

HAFEEZUR REHMAN

ASSOCIATE PROFESSOR



CONTACT

+923028579781

hafeezur.rehman@buitms.edu. pk

Balochistan University of
Information Technology,
Engineering and Management
Sciences (BUIITEMS), Quetta,
Pakistan

LANGUAGE

English (Fluent)

Urdu (Fluent)

Pashto (Native)



PROFILE

Dr. Hafeezur Rehman serves as an Associate Professor in the Mining Engineering Department at BUIITEMS, with prior experience as the department chair. Holds a Ph.D. in tunnel design at great depth from Hanyang University, South Korea (2020), and completed a one-year fellowship at Universiti Sains Malaysia. Possesses both academic and field experience in mining and tunneling across national and international organizations since 2007. Published over 50 research papers in renowned international journals.



WORK EXPERIENCE

Department of Mining Engineering, BUIITEMS Quetta

Associate Professor

12/2021 – CURRENT

- Instruct students at undergraduate and graduate levels in the Mining and Geological Engineering departments.
- Oversee research projects for both undergraduate and graduate students.
- Research collaboration with the Geotechnical Engineering Lab at Hanyang University, South Korea, and the school of Materials and Mineral Resources Engineering at USM, Malaysia.
- Write proposals for research grants.

Department of Mining Engineering, BUIITEMS Quetta

Chairperson

01/2022 – 02/2024

- Oversaw quality education and research in the mining engineering department at both undergraduate and graduate levels.
- Transitioned the curriculum from a traditional semester system to a student-centered OBE education system, aligning it with the university's vision and mission, and restructured it to meet established standards.
- Ensured the department met the KPIs set by PEC (Pakistan Engineering Council) Pakistan for OBE-based program accreditation.
- At the graduate (MS) level, ensured teaching and research activities adhered to the standards set by the university and HEC for quality education and research.
- Completed the documentations and applied for the NOC from HEC Pakistan for the PhD program in the Department during my tenure.
- Actively engaged with industry through university-industry collaborations, facilitating student internships, organizing field visits, and promoting research partnerships.
- Participated in various academic committees and contributed to curriculum revisions at both the national and departmental levels.



University Sains Malaysia

07/2022 – 06/2023

Academic Fellow, School of Materials and Mineral Resources Engineering

- Collaborated with faculty members and graduate students from the School of Materials and Mineral Resources Engineering.
- Published articles in collaboration with the school.
- Delivered lectures as assigned by the head of the school.
- Actively participated in a research project.

Department of Mining Engineering, BUITEMS Quetta

01/2013 – 12/2021

Lecturer

- Taught undergraduate courses like Mining Engineering Fundamentals, Excavation, Drilling and Blasting, Tunnel Engineering, Mine Safety, and Mining Laws.
- Played a key role in establishing laboratories for the mining engineering program, including Mine Hazards and Safety Lab, Rock Mechanics Lab, Mineral Characterization Lab, and Mineral Processing Lab

Pakistan Mineral Development Corporation, Quetta

02/2012 –
12/2012

Assistant Manager (Mining)

- Underground blast design for the mine development.
- Control production costs while maintaining safety standards.
- Implement comprehensive safety measures in mining operations to protect personnel and equipment.
- Oversee the installation and maintenance of repair and support systems with a focus on safety.
- Manage natural and mechanical ventilation systems in the underground working environment.
- Supervise mine safety protocols and rescue room operations, emphasizing preparedness and rapid response.
- Ensuring compliance with state and provincial laws and regulations for underground coal mining.
- maintain organized documentation and records

NASH Consulting Management Service PLC, Ethiopia

06/2011 – 02/2012

Mining Engineer

- Designing the pioneer underground coal mine.
- Training local personnel in mining operations and educating them on safety protocols.
- Ensuring the project is executed safely and economically.
- Selecting appropriate mining and safety equipment and machinery.
- Managing project documentation.
- Establishing a mine rescue and safety station

Pakistan Mineral Development Corporation, Quetta

08/2010 – 06/2011

Mining Engineer

- Manage shift operations during underground coal mining.
- Oversee development and production activities, ensuring adherence to safety standards and protocols.
- Verified that support systems are installed according to design specifications.
- Handle repair and maintenance tasks for underground excavations.
- Measure and test the underground environment for both qualitative and quantitative assessments.
- Maintain records in registers as required by law.



High Technology Engineering Company PVT. Ltd Islamabad

12/2007 – 06/2010

Mining Engineer

- Drill and blast design for Adit excavation.
- Monitor and manage the ventilation system in adits.
- Enforce safety measures during drilling, charging, blasting, mucking, and support system installation.
- Ensure that the storage, transportation, handling, and use of explosives and accessories comply with state regulations.
- Verify that working conditions inside and outside the adits are safe for workers.
- Maintain organized documentation and records.
- Check that work is performed according to contract specifications.
- Prepare billing for Adit-related work.
- Apply reinforcement and support as needed for excavation.



EDUCATION

Doctor of Philosophy (PhD)

08/2020

Hanyang University, South Korea

Thesis: Evaluation of rock mass classification systems for tunnel support design and their extension to highly stressed jointed rock mass environment

Website: www.hanyang.ac.kr

Bachelor of Science (B.Sc.)

11/2007

Mining Engineering, N.W.F.P. University of Engineering and Technology, Peshawar

Website: www.uetpeshawar.edu.pk

Professional Competency Enhancement Training Program

02/2013

BUIITEMS, Quetta

Website: www.buitms.edu.pk

Underground Space Utilization and Tunneling

06/2012

NUST Institute of Civil Engineering, Islamabad

Website: www.nice.nust.edu.pk

Mine Rescue Training

12/2010

Inspectorate of Mines, Baluchistan

Website: www.mmd.balochistan.gov.pk

Surveying Training Course

04/2007

Civil Engineering Department of Engineering and Technology, Peshawar

Website: www.uetpeshawar.edu.pk



RESEARCH PROJECTS

- During my doctoral studies, I participated in various research projects led by my supervisor, Prof. Hankyu Yoo. As the principal investigator of these projects, Prof. Yoo guided my involvement, and my responsibilities were either researcher or research assistant.
- **Project:** Advancement of city Safety impact assessment Technology due to underground transportation infrastructure construction
Funder: Korea Agency for Infrastructure Technology advancement
Role in the project: Research Assistant
- **Project:** Development of optimal pre-cutting technology for expansion of existing tunnels
Funder: National Research Foundation of Korea
Role in the project: Research Assistant
- **Project:** KALAM ASRIT Hydropower Project Feasibility Study Geological and General Field Technical Advisory Research
Funder: SAMAN CORPORATION, South Korea
Role in the Project: Researcher
- **Project:** TBM composite ground simulation test
Funder: HYUNDAI E&C, South Korea
Role in the Project: Researcher
- **Project:** Development of design and construction technology for deep multi-layered tunnels
Funder: Korea Agency for Infrastructure Technology Advancement
Role in the project: Research Assistant

key academic merits

- Member of the Mining Engineering Curriculum Review & Development Committee at National level (Pakistan)
- Member of the Board of studies, Department of Mining Engineering, BUIITEMS Quetta
- Member of the industrial Advisory board, Department of Mining Engineering BUIITEMS Quetta
- Peer review of the research funding program of Pakistan Science Foundation (PSF)
- Referee/reviewer of different journals
- Member of the technical committee "Capacity building of the officers of Mines and Minerals Development Department", constituted by the government of Baluchistan.
- Member of the technical committee "HR Plan Development in Mineral Sector of Pakistan



PUBLICATIONS(Selected)

1. **Rehman, H., Naji, A. M., Kim, J. J., & Yoo, H. (2019).** Extension of tunneling quality index and rock mass rating systems for tunnel support design through back calculations in highly stressed jointed rock mass: An empirical approach based on tunneling data from Himalaya. *Tunnelling and Underground Space Technology*, 85, 29-42. 2.
2. **Rehman, H., Ali, W., Naji, A. M., Kim, J. J., Abdullah, R. A., & Yoo, H. K. (2018).** Review of rock-mass rating and tunneling quality index systems for tunnel design: Development, refinement, application and limitation. *Applied sciences*, 8(8), 1250. 3.
3. **Rehman, H., Naji, A. M., Ali, W., Junaid, M., Abdullah, R. A., & Yoo, H. K. (2020).** Numerical evaluation of new Austrian tunneling method excavation sequences: A case study. *International Journal of Mining Science and Technology*, 30(3), 381-386. 4. **Naji, A. M., Emad, M. Z.,**
4. **Rehman, H., & Yoo, H. (2019).** Geological and geomechanical heterogeneity in deep hydropower tunnels: A rock burst failure case study. *Tunnelling and Underground Space Technology*, 84, 507-521. 5.
5. **Rehman, H., Naji, A. M., Kim, J. J., & Yoo, H. K. (2018).** Empirical evaluation of rock mass rating and tunneling quality index system for tunnel support design. *Applied Sciences*, 8(5), 782. 6.
6. **Rehman, H., Naji, A. M., Nam, K., Ahmad, S., Muhammad, K., & Yoo, H. K. (2021).** Impact of construction method and ground composition on headrace tunnel stability in the Neelum-Jhelum Hydroelectric Project: A case study review from Pakistan. *Applied Sciences*, 11(4), 1655




Research supervision (Completed)

- Field/co-supervisor: Micro and macro-scale failure behavior of sandstone subjected to quasi-static loadings (Ph. D. 2022)
- Supervisor: Tunnel stability evaluation using empirical approaches and numerical modelling in different rock mass conditions (MS, 2021),
- Supervisor: Comparison of support systems from widely used empirical systems by numerical analysis for the headrace tunnel of Bunji hydropower project (MS, 2022)
- Supervisor: Comparison between conventional and mechanized methods of marble quarrying at Nall Khuzdar region of Baluchistan (MS, 2022)



HONOURS AND AWARDS

- 
- Winner of HEC Pakistan scholarship for MS leading to PhD from South Korea in 2015
 - Class Position winner in the four years of Bachelor's in Mining Engineering
 - HEC Pakistan Approved PhD Supervisor