September 25-29, 2023 at the Geoscience Center, Department of Sedimentology & Environmental Geology, University of Göttingen, Germany.
6. International Winter School 2023 “*Dynamics and Sedimentary Systems in Collisional Zones*”, University of Pavia, Italy 2 – 6 October 2023.
7. Workshop on “*Testing erosional and kinematic drivers of mountain belt exhumation combining fold-and-thrust belt kinematics with thermochronology*” at the Institute of Geosciences, Potsdam-Golm, Germany, from Wednesday 11 to Friday 13 October.
8. Short course on “*MATLAB & Python Recipes for Earth Sciences*” conducted in Potsdam, Germany at the Universität Potsdam, Institute of Geosciences from 16-20 September 2024.
9. Block course “*2D/3D Structural Geological Modelling with Midland Valley’s Move software suite*” at Georg-August University of Göttingen, Germany 7-11 October, 2024.

10. Short course on “*SIMS Basics and Stable Isotope Thermometry*” conducted in Potsdam, Germany at the Helmholtz Centre Potsdam, GFZ German Research Centre for Geosciences from 6-7 November 2024.
11. Short course “*Detrital geochronology and thermochronology*” edition 2025 (16 hours) at the University of Milano-Bicocca (Italy) from 7th to 17th January 2025.
12. Winter School on “*Cross-Section Construction and Structural Restoration in Fold-and-Thrust Belts*”, conducted at the School of Science and Technology, University of Camerino (UNICAM), Italy, from 15–17 January 2025.
13. “*Research Summer School on Paleogeography*” 2025 (70 workload hours) at the University of Rennes, France from 13 to 4th July 2025.

Computer Skills

- Structural and kinematic modelling: Midland Valley MOVE (2D/3D), Geo-Orient, Dips, GeoRose
- Thermochronology: QTQt, HeFTy
- Provenance analysis: IsoplotR, DetritalPy, DZMix, DZStats, DZMDS
- GIS & visualization: ArcGIS, Global Mapper, Google Earth
- Graphics: Adobe Illustrator, CorelDRAW
- XRD interpretation: WinXPOW, Match
- MS Office

References

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2. Professor Dr. Anne Bernhardt
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