

Suleman Khan

Associate Professor

Department of Geology

University of Peshawar

Pakistan

Email: sulemanafridi@uop.edu.pk

Tel: +92 -91-9216744

Cell: +92-310-8301007

Research Interests

Sedimentology, Petroleum Geology, Sequence Stratigraphy, Foraminiferal and Calcareous nannofossils biostratigraphy, Palynostratigraphy, Stable isotopes, Organic Geochemistry, Geotectonic

Education

Ph.D.	School of Geosciences, The University of Edinburgh, U. K	2008-12
	Dissertation: Biostratigraphy and Microfacies of the Cretaceous Sediments, in the Indus Basin Pakistan (https://www.era.lib.ed.ac.uk/handle/1842/8240)	
M.Sc.	Department of Geology the University of Peshawar, Pakistan (Distinction)	2005-06
B.Sc. (Hons).	Department of Geology University of Peshawar, Pakistan (Distinction)	2001-04

Employment History

Associate Professor	Department of Geology, University of Peshawar	2022-present
Assistant Professor	Department of Geology, University of Peshawar	2014-22
Tutor/Demonstrator	School of Geosciences, The University of Edinburgh	2008-12
Lecturer	Department of Geology, University of Peshawar	2006-12

Awards, Honors, and Fellowships

Higher Education Commission, Pakistan Ph.D. Scholarship Award	2008-12
School of Geosciences, The University of Edinburgh Partial Scholarship Award	2008-12

Research Grants

1. Basin and Petroleum System Modelling of the Jurassic Strata, Lower Indus Basin, Pakistan, 2022, 2015, *the Higher Education Commission of Pakistan*, **\$35,000** (PI).
2. Shale gas prospects: A case study from the Cambrian-Triassic rocks of the Potwar basin, Pakistan, *the Higher Education Commission of Pakistan*, 2017, **\$15,000** (Co-PI).
3. Implications of advanced biostratigraphic and Sedimentological investigation of the Cretaceous Hydrocarbon Prospects of the Indus basin, 2015, *the Higher Education Commission of Pakistan*, **\$10,000** (PI).
4. Source Rock Geochemistry and Remote Sensing of the Unconventional Hydrocarbon Reservoirs in the Lower Indus Basin, Pakistan. 2015, *the Higher Education Commission of Pakistan*, **\$35,000** (Co-PI).

Consultancy Projects

1. Geological Mapping, Biostratigraphy, Sedimentology, Source Rock Geochemistry, and Reservoir Characterization of Wali West Block, Waziristan, 2023. MPCL, **\$75000** (Co-PI).
2. Hydrocarbon Source Rock and Biomarker analysis of DGK 1 Well, 2022, Pakistan Oilfield Limited, **\$1700** (Co-PI).
3. Sedimentology and Source rock analysis of Miran Block, 2022, KPOGCL, **\$3800** (Co-PI).
4. SEM/XRD/ EDX/ Porosity-Permeability studies of well cuttings for Reservoir evaluation of clastic and carbonate ditch cuttings from various wells, MPCL, PPL, 2021, **\$3800** (Co-PI).
5. Geological Mapping, Geochemistry, Biostratigraphy, Facies Depositional Modelling and Petroleum System Characterization in Tirah and Orakzai Blocks, 2016, *Oil and Gas Development Limited Corporation*, **\$300000** (Co-PI).
6. Geochemistry, Scanning Electron Microscopy, Petrography, and Reservoir Characterization of Paleocene-Eocene Reservoirs in Pariwali Oil Field, 2016, *Pakistan Oil Field Limited*, **\$6000** (Co-PI).
7. Comprehensive Sedimentological study of Cores from the Pariwali Oilfield, Potwar Basin, 2015, *Pakistan Oilfield Limited*, **\$6000** (Co-PI).

8. Geological Mapping, Biostratigraphy, Facies depositional modeling and Petroleum System Characterization of Peshawar East Block, Pakistan, 2014, Mari Petroleum Company Limited, **\$45,000** (Co-PI).
9. Palynostratigraphy of the Pindori Oil well, 2014, *Pakistan Oilfield Limited*, **\$5500** (Co-PI).
10. Palynofacies and paleoenvironmental analysis of Sofia X-1 well, 2014, *OMV, Pakistan Exploration GmbH*, **\$6000** (Co-PI).
11. Geological mapping, Biostratigraphy, Sedimentology, Source and Reservoir Rock Characterization of the Jurassic-Paleogene rocks of the MEHAR Block, Khuzdar area, Baluchistan, Pakistan, 2013, OMV (Pakistan) Exploration GmbH, **\$27000** (Co-PI).

Hotshot Biostratigraphy and Sedimentology Projects

I am a regular consultant for UEPL, MOL Pakistan, Pakistan Petroleum Limited, Mari Petroleum Company Limited, Pakistan Oilfield Limited, and OMV Pakistan since 2013 till present. I offered my services in biostratigraphy, palynostratigraphy, geochemistry, clay mineralogy, petroleum geochemistry, and sedimentology of core and ditch cuttings of active oil & gas wells.

Publications

1. Ali, M., Coletti, G., Garzanti, E., Adate, T., Castelltort, S., Sternai, P., ... & Usman, M. (2024). The Baroch Nala Section (NE Pakistan): A new PETM standard for the eastern Tethys. *Marine and Petroleum Geology*, 107183. <https://doi.org/10.1016/j.marpetgeo.2024.107183>.
2. Ali, M., Coletti, G., Mariani, L., Benedetti, A., Munawar, M. J., Rehman, S. U., ... & Garzanti, E. (2024). Shallow-water carbonate facies herald the onset of the Palaeocene-Eocene Thermal Maximum (Hazara basin, Northern Pakistan). *Journal of Asian Earth Sciences: X*, 11, 100169. <https://doi.org/10.1016/j.jaesx.2023.100169>
3. Wadood, B., Khan, S., Wagreich, M., Vennemann, T., Li, H., Ullah, M., & Schoepfer, K. (2024). Diagenetic history and porosity evolution of the Middle Permian clastic-carbonate mixed system, Indus Basin, Pakistan: Implications for reservoir development. *Energy Geoscience*, 100317. <https://doi.org/10.1016/j.engeos.2024.100317>
4. Ahamd S., Ahmad, F., Raza, S., Khan, S. Wadood, B., Mohibullah, M. (2024): Litho- and biostratigraphy and hydrocarbon source-rock potential of the Jurassic–Paleogene strata in the Kala Chitta Range, northwestern Himalayas, Pakistan. *Petroleum Geoscience*. <https://doi.org/10.1144/petgeo2022-07>
5. Ahmad, S., & Khan, S. (2024). Improved diagnosis of the carbonate reservoirs: a case study from the Potwar Basin, northwest Pakistan. *Carbonates and Evaporites*, 39(2), 1-19. DOI: [10.21203/rs.3.rs-3046098/v1](https://doi.org/10.21203/rs.3.rs-3046098/v1)

6. Ahmad, S., Kroon, D., Reijmer, J. J. G., Khan, S., Hersi, O. S., & Wadood, B. (2024). Paleogene carbonate ramp development in the Kohat Basin of northwestern Pakistan. *Australian Journal of Earth Sciences*, 71(2), 277-306. <https://doi.org/10.1080/08120099.2023.2279062>
7. Ibrar, M., Rehman, U. H., Khan, S., Hussain, S. S., Rahman, U. M., Khan, A. (2024). A detailed investigation of Jutana Formation for depositional setting in Indus Basin, Pakistan. *Carbonates and Evaporites*. <https://doi.org/10.1007/s13146-024-00951-8>
8. Ahmad, S., Khan, S., Wadood B., Kroon D., Reighmer, J. 2023: Paleogene carbonate ramp development in the Kohat Basin of northwestern Pakistan. *Australian Journal of Earth Sciences*. le: <https://doi.org/10.1080/08120099.2023.2279062>.
9. Ahamd S., Raza, S., Khan, S. (2023): Facies and Hydrocarbon Reservoir Rock Characterization of the Paleozoic Rocks of Peshawar Basin, northwest Pakistan. *Earth and Planetary Science*. <https://doi.org/10.36956/eps.v2i2.874>
10. Khan, E., Naseem, A. A., Khan, S.....(2022): Facies Analysis, Sequence Stratigraphy and Diagenetic Studies of the Jurassic Carbonates of Kohat Basin, Northwest Pakistan: Reservoir Implications. *Acta Geologica Sinica*. <https://doi.org/10.1111/1755-6724.14938>.
11. Khan, S., Jan, M., Farhan, M. (2022): Dating and tectonostratigraphy of the Early Jurassic rift delta at the northwestern margin of the Indian Plate, Pakistan. *Geological Journal*. <https://doi.org/10.1002/gj.4415>.
12. Khuda, F., Anjum, M., Khan, S. (2021): Antimicrobial, anti-inflammatory and antioxidant activities of natural organic matter extracted from cretaceous shales in district Nowshera-Pakistan. *Arabian Journal of Chemistry* 15(2). <https://doi.org/10.1016/j.arabjc.2021.103633>.
13. Saboor, A., Ahmad, J., Khan, S., Latif, K., Khan, A., Haider, T. A. (2021): Foraminiferal biostratigraphy, facies and sequence stratigraphy analysis across the K-Pg Boundary in Hazara, Lesser Himalayas (Dhudial Section). *Geodiversitas* (18), p. 663-682. <https://doi.org/10.5252/geodiversitas2021v43a18>.
14. Khan, S., Kroon, D., Bilal Wadood, B., Ahmad, S., Zhou, X. Marine Depositional Signatures of the Aptian Oceanic Anoxic Events in the Lower Indus Basin Pakistan, Eastern Tethys. *Australian Journal of Earth Sciences*. <https://doi.org/10.1080/08120099.2021.1959399>.
15. Wadood, B., Khan, S., Li, H., Ali, N. (2021). The Late Permian clastic-dominated carbonate shelf, Northwestern Pakistan: Implications for paleoenvironments, paleoclimate, and reservoir modeling. *Geological Journal*. <https://doi.org/10.1002/gj.4214>.
16. Ahmad, S., Khan, S., Wadood, B., Naseer, A, Noman, M., Wadood, J., Muslim, M. (2021): Late Cretaceous Pelagic Laminites at the Northwestern Margin of Indian Plate, Pakistan: Implication

for Basin Bathymetry and Ophiolite Emplacement. Carbonates and Evaporites. <https://doi.org/10.1007/s13146-021-00701-0>.

17. Wadood, B., Khan, S., Li, H. Wadood, J., Ahmad, S., Khan, A. (2021): The Middle Permian (Capitanian) Carbonate Platform Evolution and Stratigraphic Architecture of a Neo-Tethys Rim Basin, Central Pakistan. Geological Journal. <https://doi.org/10.1002/gj.4155>.
18. Wadood, B., Khan, S., Li, H. (2021): The Middle Permian Mixed Siliciclastic-Carbonate System on Northwestern Margin of the Indian Plate, Pakistan: Implication for Paleoclimate and Carbonate Platform Evolution. Acta Geologica Sinica. <https://doi.org/10.1111/1755-6724.14737>.
19. Khan, S., Kroon, D., Ahmad, S., Ali, A., Wadood, B., Rahman, A. (2020): Planktonic foraminiferal biostratigraphy of the Cretaceous strata, Indus Basin, Pakistan, Eastern Tethys: Implication for oceanic anoxic events. Australian Journal of Earth Sciences. <https://doi.org/10.1080/08120099.2021.1913225>.
20. Khan, S., Kroon, D., Ahmad, S., Wadood, B., Rahman, A. (2020): Palynostratigraphy of the Upper Jurassic to Lower Cretaceous strata, Upper Indus Basin, Pakistan: implication for Jurassic/Cretaceous boundary and paleoclimate in the Eastern Tethys. Australian Journal of Earth Sciences. <https://doi.org/10.1080/08120099.2021.1865452>.
21. Ahmad, S., Rehman, U. Z., Khan, S., Wadood, B., Haq, U. M., Khan, D. S., Khan, Y., Khan, H., Gul, S. (2020 in press). Belemnite Biostratigraphy of the Upper Jurassic to Lower Cretaceous strata in the Surghar Range, Northwest Pakistan: Systematic and Paleobiogeographic Implications. Iranian Journal of Earth Sciences. 13 (1); 1-13
22. Ahmad, S., Wadood, B., Khan, S., Ullah, A., Mustafa, G., Hanif, M., Ullah, H. (2020). The sedimentological and stratigraphical analysis of the Late Paleocene to Early Eocene Dungan Formation, Kirthar Fold and Thrust Belt, Pakistan: Implications for reservoir potential. Journal of Sedimentary Environments. <https://doi.org/10.1007/s43217-020-00027-2>.
23. Wadood, B., Khan, S., Li, H., Liu, Y., Rahman, A. (2020 in press). Investigating the impact of diagenesis on reservoir quality of the Jurassic shallow shelfal carbonate deposits: Kala Chitta Range, North Pakistan. Geological Journal. <https://doi.org/10.1002/gj.3968>.
24. Wadood, B., Khan, S., Li, H., Liu, Y., Ahmad, S., & Jiao, X. (2020). Sequence Stratigraphic Framework of the Jurassic Samana Suk Carbonate Formation, North Pakistan: Implications for Reservoir Potential. Arabian Journal for Science and Engineering. 46, pages525–542. <https://doi.org/10.1007/s13369-020-04654-9>.
25. Wadood, B., Khan, S., Khan, A., Khan, M. W., Liu, Y., Li, H.,... & Khan, A. (2020). Diachroneity in the closure of the eastern Tethys Seaway: evidence from the cessation of marine sedimentation in northern Pakistan. Australian Journal of Earth Sciences, 1-11. <https://doi.org/10.1080/08120099.2020.1782472>.

26. Ahmad, S., Wadood, B., Khan, S., Ahmed, S., Ali, F., & Saboor, A. (2020). Integrating the palynostratigraphy, petrography, X-ray diffraction and scanning electron microscopy data for evaluating hydrocarbon reservoir potential of Jurassic rocks in the Kala Chitta Range, Northwest Pakistan. *Journal of Petroleum Exploration and Production Technology*, 1-13. <https://doi.org/10.1007/s13202-020-00957-7>.
27. Ali, F., Qiang, J., Ahmad, S., Khan, S., Hanif, M., & Jan, I. U. (2019). Sedimentological and Geochemical Analysis of the Middle Jurassic Shinawari Formation, Upper Indus Basin, Pakistan: Implications for Palaeoenvironmental and Hydrocarbon Assessment. *Arabian Journal for Science and Engineering*, 44(7), 6465-6487.
28. Wadood, B., Awais, M., Khan, S., Ahmad, S., Ahmad, L., Muslim, M. (2019). Diagenetic studies of the Cretaceous turbidities, Sulaiman Range, Pakistan: Implications for reservoir quality. *Journal of Himalayan Earth Sciences Volume*, 52(1), 106-11.
29. Wadood, B., Khan, S., Ahmad, S., & Wadood, J. (2019). Sequence stratigraphic framework of the Maastrichtian shelfal to deep marine strata of Lower Indus Basin, Pakistan: implications for the petroleum potential. *Carbonates and Evaporites*, 34(3), 757-769. <https://doi.org/10.1007/s13146-019-00517-z>.
30. Ahmad, S., Ahmad, F., Ullah, A., Eisa, M., Ullah, F., Kaif, K., & Khan, S. (2019). Integration of the outcrop and subsurface geochemical data: implications for the hydrocarbon source rock evaluation in the Lower Indus Basin, Pakistan. *Journal of Petroleum Exploration and Production Technology*, 9(2), 937-951.
31. Ahmad, F., Ahmad, S., Khan, S., Fu, Q., Jan, I. U., Khan, R. A.,... & Alizai, F. A. (2019). Hydrocarbon source rock potential of the Early Permian rocks in the Potwar Basin, Salt Range, Pakistan. *Journal of Himalayan Earth Science*, 52(2).
32. Muhammad, B., Khan, S., Mohibullah, M., Kasi, A. K., & Ghani, M. (2018). Planktonic foraminiferal biostratigraphy and depositional setting of the Cretaceous Parh Limestone, Quetta, western Sulaiman Fold-Thrust Belt, Balochistan, Pakistan. *Journal of Himalayan Earth Sciences*, 51(2A), 8-23.
33. Ali, F., Ahmad, S., Khan, S., Hanif, M., & Qiang, J. (2018). Toarcian–Bathonian palynostratigraphy and anoxic event in Pakistan: an organic geochemical study. *Stratigraphy*, 15(3), 225-243
34. Hashmi, S. I., Jan, I. U., Khan, S., & Ali, N. (2018). Depositional, diagenetic and sequence stratigraphic controls on the reservoir potential of the Cretaceous Chichali and Lumshiwal formations, Nizampur Basin, Pakistan. *Journal of Himalayan Earth Sciences*, 51(2A), 44-65
35. Ahmad, S., Ullah, M., Ullah, S., Khan, S., Khan, Y., Jan, I. U.,... & Jan, S. (2018). Stratigraphic and Paleoclimatic Reconstruction of the Upper Carboniferous-Lower Permian strata from the Southern Gondwanaland remnants in Pakistan. *Stratigraphy*, 15(2), 69-90.

36. Khan, S., Wadood, B., Ahmed, S., Khan, A., Ahmed, F., & Khan, H. (2017). Evaluating paleoceanographic and planktonic foraminiferal diversification from the Cretaceous Mughal Kot Formation, Mughal Kot Section, Lower Indus Basin, Pakistan. *Journal of Himalayan Earth Science*, 50(2).
37. Khan, S., Ahmad, W., Ahmad, S., & Khan, J. K. (2016). Dating and depositional environment of the Tredian Formation, western Salt Range, Pakistan. *Journal of Himalayan Earth Science*, 49(2).
38. Kakar, D. M., Kasi, A. K., Kassi, A. M., Friis, H., Mohibullah, M., & Khan, S. (2016). Petrography and Whole-Rock Geochemistry of the Oligocene-Miocene Khojak Formation Khojak-Pishin Belt, Pakistan: Implications on Provenance and Source Area Weathering. *Journal of Himalayan Earth Science*, 49(2).
39. Ahmad, S., Kroon, D., Rigby, S., Hanif, M., Khan, S., Ali, F., ... & Hussain, H. S. (2016). Endemic vs cosmopolitan tethyan benthic foraminifera from the lower Eocene Panoba Formation, Kohat sub basin, Pakistan: implications for early Eocene warming. *Journal of Himalayan Earth Sciences*, 49(1), 131.
40. Sadiq, I., Ahmad, S., Hanif, H., Ali, F., Jan, U. I., Ali, F., Khan, N., Khan, S., & Farhan, M. (2016). Depositional system and sequence stratigraphy of Permian Amb Formation, Salt Ranges, Northwest Pakistan. *Journal of Himalayan Earth Science* 49 (2).
41. Ahmad, S., Kroon, D., Rigby, S., & Khan, S. (2016). Paleogene Nummulitid biostratigraphy of the Kohat and Potwar Basins in north-western Pakistan with implications for the timing of the closure of eastern Tethys and uplift of the western Himalayas. *Stratigraphy*, 13, 277-301.
42. Ahmad, S., Jalal, W., Ali, F., Hanif, M., Ullah, Z., Khan, S., ... & Rehman, K. (2015). Using larger benthic foraminifera for the paleogeographic reconstruction of Neo-Tethys during Paleogene. *Arabian Journal of Geosciences*, 8(7), 5095-5110.
43. Ahmad, S., Waqas, M., Khan, S. S., Swati, F., Azhar, M., Jan, I. U., ... & Khan, S. (2015). Facies analysis and dynamic depositional modelling of the Upper Permian Chhidru Formation, Salt Range, Upper Indus Basin, Pakistan. *Journal of Himalayan Earth Science*, 48(1).
44. Ali, A., Faisal, S., Rehman, K., Khan, S., & Ullah, N. (2015). Tectonic imprints of the Hazara Kashmir Syntaxis on the Northwest Himalayan fold and thrust belt, North Pakistan. *Arabian Journal of Geosciences*, 8(11), 9857-9876.
45. Khan, S., Ahmad, S., Hanif, M., Jan, I. U., Swati, M. A. F., Khan, S., & Saboor, A. (2014). Lithofacies, paleoenvironments and sequence stratigraphic modeling of the Wargal Limestone: Implication for reservoir characterization in the Salt Range, northwest, Pakistan. *Journal of Himalayan Earth Sciences*, 47(1), 41.
46. Ali, F., Haneef, M., Anjum, M. N., Hanif, M., & Khan, S. (2013). Microfacies analysis and sequence stratigraphic modeling of the Samana Suk Formation, Chichali Nala, Trans Indus Ranges, Punjab, Pakistan. *Journal of Himalayan Earth Science*, 46(1).

47. Ahmed Jr, S., Rigby, S., Kroon, D., Khan, S., Hanif, M., & Ahmed Sr, S. (2011). Integrated Paleogene sequence stratigraphy of the Kohat Basin, Northwest Pakistan. *Pakistan Journal of Hydrocarbon Research*, 21, 41-47.

Selected Abstracts

1. Palaeoceanographic reconstruction of Maastrichtian from the hemipelagic sediments of Pakistan, Eastern Tethys. European Geoscience Union 2020, 02-08 April 2020 at Vienna, Austria
2. Sedimentary Microfacies Analysis and Reservoir Characterization of the Middle Jurassic Carbonates: A Case Study from Lower Indus Basin, Pakistan. International Field Exploration and Development Conference 18-20 September 2018, Xi'an, China
3. Planktonic Foraminiferal Biostratigraphy of the Maastrichtian strata, Lower Indus Basin, Pakistan. 1st International Conference on Advances in Engineering and Technology, 2nd, and 3rd April 2018. BUIITEMS, Quetta, Pakistan
4. Evaluation of Palaeoceanographic and Planktonic Foraminiferal diversification from the Mughal Kot formation Lower Indus Basin Pakistan. 2nd International Conference on Sustainable utilization of Natural Resources, 03 Oct 2016. NCEG, University of Peshawar, Peshawar, Pakistan.
5. Palynostratigraphy, paleoclimatic reconstruction and palynofacies analysis of Jurassic Datta Formation, Nammal Gorge Pakistan. International Conference on: Earth Sciences Pakistan 15-17 July, 2016.
6. Stable Isotope Geochemistry and Biostratigraphy of Belemnite Bearing Lower Cretaceous Strata of Pakistan to Evaluate Weissert (Valanginian) Oceanic Anoxic Event in Southern Domain of Tethys. Graduate Research Conference, School of Geosciences, University of Edinburgh, March 24-25, 2009.
7. Bio-Chemostratigraphy of the Cretaceous Sediments of the Tethys Ocean in Pakistan. Graduate School Conference, School of Geosciences, University of Edinburgh, January 27-29, 2012.

Conferences and Workshops

1. International Conference on: Earth Sciences Pakistan 11-13 August 2018.
2. International Conference on: Earth Sciences Pakistan 15-17 July, 2016.
3. Graduate School Conference, School of Geosciences, University of Edinburgh. January 27-29, 2012.
4. International Conference on Conventional and Unconventional Hydrocarbon Potential of Pakistan May 25-27, 2013

5. Research Skill and Methodology Workshop Series (November 2008-December, 2011), the University of Edinburgh UK.
6. Graduate School Conference, School of Geosciences, University of Edinburgh. March 24-25, 2009.

Reviewer for Research Journals

1. Journal of Petroleum Science and Engineering
2. Historical Biology
3. Cretaceous Research
4. Petroleum Research
5. Geological Journal
6. Acta Geologica Sinica
7. Geological Society of Malaysia
8. Arabian Journal of GeoSciences
9. Pakistan Association of Petroleum Geoscientists

Research Supervision

1. More than 15 MS Students Supervised (since 2013-till date) in different sedimentary basins of Pakistan
2. 2 Ph.D. students Co-supervised (since 2013 till date) in different sedimentary basins of Pakistan
3. More than 100 BS dissertations supervised (since 2008-till date) in different sedimentary basins of Pakistan

Memberships and other Assignments

1. Member Stratigraphic Committee of Pakistan (2022-2025).
2. Member BS Admissions Committee, Department of Geology, University of Peshawar (2013 till present).
3. Member Board of Governors, National Centre of Excellence (NCEG), University of Peshawar, Peshawar, Khyber Pakhtunkhwa, Pakistan (April 2022 till present).
4. Member Board of Studies, University of Swabi, Khyber Pakhtunkhwa, Pakistan.
5. Subject Expert in Selection Board of the Khushal Khan Khattak University, Khyber Pakhtunkhwa, Pakistan.
6. Member Board of Studies of Bacha Khan University, Charsadda, Pakistan, Khyber Pakhtunkhwa, Pakistan.
7. Subject expert in Khyber Pakhtunkhwa Public Service Commission.
8. General Secretary Peshawar University Teachers' Association (2018-19; 2019-20).
9. Elected Member Syndicate, University of Peshawar (2022-2025).

References

Dr. Sajjad Ahmad
Associate Professor
Department of Geology, University of Peshawar, Khyber Pakhtunkhwa, Pakistan

Email: dr.s_ahmed@uop.edu.pk

Dr. Asghar Ali

Associate Professor

Department of Geology, University of Peshawar, Khyber Pakhtunkhwa, Pakistan

Email: asghar.ali@upesh.edu.pk

Dr. Muhammad Hanif

Associate Professor

National Centre of Excellence in Geology, University of Peshawar, Khyber Pakhtunkhwa, Pakistan

Email: mhanif_nceg@uop.edu.pk