

Naseer Muhammad Khan

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About

Dr. Naseer Muhammad Khan is working as Assistant Professor in the Military College of Engineering. Dr. Naseer Muhammad Khan has a PhD in Mining Engineering. Dr. Naseer Muhammad Khan has published 38 research articles & conference papers having a citation count of 355, carried out 0 projects and filed 0 intellectual property.

Qualifications

PhD in Mining Engineering	2019 - 2022
China University of Mining Technology - Beijing , China	
MS in Mining Engineering	2014 - 2016
UET Peshawar , Pakistan	
BS in Mining Engineering	2010 - 2014
UET Peshawar , Pakistan	

Experience

Assistant Professor	2022- Present
Military College of Engineering	
Lecturer	2022 - 2022
Military College of Engineering	
Lecturer	2017 - 2022
BUIITEMS, Quetta , BUIITEMS, Quetta	
Mining Engineer	2014 - 2016
Kakul Mining , Opposite meat market first floor supply bazar Abbottabad	

Research Articles

Predicting residual strength of hybrid fibre-reinforced Self-compacting concrete (HFR-SCC) exposed to elevated temperatures using machine learning	2025
Muhammad Saud Khan Liqiang Ma Waleed Bin Inqiad Majid Khan Naseer Muhammad Khan Saad S. Alarifi	
Case studies in construction materials , Volume:22, Article Number e04112	
Impact Factor: 6.500 Quartile: 1 Citations: 9	
DOI: https://doi.org/10.1016/j.cscm.2024.e04112	
Interpretable machine learning approaches to assess the compressive strength of metakaolin blended sustainable cement mortar	2025
Naseer Muhammad Khan Liqiang Ma Waleed Bin Inqiad Muhammad Saud Khan Imtiaz Iqbal Muhammad Zaka Emad Saad S. Alarifi	
Scientific Reports , Volume:15, Issue:1, Article Number: 19414	
Impact Factor: 3.900 Quartile: 1 Citations: 2	
DOI: https://doi.org/10.1038/s41598-025-01327-1	
Soft-computing models for predicting plastic viscosity and interface yield stress of fresh concrete	2025
Waleed Bin Inqiad Muhammad Faisal Javed Deema Mohammed Alsekait Naseer Muhammad Khan Majid Khan Fahid Aslam Daa Salama Abd Elminaam	
Scientific Reports , Volume:15, Article Number: 10740	
Impact Factor: 3.9 Quartile: 1	
DOI: https://doi.org/10.1038/s41598-024-77490-8	
Spatiotemporal early prediction of rock damage in rock engineering based on infrared radiation monitoring technology	2025
Qiangqiang Gao Liqiang Ma Wei Liu Naseer Muhammad Khan Xiuzhe Wang Yanxiao Ni Kunpeng Yu Saad S. Alarifi	
Engineering Fracture Mechanics , Volume:315, Article Number 110811	

Impact Factor: 4.700 Quartile: 1 Citations: 2 DOI: https://doi.org/10.1016/j.engfracmech.2025.110811	
Utilizing contemporary machine learning techniques for determining soilcrete properties <i>Waleed Bin Inqiad Muhammad Saud Khan Naseer Muhammad Khan Zohaib Mehmood Muhammad Bilal Mohammed Sazid Saad S. Alarifi</i> <i>Earth Science Informatics</i> , Volume 18, Article Number 176 Impact Factor: 2.700 Quartile: 2 Citations: 4 DOI: https://doi.org/10.1007/s12145-024-01520-2	2025
A study of residents' behavior in participating in smart waste sorting system based on structural equation modeling <i>Ming Wang Kewang Cao Naseer Muhammad Khan Xiaoman Hu Yinuo Zhao Furong Dong</i> <i>Journal of Material Cycles and Waste Management</i> , Volume:27, Issue:1, Page:354-368 Impact Factor: 2.700 Quartile: 3 Citations: 1 DOI: 10.1007/s10163-024-02115-1	2025
Comparative study of statistical computational approaches to investigate the degraded compressive strength of concrete under the freeze-thaw effect <i>Yuanzhong Yang Naseer Muhammad Khan Muhammad Nasir Amin Ayaz Ahmad Kaffayatullah Khan Muhammad Tahir Qadir</i> <i>Case studies in construction materials</i> , Volume 21, Article Number e03744 Impact Factor: 6.500 Quartile: 1 DOI: https://doi.org/10.1016/j.cscm.2024.e03744	2024
Predicting compressive strength of hollow concrete prisms using machine learning techniques and explainable artificial intelligence (XAI) <i>Waleed Bin Inqiad Elena Valentina Dumitrascu Robert Alexandru Dobre Naseer Muhammad Khan Abbas Hussein Hammood Sadiq N. Henedy Rana Muhammad Asad Khan</i> <i>Heliyon</i> , Volume 10, Issue 17, Article Number e36841 Impact Factor: 3.400 Quartile: 1 Citations: 8 DOI: https://doi.org/10.1016/j.heliyon.2024.e36841	2024
Failure mode identification in reinforced concrete flat slabs using advanced ensemble neural networks <i>Mohammad Sadegh Barkhordari Hadi Fattahi Danial Jahed Armaghani Naseer Muhammad Khan Mohammad Afraz Panagiotis G. Asteris</i> <i>Multiscale and Multidisciplinary Modeling, Experiments and Design</i>, Pages 1-15 Impact Factor: 1.900 Quartile: 2 Citations: 6 DOI: 10.1007/s41939-024-00554-9	2024
Simulation Study on Value Cocreation Mechanism of Digital Creative Industry Innovation Ecosystem Based on SEM-SD Model <i>Kewang Cao Furong Dong Naseer Muhammad Khan Tariq Feroze Ahmed Sayed M. Metwally</i> <i>IEEE Transactions on Engineering Management</i>, Volume 71, Pages 11297-11314 Impact Factor: 4.600 Quartile: 1 Citations: 2 DOI: 10.1109/TEM.2024.3416304	2024
Comparison of boosting and genetic programming techniques for prediction of tensile strain capacity of Engineered Cementitious Composites (ECC) <i>Waleed Bin Inqiad Muhammad Faisal Javed Muhammad Shahid Siddique Naseer Muhammad Khan Loai Alkhatabi Maher Abuhussain Hisham Alabduljabbar</i> <i>Materials Today Communications</i> , Volume 39, Article Number 109222 Impact Factor: 3.7 Quartile: 2 Citations: 13 DOI: https://doi.org/10.1016/j.mtcomm.2024.109222	2024
Method for Rock Fracture Prediction and Early Warning: Insight from Fusion of Multi-Physics Field Information <i>Qiangqiang Gao Liqiang Ma Wei Liu Naseer Muhammad Khan Saad.S. Alarifi Mohammed Sazid Waleed Bin Inqiad</i> <i>Heliyon</i> , Volume 10, Issue 10, Article Number e30660 Impact Factor: 3.4 Quartile: 1 Citations: 16 DOI: https://doi.org/10.1016/j.heliyon.2024.e30660	2024
Analysis of fracture characteristics of saturated sandstone based on infrared radiation variance <i>Lixiao Hou Liqiang Ma Kewang Cao Naseer Muhammad Khan Xiujuan Feng Zhitao Zhang Anye Cao Dangliang Wang Xuebin Wang</i> <i>Physics and Chemistry of the Earth</i> , Volume 133, Article Number: 103517, Pages: 15 Impact Factor: 3.7 Quartile: 2 Citations: 6 DOI: 10.1016/j.pce.2023.103517	2024

Prediction of rock loading stages using average infrared radiation temperature under shear and uniaxial loading <i>Liqiang Ma Naseer Muhammad Khan Tariq Feroze Mohammed Sazid Kewang Cao Sajjad Hussain Qiangqiang Gao Saad.S. Alarifi Hui Wang</i> <i>Infrared Physics and Technology</i> , Volume 136, Article Number: 105084, Pages: 19 Impact Factor: 3.3 Quartile: 2 Citations: 15 DOI: 10.1016/j.infrared.2023.105084	2024
Predicting Sandstone Brittleness under Varying Water Conditions Using Infrared Radiation and Computational Techniques <i>Naseer Muhammad Khan Liqiang Ma Muhammad Zaka Emad Tariq Feroze Qiangqiang Gao Saad.S. Alarifi Li Sun Sajjad Hussain Hui Wang</i> <i>Water</i> , Volume:16, Issue: 1, Article Number: 143 Impact Factor: 3.4 Quartile: 2 Citations: 5 DOI: 10.3390/w16010143	2023
Quantitative characterization of constitutive model of mudstone under uniaxial loading after immersion in acid solution by infrared radiation <i>Liqiang Ma Naseer Muhammad Khan Kewang Cao Yanfa Wu Sajjad Hussain Dongdong Niu Saad.S. Alarifi</i> <i>Infrared Physics and Technology</i> , Volume 135, Article Number 104997 Impact Factor: 3.3 Quartile: 2 Citations: 6 DOI: 10.1016/j.infrared.2023.104997	2023
Investigating average infrared radiation temperature characteristics during shear and tensile cracks in sandstone under different water contents <i>Naseer Muhammad Khan Liqiang Ma Tariq Feroze Dangliang Wang Kewang Cao Qiangqiang Gao Hui Wang Sajjad Hussain Zhitao Zhang Saad.S. Alarifi</i> <i>Infrared Physics and Technology</i> , Volume 135, Article Number 104968 Impact Factor: 3.3 Quartile: 2 Citations: 6 DOI: 10.1016/j.infrared.2023.104968	2023
Infrared radiation constitutive model of sandstone during loading fracture <i>Kewang Cao Furong Dong Liqiang Ma Naseer Muhammad Khan Sajjad Hussain Danial Jahed Armaghani</i> <i>Infrared Physics and Technology</i> , Volume 133, Article Number 104755 Impact Factor: 3.3 Quartile: 2 Citations: 7 DOI: 10.1016/j.infrared.2023.104755	2023
Infrared radiation response mechanism of sandstone during loading and fracture process <i>Kewang Cao Furong Dong Yihe Yu Naseer Muhammad Khan Sajjad Hussain Saad.S. Alarifi</i> <i>Theoretical and Applied Fracture Mechanics</i> , Volume 126, Article Number 103974 Impact Factor: 5.3 Quartile: 1 Citations: 13 DOI: https://doi.org/10.1016/j.tafmec.2023.103974	2023
Precursors of Cyclic Loading and Unloading Sandstone Failure Based on “Acoustic-Thermal” Loading–Unloading Response Ratio <i>Hao Xu Liqiang Ma Kewang Cao Naseer Muhammad Khan Sajjad Hussain Dongdong Niu Saad.S. Alarifi Sher Bacha</i> <i>Sustainability</i> , Volume 15, Issue 13, Article Number 10158 Impact Factor: 3.9 Quartile: 2 Citations: 8 DOI: 10.3390/su151310158	2023
Research on the denoising method of infrared thermogram during rock fracture <i>Qiangqiang Gao Liqiang Ma Wei Liu Naseer Muhammad Khan Guanghui Cao Yumiao Fang Hui Wang</i> <i>Infrared Physics and Technology</i> , Volume 131, Article Number 104651 Impact Factor: 2.999 Quartile: 2 Citations: 13 DOI: 10.1016/j.infrared.2023.104651	2023
Appraisal of Different Artificial Intelligence Techniques for the Prediction of Marble Strength <i>Muhammad Saqib Jan Sajjad Hussain Rida e Zahra Muhammad Zaka Emad Naseer Muhammad Khan Zahid Ur Rehman Kewang Cao Saad.S. Alarifi Salim Raza Saira Sherin Muhammad Salman</i> <i>Sustainability</i> , Volume 15, Issue 11, Article Number 8835 Impact Factor: 3.9 Quartile: 2 Citations: 14 DOI: https://doi.org/10.3390/su15118835	2023
Infrared Precursor Experiment to Predict Water Intrushes in Underground Spaces Using a Multiparameter Normalization <i>Kewang Cao Furong Dong Liqiang Ma Naseer Muhammad Khan Tariq Feroze Saad.S. Alarifi Sajjad Hussain Muhammad Ali</i> <i>Sustainability</i> , Volume 15, Issue 9, Article Number 7570 Impact Factor: 3.9 Quartile: 2 Citations: 9	2023

DOI: doi.org/10.3390/su15097570

A comprehensive model for evaluating infrared radiation and acoustic emission characteristics of sandstone fracture 2023

Kewang Cao Yujun Xu Naseer Muhammad Khan Xinci Li Ruoyu Cui Sajjad Hussain Danial Jahed Armaghani Saad S. Alarifi
Engineering Fracture Mechanics , Volume 283, Article Number 109217

Impact Factor: 4.898 | **Quartile:** 1 | **Citations:** 21

DOI: <https://doi.org/10.1016/j.engfracmech.2023.109217>

Prediction of Coal Dilatancy Point Using Acoustic Emission Characteristics: Insight Experimental and Artificial Intelligence Approaches 2023

Muhammad Ali Naseer Muhammad Khan Qiangqiang Gao Kewang Cao Danial Jahed Armaghani Saad.S. Alarifi Hafeezur Rehman Izhar Mithal Jiskani
Mathematics , Volume 11(6), Article Number 1305

Impact Factor: 2.592 | **Quartile:** 1

DOI: https://qalam.nust.edu.pk/faculty/nrp/journal_paper/mgmt

Infrared radiation denoising model of “sub-region-Gaussian kernel function” in the process of sandstone loading and fracture 2023

Kewang Cao Furong Dong's Wei Liu's Naseer Muhammad Khan Ruoyu Cui Xinci Li Sajjad Hussain Saad S. Alarifi Dongdong Niu
Infrared Physics and Technology , Volume 129, Article Number 104583

Impact Factor: 2.997 | **Quartile:** 2 | **Citations:** 14

DOI: <http://dx.doi.org/10.1016/j.infrared.2023.104583>

Investigation of the acoustic emission and fractal characteristics of coal with varying water contents during uniaxial compression failure 2023

Muhammad Ali Enyuan Wang Zhonghui Li Naseer Muhammad Khan Mohanad Muayad Sabri Sabri Barkat Ullah
Scientific Reports , Volume 13, Issue 1, Article Number 2238

Impact Factor: 4.996 | **Quartile:** 2 | **Citations:** 20

DOI: <https://doi.org/10.1038/s41598-023-29473-4>

Precursory Analysis of Water-Bearing Rock Fracture Based on The Proportion of Dissipated Energy 2023

Lixiao Hou Kewang Cao Naseer Muhammad Khan Danial Jahed Armaghani Saad S. Alarifi Sajjad Hussain Muhammad Ali
Sustainability (Switzerland) , Volume 15, Issue 3, Article Number 1769

Impact Factor: 3.889 | **Quartile:** 2 | **Citations:** 4

DOI: <http://dx.doi.org/10.3390/su15031769>

Analytical Damage Model for Predicting Coal Failure Stresses by Utilizing Acoustic Emission 2023

Muhammad Ali Enyuan Wang Zhonghui Li Xiaoran Wang Naseer Muhammad Khan Zesheng Zang Saad S Alarifi Yewuhalashet Fissha
Sustainability (Switzerland) , Volume 15, Issue 2, Article Number1236

Impact Factor: 3.889 | **Quartile:** 2 | **Citations:** 15

DOI: <http://dx.doi.org/10.3390/su15021236>

Research on Leakage Detection at the Joints of Diaphragm Walls of Foundation Pits Based on Ground Penetrating Radar 2022

Yi Xu Naseer Muhammad Khan Hafeezur Rehman Sajjad Hussain Rana Muhammad Asad Khan Muhammad Zaka Emad Kewang Cao Mohd Hazizan Bin Mohd Hashim Saad.S. Alarifi Ruoyu Cui Xinci Li
Sustainability , Volume 15, Issue 1, Article Number 506

Impact Factor: 3.889 | **Quartile:** 2 | **Citations:** 4

DOI: 10.3390/su15010506

The Infrared Radiation Characteristics of Sandstone Fracture Seepage under Coupled Stress-Hydro Effect 2022

Ruoyu Cui Kewang Cao Xinci Li Rana Muhammad Asad Khan Naseer Muhammad Khan Wei Liu Qiangqiang Gao Fagang Wang Yuanzhong Yang Jiangbo Quan Saad S. Alarifi
Sustainability , Volume 14, Issue 24, Article Number 16454

Impact Factor: 3.889 | **Quartile:** 2 | **Citations:** 8

DOI: doi.org/10.3390/su142416454

Appraisal of rock IR law and damage precursor: Insight infrared thermogram entropy 2022

Qiangqiang Gao Liqiang Ma Wei Liu Kewang Cao Zhiyang Zhao Naseer Muhammad Khan
Infrared Physics and Technology , Volume 127, Article Number 104443

Impact Factor: 2.997 | **Quartile:** 2 | **Citations:** 11

DOI: doi.org/10.1016/j.infrared.2022.104443

Statistics and Machine Learning Techniques

Mohamed Elgharib Gomah Guichen Li Naseer Muhammad Khan Changlun Sun Jiahui Xu Ahmed A. Omar B. G. Mousa Marzouk Mohamed Aly Abdelhamid M. M. Zaki

Mathematics , Volume 10, Issue 23, Article Number 4523

Impact Factor: 2.4 | **Quartile:** 1 | **Citations:** 8

DOI: doi.org/10.3390/math10234523

Evaluating the thermal-cooling induced effects on the Ambela granite properties (from Pakistan) using experimental and image processing techniques

2022

Naseer Muhammad Khan Liqiang Ma Kewang Cao Sajjad Hussain Asghar Ali Wei Liu Saad.S. Alarifi Kausar Sultan Shah Sajid Khan Yang Xiaoxu Yujun Xu

Bulletin of Engineering Geology and the Environment, Volume 81, Issue 12, Article Number: 506

Impact Factor: 4.130 | **Quartile:** 2 | **Citations:** 7

DOI: doi.org/10.1007/s10064-022-03019-w

An Appropriate Model for the Prediction of Rock Mass Deformation Modulus among Various Artificial Intelligence Models

2022

Sajjad Hussain Naseer Muhammad Khan Muhammad Zaka Emad Abdul Muntaqim Naji Kewang Cao Qiangqiang Gao Zahid Ur Rehman Salim Raza Ruoyu Cui Muhammad Salman Saad.S. Alarifi

Sustainability , Volume 14, Issue 22, Article Number 15225

Impact Factor: 3.889 | **Quartile:** 2 | **Citations:** 8

DOI: https://doi.org/10.3390/su142215225

Early Violent Failure Precursor Prediction Based on Infrared Radiation Characteristics for Coal Specimens Under Different Loading Rates

2022

Naseer Muhammad Khan Liqiang Ma Kewang Cao A. J. S. Spearing W. Liu Y. Jie M. Yousaf

Rock Mechanics and Rock Engineering, Pages 1-8

Impact Factor: 6.518 | **Quartile:** 1 | **Citations:** 26

DOI: 10.1007/s00603-022-03021-4

Development of Predictive Models for Determination of the Extent of Damage in Granite Caused by Thermal Treatment and Cooling Conditions Using Artificial Intelligence

2022

Naseer Muhammad Khan Kewang Cao Muhammad Zaka Emad Sajjad Hussain Hafeezur Rehman Kausar Sultan Shah Faheem Ur Rehman Aamir Muhammad

Mathematics , Volume 10, Issue 16, Article Number 2883

Impact Factor: 2.4 | **Quartile:** 1 | **Citations:** 12

DOI: 10.3390/math10162883

Application of Machine Learning and Multivariate Statistics to Predict Uniaxial Compressive Strength and Static Young's Modulus Using Physical Properties under Different Thermal Conditions

2022

Naseer Muhammad Khan Kewang Cao Qiupeng Yuan Mohd Hazizan Bin Mohd Hashim Hafeezur Rehman Sajjad Hussain Muhammad Zaka Emad Kausar Sultan Shah Barkat Ullah Sajid Khan

Sustainability , Volume 14(16), Article Number 9901

Impact Factor: 3.889 | **Quartile:** 2 | **Citations:** 32

DOI: 10.3390/su14169901