



## Publications 2021

1. Din SU, **Muhammad K**, Khan MFA, Bashir S, Sajid M, Khan A. A Fusion of Feature-Oriented Principal Components of Multispectral Data to Map Granite Exposures of Pakistan. *Applied Sciences*. 2021; 11(23):11486. <https://doi.org/10.3390/app112311486>
2. AAK Danish, Khan A, **Muhammad K**, Ahmad W, and Salman S. A simulated annealing based approach for open pit mine production scheduling with stockpiling option, *Resources Policy*, Volume 71, 2021, 102016, ISSN 0301-4207, <https://doi.org/10.1016/j.resourpol.2021.102016>.
3. Salman S, **Muhammad K**, Khan A, Glass HJ. A Block Aggregation Method for Short-Term Planning of Open Pit Mining with Multiple Processing Destinations. *Minerals*. 2021; 11(3):288. <https://doi.org/10.3390/min11030288>
4. B. Khurshid, S. Maqsood, M. Omair, B. Sarkar, I. Ahmad and **K. Muhammad**, "An Improved Evolution Strategy Hybridization With Simulated Annealing for Permutation Flow Shop Scheduling Problems," in *IEEE Access*, vol. 9, 2021, pp. 94505-94522. <https://doi.org/10.1109/ACCESS.2021.3093336>
5. Rehman H, Najji AM, Nam K, Ahmad S, **Muhammad K**, Yoo H-K. 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*. 2021; 11(4):1655. <https://doi.org/10.3390/app11041655>
6. Khan MFA, **Muhammad K**, Bashir S, Ud Din S, Hanif M. Mapping Allochemical Limestone Formations in Hazara, Pakistan Using Google Cloud Architecture: Application of Machine-Learning Algorithms on Multispectral Data. *ISPRS International Journal of Geo-Information*. 2021; 10(2):58. <https://doi.org/10.3390/ijgi10020058>



## Conferences

1. Keynote Speaker at 1st IEEE international Conference on Artificial Intelligence organized by National Centre of AI at NUST, Islamabad 5-7 April 2021 "AI products for Minerals Industry developed at Intelligent Information Processing Lab"
2. Exploration of geosciences using advanced geo-information tool Conference. Organized by GIS & Space Application in Geosciences Lab c

National Centre of Excellence in Geology University of Peshawar June 25, 2021 "From AI based 2D mapping to 3D geological Modelling."

3. Invited speaker at 3rd International Symposium on Chemical and Mineral Resource Engineering (ISCMRE'21). Organized by Pakistan Institute of Engineering and Applied Sciences Islamabad Pakistan. 26 and 27 October 2021. "AI based solutions for the Minerals Industry".
4. Young geoscientists Conference, University of Exeter, UK 10 Oct, 2007  
"Predicting geology using fuzzy logic"
5. UK Minerals Conference, Imperial College, London, UK 9-10 Sep, 2007  
"Application of Fuzzy Logic in Mineral Resource Estimation"



## Publications 2020

1. Ahmed W, **Muhammad K**, Siddiqui, FI. Predicting Calorific Value of Thar Lignite Deposit: A Comparison between Back-propagation Neural Networks (BPNN), Gradient Boosting Trees (GBT), and Multiple Linear Regression (MLR), Applied Artificial Intelligence. 2020; 34:14, 1124-1136, <https://doi.org/10.1080/08839514.2020.1824091>



## Publications 2018

1. Khan, MAZ, Kamran M, **Muhammad, K.** Identification of the Optimal Operating Parameters of Locally Available Coal for Use in Pakistani Industries. JOURNAL OF ENGINEERING AND APPLIED SCIENCES. 2018; 37(1), 20-25. Retrieved from <https://journals.uetjournals.com/index.php/JEAS/article/view/2865>



## Publications 2017

1. **Muhammad K**, Shah, A. Minimizing Backbreak at Deewan Cement Limestone Quarry using artificial Neural Network. Archives of Mining Sciences. 2017; 62(4): 795-806. <https://doi.org/10.1515/amsc-2017-0055>



## Publications 2016

1. Abbas N, **Muhammad K**. Optimization of Operating and Design Parameters of Water only Cyclone using Cherat Coal in Pakistan. J Nucl Ene Sci Power Generat Technol. 2016; 5:2 <https://doi.org/10.4172/2325-9809.1000149>



## Publications 2015

2. **Muhammad K**, Mohammad N, Rehman F. Modeling Shotcrete Mix Design using Artificial Neural Network. Computers and Concrete. 2015; 15(2):1-20. <https://doi.org/10.12989/CAC.2015.15.2.167>



## Publications 2012

3. Usman T, **Muhammad K**. Analysis of Blasting Operation at Deewan Cement Quarry, Hattar: Principal Component Analysis. JEAS. 2012; 12(1):1-10.



## Publications 2011

4. **Muhammad K**, Glass HJ. Modelling Short-Scale Variability and Uncertainty During Mineral Resource Estimation Using a Novel Fuzzy Estimation Technique. Geostandards and Geoanalytical Research. 2011; 35: 369–385. <https://doi.org/10.1111/j.1751-908X.2010.00051.x>