

# Dr. Asif Khan

Assistant professor (Department of Materials Science and Engineering)

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## Education

- PhD (2015): Institute of Mining Engineering III (BBK III), RWTH Aachen University, Germany.  
Thesis title: Development of new Meta heuristic tools for Long Term Production Scheduling of Open Pit Mines.
- M.Sc. (2010): Computational Engineering, Faculty of Civil and Environmental Engineering, Ruhr University Bochum, Germany. Thesis title: Experimental Investigations of Dispersive Waves in Granular Media.
- B.Sc. (2005): Department of Mining Engineering, University of Engineering and Technology Peshawar.  
Thesis title: Identification and Prevention of Hazards in a Cement Quarry.

## Experience

- November 2020 to date, Assistant professor, Department of Materials Science and Engineering, PAF-IAST, Mang, Haripur, Khyber Pakhtunkhwa.
- April 2017 – November 2020, Assistant Professor, Department of Mining Engineering, Karakoram International University, Gilgit, Gilgit - Baltistan.
- January 2016 – January 2017, Assistant Professor, Department of Mining Engineering, UET Peshawar, Khyber Pakhtunkhwa.
- December 2006 – July 2008, Junior Mining Engineer, Pakistan Atomic Energy Commission (PAEC), DG Khan.
- May – September 2006, Quarry Engineer, Pakistan Motorway Contractor-Joint Venture, Nowshera, Pakistan

## Projects & Awards

- 2018 Co-PI: Design, Development and Deployment of Mineral Cadaster and Mine Planning and Design System, HEC project Establishment of Technology Development Fund (TDF), Worth (PKR): 10.6 Million
- 2018 Co-PI: AI in Mineral Resource Estimation and Mine Planning, Planning Commission and Higher Education of Pakistan, Worth (PKR): 170 Million

## Patent & Publications

09 International Publications, 08 in ISI indexed journals, impact factor of 33, citations 100, h-index 6:

- **Asif Khan** and Christian Niemann-Delius , “*A Differential Evolution based approach for the production scheduling of the open pit mines with or without the condition of grade uncertainty*” Applied Soft Computing, Volume 66, May 2018,
- **Asif Khan**, “*Long Term Production Scheduling of Open Pit Mines using Particle Swarm and Bat Algorithms under grade uncertainty*”, The Southern African Institute of Mining and Metallurgy, Volume 118, April 2018,
- **Asif Khan** & Mohammad Waqar Asad, “*A mathematical programming model for optimal cut-off grade policy in open pit mining operations with multiple processing streams*” International Journal of Mining, Reclamation and Environment, 2018
- **Asif Khan** and Mohammad Waqar Asad, “*A method for optimal cut-off grade policy in open pit mining operations under uncertain supply*”. Resources Policy 60 (2019)
- **Asif Khan** and Mohammad Waqar Asad, “*An optimal cut-off grade policy under diverse stockpile handling strategies in open-pit mining operations*”. International Journal of Mining, Reclamation and Environment, 2020
- Abid Ali Khan Danish, **Asif Khan**, Khan Muhammad, Waqas Ahmed, Saad Salman, “*A Simulated Annealing based approach for open pit mine production scheduling with stockpiling option*” Resources Policy (2021).
- Saad Salman, Khan Muhammad, **Asif Khan**, Hylke J. Glass, “*A Block Aggregation Method for Short-Term Planning of Open Pit Mining with Multiple Processing Destinations*” Minerals, volume 11, issue 3 (2021)
- **Asif Khan** and Mohammad Waqar Asad, “*A mixed integer programming based cut-off grade model for open-pit mining of complex poly-metallic resources*”. Resources Policy, Volume 72, August 2021.