
PERSONAL	Name:	Mian Sohail Akram
	Date of Birth	18-01-1975
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KEY QUALIFICATIONS:

- Sohail has been serving as Professor and Head of Applied Geosciences (Engineering Geology & Geophysics sections) in Institute of Geology, University of the Punjab, Lahore, Pakistan. Key subjects are engineering geology, rock mechanics, soil mechanics and geohydrology together with the supervision of M.Sc./ M. Phil and PhD research work and thesis writing. Also coordinated seminars/ technical workshops on hydrology, tunnels, slope stability and GIS. Sohail has supervised four (4) PhD recently and about forty (40) M. Phil research and thesis writing. Six (6) PhD and Three (3) M. Phil students are currently enrolled under his supervision.
- Overall, Sohail has about twenty (20) years' experience in the field of engineering geology, geotechnical engineering, and geomechanics. The area of expertise includes geotechnical, geological and geohydrological investigations, insitu testing, analyses, and interpretation for the design of the surface and subsurface structures. In rock mechanics, the area of interest comprises of rock mass characterisation, classification, and interpretation for the design of the slopes, shafts, tunnels, underground caverns etc. In addition, Sohail has a thorough experience of undertaking slope stability assessments based on the kinematic, statistical, and empirical analyses together with the design of slope remediation measures.
- Sohail is Editorial Board Member (EBM) of Bulletin of Engineering Geology and the Environment (BOEG), one of the top five journals of Engineering Geology since 2020 and has reviewed more than 50 research articles as reviewer of the same journal and handled about 65 research articles as EBM.
- Sohail has been advisor on many national level projects of dams, hydropower, slopes, and tunnels.
- During his professional life, Sohail has worked in Afghanistan, Australia, Oman, Saudi Arabia and Pakistan.
- Extensive experience in technical writing for desktop reviews, factual data, geological and geotechnical analyses, interpretations and design recommendations.

EDUCATION:

Ph.D. (Geomechanics) 2011, UNSW, Australia
M.Sc. (Applied Geology with Specialization in Engg. Geology), 2002, PU, Pakistan
B.Sc. (Hons- Applied Geology), 2000, PU, Pakistan

PROFESSIONAL AFFILIATIONS/ MEMBERSHIPS

- Editorial Board Member, Bulletin of Engineering Geology and Environment (IF: >4)
- International Association for Engineering Geology (IAEG)-Member
- Pakistan Association for Engineering Geology (PAEG)- General Secretary
- American Rock Mechanics Association (ARMA), Member
- Australian Geomechanics Society (AGS), Member
- European Association of Geoscientists & Engineers (EAGE), Member
- International Society of Rock Mechanics (ISRM), Corresponding Member

- International Society for Soil Mechanics & Geotechnical Engineering (ISSMGE), Member
- Pakistan Geotechnical Engineering Society (PGES), Member
- Punjab Geological Society, Pakistan (PGS), Member

PROFESSIONAL TRAININGS

Name & Place	Type of training	Attended	
		From	To
“Evaluation of Aggregate as a Construction Material” In Collaboration with the Ministry of Labour, Manpower & Overseas Pakistanis, and UNDP under TOKTEN Programme, held in Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	December 24, 1997	January 14, 1998
“Fluvial Sedimentology” In Collaboration with Geological Survey of Pakistan, Islamabad, Pakistan	Professional Short Course	April 27, 1998	May 10, 1998
“The Waste Management Systems” In Collaboration with the Ministry of Labour, Manpower & Overseas Pakistanis, and UNDP under TOKTEN Programme, held in Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	December 17, 1998	December 23, 1998
“Environmental Hydrogeology & Groundwater Contamination” In Collaboration with the Ministry of Labour, Manpower & Overseas Pakistanis, and UNDP under TOKTEN Programme, held in Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	January 26, 1999	February 14, 1999
“Economic Mineral Deposits” In Collaboration with the Dept. of Mines and Energy, N.T. Geological Survey, Darwin, Australia, held in Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	March 22, 1999	March 27, 1999
“Landslides (Identification, Analysis & Remedies)” In Collaboration with the Ministry of Labour, Manpower & Overseas Pakistanis, and UNDP under TOKTEN Programme, held in Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	December 22, 1999	January 21, 2000
“Isotope Geology” Post Graduate Center for Earth Sciences, University of the Punjab, Lahore, Pakistan	Professional Short Course	March 29, 2001	April 03, 2001
“Groundwater Resources and Their Environmental Impacts” In collaboration with National Committee of Pakistan, International Association of Hydro-geologists (IAH), held in Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	January 31, 2002	February 01, 2002
“Geological Application of Open-Hole Logging” In Collaboration with the Oil and Gas Development Company Limited (OGDCL), held in Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	August 05, 2002	August 09, 2002
“Seventh Human Resources Development Centre (HRDC) Faculty Orientation Program” Institute of Administrative Sciences (IAS), University of the Punjab, Lahore, Pakistan	Professional Short Course	September 19, 2005	September 29, 2005
“Tunnels- Alignment, Investigations & Construction” Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	September 19, 2006	September 21, 2006
“Tutor Training Workshop” UNSW Learning Center, University of New South Wales, Sydney, Australia	Professional Short Course	September 3, 2007	

“Analysis of Geotechnical Problems with ABAQUS” In collaboration with SIMULIA, held in School of Mining Engineering, University of New South Wales, Australia	Professional Short Course	September 27, 2007	September 28, 2007
“Tunnel Design and Construction Short Course” In collaboration with Australasian Tunneling Society (ATS), held in University of Technology Sydney (UTS), Australia	Professional Short Course	September 28, 2009	September 30, 2009
“Applied Numerical Methods with MATLAB” Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	March 11, 2013	March 15, 2013
“Mixed Methods Research using SPSS & NVIVO software” Office of Research, Innovation and Commercialization (ORIC), University of the Punjab, Lahore, Pakistan	Professional Short Course	November 23, 2013	
“Preparation of Geological Maps in GIS Environment: GIS as a Tool for Geologists” Institute of Geology, University of the Punjab, Lahore, Pakistan	Professional Short Course	January 25, 2016	January 29, 2016

EXPERIENCE RECORD:

1. INSTITUTE OF GEOLOGY, UNIVERSITY OF PUNJAB, LAHORE, PAKISTAN

Title of position: Professor

Period of Assignment December 13, 2022, to date

Head, Applied Geosciences Division, Institute of Geology, University of the Punjab, Lahore comprising Engineering Geology and Geophysics Sections; Also

Head, Engineering Geology Section and HEC Approved Supervisor for M. Phil & PhD (Geology)

Following are the key responsibilities;

- Undergraduate and post graduate teaching
- Supervision of undergraduate and post graduate research and dissertation writing
- Supervision and monitoring of Engineering Geology and Geophysics sections for planning, scheduling and implementation of classes, exams and research to keep the sessions regular.

Teaching Area (Undergraduate)

- Engineering Geology
- Rock Mechanics
- Soil Mechanics
- Geohydrology

Teaching Area (Postgraduate M. Phil)

- Soil Mechanics-I (GEOL-531)
- Rock Mechanics – I (GEOL-532)
- Engineering Geology (GEOL-535)
- Soil Mechanics-II (GEOL-536)
- Rock Mechanics – II (GEOL-537)

Teaching Area (Postgraduate Ph. D)

- Geomechanics (GEOL-741)
- Slope Stability: Types, Factors And Investigations (GEOL-742)
- Slope Stability: Evaluations and Mitigations (GEOL-744)
- 3D Geological Modelling (GEOL-745)
- Underground Excavations & Support Assessment (GEOL-746)
- Numerical Methods in Geomechanics (GEOL-747)
- Slope Stability Hazard Zonation (GEOL-750)
- Geohazards; Types And Factors (GEOL-751)
- Geohazards; Zonation & Risk Assessment (GEOL-752)

- Engineering Geology In Dams & Hydropower Projects (GEOL-754)
- Construction Materials for Dams & Hydropower Projects (GEOL-757)
- Construction Materials For Roads & Highways (GEOL-758)

Thesis Supervision

- Supervised more than 40 M. Phil Student and four (4) Ph.D. Students (Since 2011)
- Six Ph.D. and six M. Phil students are enrolled currently.

Other Engagements

- Incharge, Engineering Geology, Groundwater and Geomechanics Laboratory, Institute of Geology, PU, Lahore.
- Incharge, Topographic & Geologic Mapping Section, Institute of Geology, PU, Lahore.
- Incharge, Sports, Institute of Geology, PU, Lahore (2014-2020).
- Incharge Library (2014-2016)
- Member Board of Study, Institute of Geology, University of the Punjab, Lahore (Since 2019)
- Member, Academic Council, University of the Punjab, Lahore (Since 2021)
- Member, Faculty of Geosciences, University of the Punjab, Lahore (Since 2022)

Other Activities

- Conducted reconnaissance visit to study earthquake induced landslides in northern Pakistan after destructive earthquake of October 12, 2005.
- Conducted post-earthquake visit for slope instability along KKH in 2016.
- Organized and conducted short course "Preparation of Geological Maps in GIS Environment: GIS as a Tool for Geologists"
- Organised and Coordinated seminar on Tunnels- Alignment, Investigations & Construction.
- Organized annual Sports (2014-2020)

2. INSTITUTE OF GEOLOGY, UNIVERSITY OF PUNJAB, LAHORE, PAKISTAN

Title of position: Associate Professor

Period of Assignment February 03, 2019, to December 12, 2022

Head, Applied Geosciences Division, Institute of Geology, University of the Punjab, Lahore comprising Engineering Geology and Geophysics Sections; Also

Head, Engineering Geology Section and HEC Approved Supervisor for M. Phil & PhD (Geology)

Following are the key responsibilities.

- Undergraduate and post graduate teaching
- Supervision of undergraduate and post graduate research and dissertation writing
- Supervision and monitoring of Engineering Geology and Geophysics sections for planning, scheduling and implementation of classes, exams and researches to keep the sessions regular.

3. INSTITUTE OF GEOLOGY, UNIVERSITY OF PUNJAB, LAHORE, PAKISTAN

Title of position: Assistant Professor

Period of Assignment April 05, 2012 to February 02, 2019

Head, Applied Geosciences Division, Institute of Geology, University of the Punjab, Lahore comprising Engineering Geology and Geophysics Sections; Also

Head, Engineering Geology Section

Following are the key responsibilities.

- Undergraduate and post graduate teaching
- Supervision of undergraduate and post graduate research and dissertation writing
- Supervision and monitoring of Engineering Geology and Geophysics sections for planning, scheduling and implementation of classes, exams and research to keep the sessions regular.

4. INSTITUTE OF GEOLOGY, UNIVERSITY OF PUNJAB, LAHORE, PAKISTAN

Title of position: Lecturer

Period of Assignment Sep. 2005 to April 2012

(PhD Leave from April 2007 to May 2011)

Responsibilities included undergrad and postgrad teaching with supervision of research work.

Thesis Supervision

- Supervised two M. Sc student in 2006-2007 on natural hazards i.e. erosion control in north-western regions of Pakistan.

5. NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED (NESPAK)

Title of position Engineering Geologist

Location of Assignment Lahore - Pakistan

Period of Assignment Nov. 2002 to August 2005

Responsibilities:

- Planning and performance of engineering geologic mapping and development of geologic cross-sections.
- Slope stability analysis by using computer aided programmes.
- Core- Trench/ Foundation Mapping for Dam Projects.
- Planning and conductance of rock discontinuity survey i.e. scan line survey, detail line survey.
- Planning and acquisition of orientation data for discontinuities in a rock mass.
- Plotting of stereo- nets for discontinuities and analysis of data for rock mass strength.
- Studies, investigations and evaluation of landslides.
- Design of remedial works for various landslide projects.
- Development of land-use and slope maps by using satellite imageries.
- Planning and supervision of geotechnical investigations including boring, drilling, sampling and in-situ testing for dams and buildings.
- Preparation of laboratory testing programmes and analyses of lab test results.
- Data analysis, interpretation of geological and geotechnical investigation data and compilation of reports.
- Preparation of financial and technical proposals for various mega and small projects.

Projects

- Wadi Dayqah Dam Project, Quriyat. (Oman)
- Istalif Micro Hydropower Project, Istalif. (Afghanistan)
- Detailed feasibility studies of Bara Dam, Lashora Dam and Wuch Tangi Dam, Khyber Agency (Pakistan).
- Feasibility Study of Zamir Gul, Maroobi and Rajoia Dams in NWFP. (Pakistan)
- Feasibility Study, detailed design and construction supervision of 12 Small Dams in FATA. (Pakistan)
- Perspective planning of Small Dams in FATA. (Pakistan)
- Study and design of remedial measures for landslides for "Upgradation and Relocation of KKH. (Karakoram Highway) for "Bash Diامر Dam Project" (Pakistan)
- Study and Design of Remedial Measures for landslides on Kahuta-Panjar-Azad Pattan Road, Rawalpindi.(Pakistan)
- Study and design of remedial measures for Aliot landslide along Murree – Kohala road. (Pakistan)
- Study and design of remedial measures for Landslides along Lawrence College – Jhika Gali bypass road, Murree. (Pakistan)
- Master Planning for New-township, Murree & Patriata. (Pakistan)
- Construction of Cargo Runway, Bagram Air Base. (Afghanistan)
- Hasarak Bridge, Jalalabad. (Afghanistan)
- Planning and supervision of geotechnical investigation and geological mapping for National University of Science & Technology, Islamabad. (Pakistan)

6. GEOSCIENCE ASSOCIATES, LAHORE, PAKISTAN

Title of Position	Trainee Geologist/ Geologist
Location of Assignment	Lahore - Pakistan
Period of Assignment	Nov. 2001 to Nov.2002

Responsibilities:

- Testing and interpretation of piles' defects by using SIT (Sonic Integrity Testing) equipment & Programme.
- Conducting Hydrogeological reconnaissance survey and demarcation of saline/fresh water interface for sustainable exploitation of groundwater in different areas of Sindh, Kashmir and Punjab.
- To conduct geo-electrical resistivity survey using signal averaging resistivity measuring equipment i.e. 3Pa and Terrameter SAS 300C
- Processing and interpretation of resistivity data using numerical model RESIX & RESIXP.
- Conducting geophysical well logging using SP/SPR and natural gamma ray logging in various projects to delineate sub-surface lithology and groundwater quality.
- Preparation and compilation of reports for the acquired data.

Projects

- Shah Faisal Fly-Over, Karachi. (Pakistan)
- PRWSS (Punjab Rural Water Supply Scheme) Chakwal & Bahawalpur districts. (Pakistan)
- PRWSS (Punjab Rural Water Supply Scheme) Dist. Chakwal (Pakistan)
- Water Supplu Schemes, Dist. Mirpur (AJK). (Pakistan)
- Groundwater investigations, Dist. Sukkar. (Pakistan)
- Groundwater investigations, Gwadar Fish Harbor, Gwadar. (Pakistan)

OVERSEAS ASSIGNMENTS:

Wadi Dayqah Dam Project, Quriyat, Oman (2004-2005).

Assignment included geological mapping, rock mass characteristics and evaluation, stability of reservoir rim, water tightness issues because of cast topography, kinematic analyses of abutment slopes and preparation of report.

Geotechnical Investigations for Hasarak Bridge, Jalalabad, Afghanistan (July 2005).

Supervised Geotechnical Investigation including drilling of boreholes, core logging, insitu testing and report compilation.

Istalif Micro Hydropower Project, Kabul, Afghanistan (June-July 2003).

Supervised Geotechnical Investigations including drilling of boreholes, core logging and insitu testing and compiled foundation design recommendation report.

Geotechnical Investigations at Bagram Air Base, Afghanistan (June-July 2003).

Conducted plate load tests as part of the field investigations for new cargo runway, analyses and recommendations for bearing pressures.

NUMERICAL MODELLING STRENGTHS:

Numerical Models

PFC2&3D Discrete Element Methods (DEM) code having numerous applications in geomechanics.

UDEC&3DEC Discrete Element Methods (DEM) code having numerous applications in geomechanics.

Map3D Boundary Element Methods (BEM) code for stress analysis of underground excavations.

Phase-II/ RS2/3 Finite Element Methods (FEM) code having numerous applications in Geotech.

RocPack-III For rock slope stability analyses (Kinematic & Limit Equilibrium)

Geo-Orient For stereographic Projection and kinematic analysis of discontinuity orientation data

Rockworks For the development of 3D geological model based on surface and subsurface data.

Roclab/ data For rock mass strength criteria

DIPS For kinematic analyses of rock slopes

SWEDGE For Limit Equilibrium analyses of wedge failures in rock slopes

UNWEDGE For Limit Equilibrium analyses of wedge failures in underground rock excavations

SLIDE/3D For Limit Equilibrium analyses of overburden/ rock slopes.

SLOPE/W For Limit Equilibrium analyses of overburden/ rock slopes.

SIT Sonic Integrity Testing Program for pile non-destructive testing.

ResixP For the resistivity analysis/ interpretation of subsurface material.

RESEARCH

Undertaken Researches

- Akram, M.S. (2001). Geotechnical & Geophysical Studies of Landslides along Murree - Ayubia Road & Partsan Village, District Chitral. (M.Sc Thesis), Institute of Geology, University of the Punjab, Lahore, Pakistan. (Research was supervised by Dr. Muhammad Saeed Farooq)
- Akram, M.S. (2010). Physical and numerical investigation of conglomeratic rocks. (Ph.D. Thesis). School of Mining Engineering, The University of New South Wales, Sydney, Australia. (The Research was supervised by Dr. Glenn Bruce Sharrock (Supervisor) and Dr Rudra Mitra (Co-Supervisor))

Research Interests

- Rock Mass Strength Evaluation
- Slope Stability Studies and Analyses
- Experimental Rock Mechanics
- Rock Excavations & Numerical Modeling

COMPLETED RESEARCH PROJECTS

Being principal Investigator, following University of the Punjab Research Projects were undertaken and completion reports were submitted.

Year	Research Project Title
2011-2012	Correlation of Uniaxial Compressive Strength (UCS), Point Load Strength Index (Is50) and Schmidt hardness of Various Rock Units of Salt Range, Pakistan. (Research Report Submitted to Director, Research, PU).
2012-2013	Correlation of mineral and mechanical properties of Salt Range rocks (Research Report Submitted to Director, Research, PU).
2013-2014	Geotechnical evaluation of landslides and inventory of remedial works along Islamabad-Murree Expressway, Pakistan. (Research Report Submitted to Director, Research, PU).
2014-2015	Stability assessment of Dewal landslide along Murree – Muzaffarabad road, Pakistan (Research Report Submitted to Director, Research, PU).
2015-2016	Back analysis of earthquake induced 80 m high slope failures along Shinkiari-Jabori Road, Abbottabad, Pakistan. (Research Report Submitted to Director, Research, PU).

- 2017-2018 Rock Characterization and Support Assessment by Empirical Methods for a 20km long Power Tunnel of a Hydropower Project along China-Pakistan Economic Corridor (CPEC), District Kohistan, KPK, Pakistan.
(Research Report Submitted to Director, Research, PU).
- 2019-2020 Development of Kinematic Criterion for the Evaluation of Undercutting Induced Slope Failures in alternate beds of Shales and Sandstones
(Research Report Submitted to Director, Research, PU).
- 2021-2022 Investigating a Comparison of Durability based Classifications and Characterization of the Sub-Himalayas Rocks in controlling the Slope Stability
(Research Report Submitted to Director, Research, PU)
- 2022-2023 Numerical evaluation of cut slope angles in Interbedded competent and incompetent rocks of Miocene in Lesser Himalayas, Pakistan
(In progress)

CONDUCTED SEMINARS/ WORKSHOPS / CONFERENCES

- Conducted 5-days course on Preparation of Geological Maps in GIS, Institute of Geology, University of the Punjab, January 25-29, 2016.
- Organized 01-Day Seminar on Hazards of Geography: Earthquakes, Floods and Landslides, on May 11, 2012 at the Institute of Geology, P.U., Lahore
- Conducted 3-days workshop on Tunnels: Alignment, Investigation and Construction, September 19-21, 2006, at the Institute of Geology, University of the Punjab, Lahore, Pakistan.

12. PUBLICATIONS.

Journal Publications

1. Saleem, M. U., & **Akram, M. S.** (2023). Performance assessment of gridded climatic data and modeling spatial accuracy ranking matrix for gridded precipitation using a new pixel-based approach: a district-wise case study of Punjab. *Arabian Journal of Geosciences*, 16(5), 1-18.
2. Ahmed, L., & **Akram, M. S.** (2022). Durability Based Classification and Characterization of the Rocks of the Sub-Himalayas, Pakistan. *Geotechnical and Geological Engineering*, 40(8), 4069-4081.
3. Ahmed, L. and **Akram, M.S.** (2022). Durability Based Classification and Characterization of the Rocks of the Sub-Himalayas, Pakistan. *Geotechnical and Geological Engineering* (Published online <https://doi.org/10.1007/s10706-022-02140-7>).
4. Ahmed, L. and **Akram, M.S.** (2022). Development of Kinematic Criterion for Undercutting Induced Rock Failures. *Journal of Earth Sciences and Technology*, Vol. 3 (2), 1–6
5. Salman, F. and **Akram, M.S.** (2021). Landslide susceptibility mapping using information value method in Jhelum Valley of the Himalayas. *Arabian Journal of Geosciences*, 14 (10), 01-16.
6. Salman, F. and **Akram, M.S.** (2021). Comparison of data-driven landslide susceptibility assessment using weight of evidence, information value, frequency ratio and certainty factor methods. *Acta Geodynamica et Geomaterialia*, 18, (3), 301–317.
7. Ehsan, M. I., Zhao, Y. H., Khalid, P., Azeem, T., Akram, N., **Akram, M.S.**, & Qi, Z. (2021). An improved Rock Physics Modeling approach to estimate attenuation and dispersion for three phase medium to delineate methane hydrates reserves. *Himalayan Geology*, 42(2), 256-262.
8. Ahmad, B., **Akram, M.S.**, Ahmed, N., Jamil, S., Hussain, M. (2020). Estimation of Local Stress Directions from slipped veins near Dasu, Khyber Pakhtunkhwa (KPK), Pakistan. *Himalayan Geology*, 41 (1), 63-72.

9. Ahmed, N., Alib, S. H., Ahmad, M., Khalid, P., Ahmad, B., **Akram, M. S.**, Farooq, S. & Din, Z. U. (2020). Subsurface structural investigation based on seismic data of the north-eastern Potwar basin, Pakistan. *Indian Journal of Geo-Marine Sciences*, 49 (07), 1258-1268
10. Ghazi, S., Ali, S.H., Shahzad, T., Ahmed, N., Khalid, P, **Akram S**, Ali, S., Sami, J. (2020). Sedimentary, structural and salt tectonic evolution of Karoli-Nilawahan area, Central Salt Range and its impact for the Potwar Province. *Himalayan Geology*, 41 (2), 145-156.
11. Ahmad, M., Ahmed, N., Khalid, P., Badar, M. A., **Akram, S.**, Hussain, M., ... & Rehman, A. U. (2019). Impact of pore fluid heterogeneities on angle-dependent reflectivity in poroelastic layers: A study driven by seismic petrophysics. *Geomechanics and Engineering*, 17(4), 343-354.
12. **Akram, M. S.**, Noor, A., Ullah, M. F., Ahmed, L., Rehman, F., & Ali, M. (2019). Squeezing Assessment Along 2.84-km-Long Headrace Tunnel of a Small Hydropower Project in KPK, Pakistan: Comparison of Different Methods. *International Journal of Geosynthetics and Ground Engineering*, 5(3), 19.
13. **Akram, M. S.**, Mirza, K., Ali, U., & Zeeshan, M. (2019). Geotechnical and Hydrological Characterization of Subsurface for Metallic Minerals Mining Operations in Punjab, Pakistan. *Open Journal of Geology*, 9(11), 752-767.
14. **Akram, M. S.**, Ullah, M. F., Rehman, F., Ali, M., Ahmed, L., & Gillani, A. A. (2019). Stability Evaluation of Slopes Using Kinematic and Limit Equilibrium Analyses in Seismically Active Balakot, KPK, Pakistan. *Open Journal of Geology*, 9(11), 795.
15. **Akram, M. S.**, Zeeshan, M., Haroon, M., & Mirza, K. (2019). Assessment of Rock Mass Quality and Support Estimation along Headrace Tunnel of a Small Hydropower in District Mansehra, Khyber Pakhtunkhwa, Pakistan. *Open Journal of Geology*, 9(11), 809.
16. **Akram, M. S.**, Mirza, K., Zeeshan, M., & Ali, I. (2019). Correlation of Tectonics with Geologic Lineaments Interpreted from Remote Sensing Data for Kandiah Valley, Khyber-Pakhtunkhwa, Pakistan. *Journal of the Geological Society of India*, 93(5), 607-613.
17. **Akram, M. S.**, Sharrock, G. B., & Mitra, R. (2019). Investigating mechanics of conglomeratic rocks: influence of clast size distribution, scale and properties of clast and interparticle cement. *Bulletin of Engineering Geology and the Environment*, 78(4), 2769-2788.
18. Ahmad, B., **Akram, S.**, Ahmed, N., & Jamil, S. (2018). Geological and geotechnical investigations at dam site for site characterization of 4320MW Dasu hydropower project, northern Pakistan. *HIMALAYAN GEOLOGY*, 39(2), 171-187.
19. **Akram, M. S.**, & Zeeshan, M. (2018). Rock Mass Characterization and Support Assessment along Power Tunnel of Hydropower in Kohistan Area, KPK, Pakistan. *Journal of the Geological Society of India*, 91(2), 221-226.
20. **Akram, M. S.**, Zeeshan, M., & Ali, A. (2018). Stability Analysis of Landslide near Dewal Village along Murree-Muzaffarabad Road, Pakistan. *Journal of the Geological Society of India*, 91(6), 729-735.
21. Ahmed, N., Kausar, T., Khalid, P., & **Akram, S.** (2018). Assessment of Reservoir Rock Properties from Rock Physics Modeling and Petrophysical Analysis of Borehole Logging Data to Lessen Uncertainty in Formation Characterization in Ratana Gas Field, Northern Potwar, Pakistan. *Journal of the Geological Society of India*, 91(6), 736-742.
22. **Akram, M. S.**, Mirza, K., Zeeshan, M., & Jabbar, M. A. (2018). Assessment of Rock Mass Quality and Deformation Modulus by Empirical Methods along Kandiah River, KPK, Pakistan. *Open Journal of Geology*, 8(10), 947.
23. **Akram, M. S.**, Mirza, K., Zeeshan, M., Ali, M., & Ahmed, L. (2018). Geotechnical Investigation and Prediction of Rock Burst, Squeezing with Remediation Design by Numerical Analyses along Headrace Tunnel in Swat Valley, Khyber Pakhtunkhwa, Pakistan. *Open Journal of Geology*, 8(10), 965.
24. Saleem, U., **Akram, M. S.**, Ullah, M. F., & Rehman, F. (2018). Accurate Imputation for Relative Humidity over Pakistan Gathered from AQUA Satellite. *Open Journal of Geology*, 8(10), 987.
25. Saleem, U., **Akram, M. S.**, Ullah, M. F., Rehman, F., & Khan, M. R. (2018). AQUA Satellite Data and Imputation of Geopotential Height: A Case Study for Pakistan. *Open Journal of Geology*, 8(10), 1002.
26. Khalid, P., Ehsan, M. I., **Akram, S.**, Din, Z. U., & Ghazi, S. (2018). Integrated Reservoir Characterization and Petrophysical Analysis of Cretaceous Sands in Lower Indus Basin, Pakistan. *Journal of the Geological Society of India*, 92(4), 465-470.

27. **Akram, M. S.**, Ahmed, L., Farooq, S., Ahad, M. A., Zaidi, S. M. H., Khan, M., & Azhar, M. U. (2018). Geotechnical evaluation of rock cut slopes using basic Rock Mass Rating (RMR basic), Slope Mass Rating (SMR) and Kinematic Analysis along Islamabad Muzaffarabad Dual Carriageway (IMDC), Pakistan. *Journal of Biodiversity and Environmental Sciences*, 13(1), 297–306.
28. **Akram, M. S.**, Mirza, K., Iqbal, A., & Zeeshan, M. (2018). Development and validation of portable electronic sensor to detect the soil moisture for geotechnical investigations. 13(4), 63–72.
29. Mirza, K., **Akram, M. S.**, Khan, D., & Khalil, K. (2018). Integrated microfacies analysis of lower Paleogene carbonate rocks of Kasanwala area , Western Salt Range , North Western. 13(4), 1–15.
30. Mirza, K., S. M., Siddiqi, M. I., **Akram, M. S.**, & Zeeshan, M. (2018). Microfacies analysis and reservoir characters of eocene carbonates of Potwar Deformed Zone (NPDZ), Sub-Himalayas , Pakistan. 13(4), 88–100.
31. Dasti, N., **Akram, S.**, Ahmad, I., & Usman, M. (2018). Rock Fractures Characterization in the Khairi Murat Range, Sub Himalayan Fold and Thrust Belt, North Pakistan. *The Nucleus*, 55(3), 115-127.
32. **Akram, M. S.**, Ahmed, L., Ullah, M. F., Rehman, F., & Ali, M. (2018). Numerical Verification of Empirically Designed Support for a Headrace Tunnel. *Civil Engineering Journal*, 4(11), 2575-2587.
33. **Akram, M. S.**, Zeeshan, M., Mirza, K., Ahmed, L., Noor, A., & Ali, M (2018). Slope stability analyses using classification systems and numerical methods: case study from Lower Dir, Khyber Pakhtunkhwa, Pakistan.
34. Ullah, M. F., Alamri, A. M., Mehmood, K., **Akram, M. S.**, Rehman, F., Rehman, S. U., & Riaz, O. (2018). Coal mining trends, approaches, and safety hazards: a brief review. *Arabian Journal of Geosciences*, 11(21), 651.
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Conference Publications

1. Akram, M.S. (2023). Role of Institute of Geology, University of the Punjab in investigating the Landslides- Keynote Speaker at National Conference on Landslides organized by Geological Survey of Pakistan (June 07, 2023)
2. Ahmed, L. and Akram, M.S. (2022). Development of Kinematic Criterion for Undercutting Induced Rock Failures. 7th Pakistan Geological Congress (PGC), March 16-18, 2022, Lahore, Pakistan.
3. Ahmed, L. and Akram, M.S. (2021). Kinematic Stability Evaluation of the Cut Slopes along Islamabad-Muzaffarabad Dual Carriageway (IMDC), Pakistan. *Mediterranean Geosciences Union (MedGU), Annual Meeting, Istanbul, Turkey 25-28 November 2021.*
4. Ali, S., Akram, M. S. & Haider, R. (2018). A Comparative Evaluation of Indirect Methods to Estimate the Compressive Strength of Limestone (Chorgali Formation). In: Hoyos L., McCartney J. (eds) *Advances in*

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5. Rehman, A., Akram, M. S. & Zafar, T. (2017). Physical Characterization of the Wargal Limestone, Barai Nala Section, Amb Sharif, Central Salt Range, Sub-Himalayas, Pakistan. International Conference on Mining and Fuel Industries (CMFI-2017) October, 19-21, 2017, Sheikh Zayed Islamic Research Centre, Karachi, Pakistan
 6. Akram, M. S. & Iqbal, A. (2017). Development of Portable Instant Soil Moisture Content Sensor. International Conference for New Challenges in Geo-technical Engineering (ICNCGE), FAST-NUCES Lahore Pakistan. January 23-24, 2017
 7. Elahi, I. & Akram, M. S. (2017). Estimating Soil Depth to Bedrock for Seismic Site Characterization. International Conference for New Challenges in Geo-technical Engineering (ICNCGE), FAST-NUCES Lahore Pakistan. January 23-24, 2017
 8. Akram, M. S., Azhar, M. U. & Farooq, S. (2014). Prediction of Uniaxial Compressive Strength (UCS) of Sakesar Limestone in Salt Range - Pakistan by Indirect Methods. International Conference on Earth Science Pakistan
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 10. Farooq, M. S., Akram, M. S., Farooq, S. & Kashif, H. M. (2013). Geotechnical studies and stability analysis of Miachar Landslide in Hunza valley, Baltistan, Pakistan. In Proc. 13th National Conference on Geotechnical Engineering, March 14-15, 2013, Lahore, Pakistan
 11. Elahi, I. & Akram, M. S. (2013). SRTM based prediction of the overburden thickness on the rock Engineering, March 14-15, 2013, Lahore, Pakistan
 12. Akram, M. S., Sharrock, G. & Mitra, R. (2011). Physical and numerical investigation of conglomerates. 2nd International FLAC/DEM Symposium, February 14-16, 2011, Melbourne, Australia.
 13. Akram, M. S., Sharrock, G. & Mitra, R. (2011). The role of interstitial cement in cemented spheres. 2nd International FLAC/DEM Symposium, February 14-16, 2011, Melbourne, Australia.
 14. Akram, M. S. & Sharrock, G. (2009). Physical and numerical investigation of a cemented granular assembly under uniaxial and triaxial compression. The 43rd US Rock Mechanics Symposium and 4th U.S. - Canada Rock Mechanics Symposium June 28 – July 1, 2009, Asheville, ARMA09-024 (CD-ROM), Paper No. 24.
 15. Sharrock, G. B., Akram, M. S. & Mitra, R. (2009). Application of synthetic rock mass modeling to estimate the strength of jointed sandstone. The 43rd US Rock Mechanics Symposium and 4th U.S. - Canada Rock Mechanics Symposium June 28 – July 1, 2009, Asheville, ARMA09-059 (CD-ROM), Paper No. 59.

LANGUAGES AND DEGREE OF PROFICIENCY

English - Fluent in speaking, reading and writing (Medium of Instructions in higher education).

Urdu - Fluent in speaking, reading and writing (National Language- Pakistan).

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