

Zain Maqsood

Assistant Professor
NUST Institute of Civil Engineering

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About

Dr. Zain Maqsood is working as Assistant Professor in the NUST Institute of Civil Engineering. Dr. Zain Maqsood has a PhD in Geotechnical. Dr. Zain Maqsood has published 25 research articles & conference papers having a citation count of 286, carried out 27 projects and filed 0 intellectual property.

Qualifications

PhD in Geotechnical The University of Tokyo , Japan	2016 - 2019
MS in Geotechnical The University of Tokyo , Japan	2014 - 2016
BE in Civil Engineering NUST, Islamabad , Pakistan	2008 - 2012

Experience

Assistant Professor NUST Institute of Civil Engineering	2022- Present
Assistant Professor NUST Institute of Civil Engineering	2021 - 2022
Project Researcher The University of Tokyo , Tokyo, Islamabad	2019 - 2020
Junior Engineer NESPAK , Lahore	2013 - 2014
Junior Engineer NESPAK Foundation , Lahore, Pakistan	2012 - 2013

Research Projects

National Projects	
Time-Dependent Mechanical Behavior of New Type of Light Weight Cemented Granular Geomaterials (CGG) Funding Agency: HEC Amount: PKR 11,580,000.00 Status: Approved_inprocess	2022
Effect of Creep, temperature and loading cycling of soil geomembrane interface shear strength Funding Agency: HEC Amount: PKR 15,765,000.00 Status: Approved_inprocess	2022

International Projects

Industry Projects

National Projects	
Implement a shallow seismic survey at Balakot Project, Mansehra District, Khyber Pakhtunkhwa Client: BK Consultants (PVT) Lt Amount: PKR 90,000.00 Status: Completed	2024

Geotechnical Consultancy Project for “Geotechnical Investigations for HEC Secretariat Building at HEC H-8 Premises, Islamabad” Client: NESPAK Amount: PKR 764,900.00 Status: Completed	2024
Geotechnical Consultancy Project for “Preliminary Geotechnical Investigation for NCLS College at NUST H-12, Islamabad” Client: Project Management Office (PMO) NUST, Pakistan Amount: PKR 808,000.00 Status: Completed	2024
Geotechnical Consultancy for Construction of Box Culverts at C-14, Islamabad Client: Capital Development Authority (CDA), Pakistan Amount: PKR 1,948,000.00 Status: Completed	2024
Geotechnical Consultancy Project for “Field Density Tests at German Embassy, Islamabad. Client: DVK Construction Pvt Ltd Amount: PKR 208,500.00 Status: Completed	2023
Geotechnical Consultancy for Design of Foundation for Upgradation of NCRD Complex, Phase-III, at Chak Shahzad, Islamabad Client: Pakistan Public Works Department (PWD) Amount: PKR 646,000.00 Status: Completed	2024
Geotechnical Consultancy Project for “Geotechnical Investigation for Newly Proposed 132 KV Grid Station at Cabinet Division Employees Cooperative Housing Society, Islamabad” Client: Islamabad Electric Supply Company (IESCO), Pakistan Amount: PKR 688,010.00 Status: Completed	2023
Geotechnical Consultancy Project for “Geotechnical Investigation for Construction of BOQs (Male) (Adjacent to Under Construction Male BOQ building)” Client: Project Management Office (PMO) NUST, Pakistan Amount: PKR 411,200.00 Status: Completed	2023
Geotechnical Consultancy for Construction of 132 KV Grid Station at Shakrial, Rawalpindi Client: Islamabad Electric Supply Company (IESCO), Pakistan Amount: PKR 648,000.00 Status: Completed	2023
Geotechnical Consultancy for Design of Foundation for Transmission Tower at 132 KV, CHAKSAWARI, MIRPUR Client: Islamabad Electric Supply Company (IESCO), Pakistan Amount: PKR 800,000.00 Status: Completed	2023
Geotechnical Consultancy for Construction of 132 KV Grid Station at EMAAR Housing Society, Islamabad Client: Islamabad Electric Supply Company (IESCO), Pakistan Amount: PKR 851,000.00 Status: Completed	2023
Geotechnical Consultancy Project for “Soil Investigation for Newly Proposed 132 kV Grid Station Khanpur Under 7th STG Client: Islamabad Electric Supply Company (IESCO), Pakistan Amount: PKR 891,000.00 Status: Completed	2022
Geotechnical Investigation for Construction of PCC Drain/Nullah Along Sr (West) & (South) Sector D-12/1-2, Islamabad Client: Capital Development Authority (CDA), Pakistan Amount: PKR 324,000.00 Status: Completed	2022

Geotechnical Consultancy Project for “Field Density Tests at German Embassy, Islamabad”	2022
Client: DVK Construction Pvt Ltd.	
Amount: PKR 138,500.00	
Status: Completed	
Geotechnical investigation for determination of Bearing capacity of soil bridges at service road (north) sector h-10 and service road (south), Sector h-10, Islamabad	2022
Client: Capital Development Authority (CDA), Pakistan	
Amount: PKR 1,000,000.00	
Status: Completed	
Geotechnical Consultancy for Construction of 132 KV Grid Station at Rewat Industrial Area - Rawat	2022
Client: IESCO Islamabad	
Amount: PKR N/A	
Status: Completed	
Soil Investigation for Construction of 2 × NG-Staff Apartments at NUST H-12 Sector, Islamabad	2022
Client: Project Management Office (PMO) NUST, Pakistan	
Amount: PKR 887,000.00	
Status: Completed	
Soil Investigation for Construction of Boys Hostel at NUST H-12 Sector, Islamabad	2022
Client: Project Management Office (PMO) NUST, Pakistan	
Amount: PKR 1,130,000.00	
Status: Completed	
Soil Investigation for Construction of Girls Hostel at NUST H-12 Sector, Islamabad	2022
Client: Project Management Office (PMO) NUST, Pakistan	
Amount: PKR 1,110,000.00	
Status: Completed	
Geotechnical Consultancy Project for “Soil Investigation of Construction of Access Road from Kuri Road Leading to the Plots Allotted to Special Technology Zone (STZ) Chak Shahzad, Islamabad	2021
Client: Capital Development Authority (CDA), Pakistan	
Amount: PKR 646,400.00	
Status: Completed	
Soil Investigation of CONSTRUCTION OF CELL BOX CULVERTS IN SECTOR C-15, ISLAMABAD	2021
Client: Capital Development Authority (CDA), Pakistan	
Amount: PKR 805,000.00	
Status: Completed	
Geotechnical Consultancy for Construction of Panahgah's for Pakistan Baitul Maal at Tarlali Kalan and Tarnol Islamabad	2021
Client: Pakistan Public Works Department (Pak PWD)	
Amount: PKR 911,600.00	
Status: Completed	
Geotechnical Consultancy for Construction of Cell Box Culverts at Sector I-12, Islamabad	2021
Client: Sector Development Division-I of Capital Development Authority (CDA) Islamabad	
Amount: PKR 991,500.00	
Status: Completed	
Geotechnical Consultancy for Construction of National Academy of Public Accounts and Finance, Islamabad	2021
Client: Development Consultancy Services (Pvt.) Ltd	
Amount: PKR 522,750.00	
Status: Completed	
Geotechnical Consultancy for "Soil Investigation of Newly Proposed 132 KV Grid Station DHA Phase-1V, Rawalpindi"	2021
Client: Islamabad Electric Supply Company (IESCO, Pakistan	
Amount: PKR 835,600.00	
Status: Completed	

International Projects

Research Articles

<p>Sustainable fill solutions: recycling EPS waste in shredded EPS-clayed soil composites for improved mechanical and compaction behaviour</p> <p><i>Muhammad Haseeb Zain Maqsood Muhammad Baqir Sofia Sarwar Badee Abdulqawi Hamood Al-Shameri Waqas Hassan Abbas Haider Lin Wenli Mehtab Alam Jiren Xie Liu Ang Muhammad Umar</i></p> <p><i>Transportation Geotechnics</i> , Volume:54, ID:101614</p> <p>Impact Factor: 5.5 Quartile: 1</p> <p>DOI: https://doi.org/10.1016/j.trgeo.2025.101614</p>	2025
<p>Data-Driven Approach to Enhance Deep Foundation Safety: Reliable Methods for Predicting Bored Pile Capacity</p> <p><i>Usman Hasan Jalali Badee Abdulqawi Hamood Al-Shameri Muhammad Hamza Khalid Waqas Hassan Lokmane Abdeldjoud Syed Muhammad Jamil Syed Hassan Farooq Zain Maqsood</i></p> <p><i>International Journal of Geo-Engineering</i> , Volume 16, Article Number 16</p> <p>Impact Factor: 7.100 Quartile: 1</p> <p>DOI: https://doi.org/10.1186/s40703-025-00247-3</p>	2025
<p>Application of multiple machine learning algorithms for intelligent prediction of the strength of fine-grained natural soils</p> <p><i>Muhammad Shahroz Khalid Zia ur Rehman Badee Abdulqawi Hamood Al-Shameri Zain Maqsood Fazal Hussain Muhammad Irsan Khalid Syed Jamal Arbi Abbas Haider</i></p> <p><i>Arabian Journal of Geosciences</i> , Volume 18, Article Number 115</p> <p>Impact Factor: N/A</p> <p>DOI: https://doi.org/10.1007/s12517-025-12236-y</p>	2025
<p>Optimized machine learning-based enhanced modeling of pile bearing capacity in layered soils using random and grid search techniques</p> <p><i>Syed Jamal Arbi Zia ur Rehman Waqas Hassan Usama Khalid Nauman Ijaz Zain Maqsood Abbas Haider</i></p> <p><i>Earth Science Informatics</i> , Volume:18, Issue:4, Article Number 332</p> <p>Impact Factor: 3.000 Quartile: 2 Citations: 3</p> <p>DOI: https://doi.org/10.1007/s12145-025-01784-2</p>	2025
<p>Predictive Modeling of Atterberg's Limits of Soil passing through Sieve #40 and #200 using Artificial Neural Networks and Multivariate Regression: Advancing Sustainable Construction Practices</p> <p><i>Sana Ullah Qamar Badee Alshameri Waqas Hassan Zain Maqsood Abbas Haider</i></p> <p><i>Multiscale and Multidisciplinary Modeling, Experiments and Design</i> , Pages 1-19</p> <p>Impact Factor: 1.900 Quartile: 2 Citations: 3</p> <p>DOI: https://doi.org/10.1007/s41939-024-00560-x</p>	2024
<p>Macro-micro mechanical behavior of saturated cemented sands during drained triaxial shearing</p> <p><i>Wenli Lin Ang Liu Erkang Zhang Shuyu Tian Deqi He Zain Maqsood</i></p> <p><i>Construction and Building Materials</i> , Volume 434, Article Number 136787</p> <p>Impact Factor: 7.400 Quartile: 1 Citations: 1</p> <p>DOI: https://doi.org/10.1016/j.conbuildmat.2024.136787</p>	2024
<p>Predictive Modelling of Cohesion and Friction Angle of Soil using Gene Expression Programming: A Step Towards Smart and Sustainable Construction</p> <p><i>Muhammad Naqeeb Nawaz Badee Alshameri Zain Maqsood Waqas Hassan</i></p> <p><i>Neural Computing and Applications</i> , Pages 1-22</p> <p>Impact Factor: 6.000 Quartile: 2 Citations: 18</p> <p>DOI: https://doi.org/10.1007/s00521-024-09626-w</p>	2024
<p>An innovative application of fine marble dust for the construction industry to mitigate the piping, internal erosion and dispersion problems of sodium-rich clays</p> <p><i>Waqas Hassan Badee Alshameri Zain Maqsood Abbas Haider Syed Muhammad Jamil Hassan Mujtaba</i></p> <p><i>Construction and Building materials</i> , Volume 408, Article Number 133834</p> <p>Impact Factor: 7.4 Quartile: 1 Citations: 16</p> <p>DOI: https://doi.org/10.1016/j.conbuildmat.2023.133834</p>	2023
<p>A novel technique for the construction industry to mitigate dispersibility and internal erosion problems of Sodium rich clays by using Water-Soluble Potassium Rich Ions Material</p> <p><i>Waqas Hassan Badee Abdulqawi Hamood Al-Shameri Abbas Haider Zain Maqsood Syed Muhammad Jamil Arfan Shahzad</i></p> <p><i>Construction and Building Materials</i> , Volume 400, Article Number 132780</p> <p>Impact Factor: 7.4 Quartile: 1 Citations: 16</p> <p>DOI: https://doi.org/10.1016/j.conbuildmat.2023.132780</p>	2023

<p>Incorporating potassium-rich waste material in a sustainable way to stabilize dispersive clay: A novel practical approach for the construction industry</p> <p><i>Waqas Hassan Badee Abdulqawi Hamood Al-Shameri Syed Muhammad Jamil Zain Maqsood Abbas Haider Arfan Shahzad Construction and Building Materials</i> , Volume 400, Article Number 132717</p> <p>Impact Factor: 7.4 Quartile: 1 Citations: 26</p> <p>DOI: https://doi.org/10.1016/j.conbuildmat.2023.132717</p>	2023
<p>PET Waste Management in Pakistan Through use of PET Shreds as Additive in Backfill Soil</p> <p><i>Fawad Sheikh Badee Alshameri Zain Maqsood Abbas Haider Jawad Hassan Environmental Monitoring and Assessment</i> , Volume 195, Article Number 1239</p> <p>Impact Factor: 3.0 Quartile: 3 Citations: 2</p> <p>DOI: https://doi.org/10.1007/s10661-023-11832-3</p>	2023
<p>Sustainable incorporation of Plaster of Paris kiln dust for stabilization of dispersive soil: A potential solution for construction industry</p> <p><i>Bushra Fatima Badee Abdulqawi Hamood Al-Shameri Waqas Hassan Zain Maqsood S. Muhammad Jamil Aziman Madun Construction and Building Materials</i> , Volume 397, Article Number 132459</p> <p>Impact Factor: 7.4 Quartile: 1 Citations: 29</p> <p>DOI: https://doi.org/10.1016/j.conbuildmat.2023.132459</p>	2023
<p>Mechanical Behaviour and Stress-Strain Recovery Characteristics of Expanded Polypropylene</p> <p><i>Zain Maqsood Junichi Koseki Hiroyuki Kyokawa Geosynthetics International</i> , Volume 31 Issue 1, Pages: 18-30</p> <p>Impact Factor: 4.5 Quartile: 1 Citations: 2</p> <p>DOI: https://doi.org/10.1680/jgein.21.00061</p>	2022
<p>Swelling and strength characteristics of sand treated with paper sludge ash-based stabilizer</p> <p><i>Maliki Otieboame Djandjieme Kimitoshi Hayano Hiromoto Yamauchi Zain Maqsood Construction and Building Materials</i> , Volume 341, Article Number 127849</p> <p>Impact Factor: 7.693 Quartile: 1 Citations: 24</p> <p>DOI: https://doi.org/10.1016/j.conbuildmat.2022.127849</p>	2022
<p>Verification of 3D AE Source Location Technique in Triaxial Compression Tests Using Pencil Lead Break Sources on a Cylindrical Metal Specimen</p> <p><i>Xianfeng Li Ali Naqi Zain Maqsood Junichi Koseki Applied Sciences</i> , Volume 12, Issue 3, Article Number 1603</p> <p>Impact Factor: 2.9 Quartile: 2 Citations: 4</p> <p>DOI: https://doi.org/10.3390/app12031603</p>	2022
<p>Micromechanical Behavior of Granular Soils Characterized by Acoustic Emission</p> <p><i>Wenli Lin Ang Liu Wuwei Mao Zain Maqsood Junichi Koseki Lithosphere</i> , Volume 2021, Article ID 4061808, 14 pages</p> <p>Impact Factor: 3.375 Quartile: 1</p> <p>DOI: https://doi.org/10.2113/2021/4061808</p>	2021
<p>Mechanical behaviour and loading rate dependency of gypsum-mixed fine-grained soils</p> <p><i>Masum Shaikh Hiroyuki Kyokawa Zain Maqsood Md. Kamrul Ahsan Junichi Koseki Proceedings of the Institution of Civil Engineers - Geotechnical Engineering</i> , Pages 1-12</p> <p>Impact Factor: 1.341 Quartile: 4 Citations: 8</p> <p>DOI: https://doi.org/10.1680/jgeen.21.00057</p>	2021
<p>Experimental Study on the Relationship between the Velocity of Surface Movements and Tilting Rate in Pre-Failure Stage of Rainfall-Induced Landslides</p> <p><i>Jiren Xie Taro Uchimura Chao Huang Zain Maqsood Jingli Tian Sensors</i> , Volume 21(18), Article Number 5988</p> <p>Impact Factor: 3.576 Quartile: 1 Citations: 3</p> <p>DOI: https://doi.org/10.3390/s21185988</p>	2021
<p>Experimental study on hardening characteristics and loading rate dependent mechanical behaviour of gypsum mixed sand</p> <p><i>Zain Maqsood Junichi Koseki Md. Kamrul Ahsan Masum Shaikh Hiroyuki Kyokawa Construction and Building Materials</i> , Volume 262, Article Number 119992</p> <p>Impact Factor: 6.141 Quartile: 1 Citations: 23</p> <p>DOI: https://doi.org/10.1016/j.conbuildmat.2020.119992</p>	2020

Experimental study on the mechanical behaviour of bounded geomaterials under creep and cyclic loading considering effects of instantaneous strain rates <i>Zain Maqsood Junichi Koseki Yukika Miyashita Jiren Xie Hiroyuki Kyokawa</i> <i>Engineering Geology</i> , Volume 276, Article Number 105774 Impact Factor: 6.755 Quartile: 1 Citations: 33 DOI: https://doi.org/10.1016/j.enggeo.2020.105774	2020
Influence of salinity exposure on the mechanical properties of cement-treated sand <i>Md. Kamrul Ahsan Masum Shaikh Dipankar Chandra Barman Zain Maqsood</i> <i>Geotechnical Research</i> , Volume 7, Issue 3, Pages 161-172 Impact Factor: N/A Citations: 3 DOI: https://doi.org/10.1680/jgere.20.00013	2020
Predicting the sliding behavior of rotational landslides based on the tilting measurement of the slope surface <i>Jiren Xie Taro Uchimura Gonghui Wang Hemakanth Selvarajah Zain Maqsood Quan Shen Guoxiong Mei Shifan Qiao</i> <i>Engineering Geology</i> , Volume 269, Article Number 105554 Impact Factor: 6.755 Quartile: 1 Citations: 40 DOI: https://doi.org/10.1016/j.enggeo.2020.105554	2020
A new prediction method for the occurrence of landslides based on the time history of tilting of the slope surface <i>Jiren Xie Taro Uchimura Gonghui Wang Quan Shen Zain Maqsood Canrong Xie Jiapeng Liu Weikai Lei Shangning Tao Pan Chen Hongyuan Dong Guoxiong Mei Shifan Qiao</i> <i>Landslides</i> , Volume 17, Pages 301-312 Impact Factor: 6.578 Quartile: 1 Citations: 32 DOI: https://doi.org/10.1007/s10346-019-01283-8	2020

Conference Proceedings

Characterization of weathering cycle for laboratory reproduced accelerated weathering of soft indigenous rocks <i>Haseeb Yaqoob Maryem Naeem Muhammad Junaid Riaz Naveed Ahmad Zain Maqsood</i> <i>2nd International Conference on Recent Advances in Civil Engineering and Disaster Management</i> , res.country(177.) Citations: N/A DOI: Nil	2022
Strength evaluation of Cement-Treated Sand-Expanded Polystyrene Bead Lightweight Fill <i>Khola Iqbal Hammad Siddique Waleed Iqbal Taro Uchimura Zain Maqsood</i> <i>11th International Conference on Geotechnique, Construction Materials & Environment, GEOMATE 2021</i> , res.country(113,)	2021

Editorial Activities

Applied Sciences Reviewed Papers for Journals Impact Factor: 2.5	2024
Scientific Reports Reviewed Papers for Journals Impact Factor: 3.8	2024
[Processes] Reviewed Papers for Journals Impact Factor: 2.8	2024
Applied Sciences Reviewed Papers for Journals Impact Factor: 2.5	2024
Buildings Reviewed Papers for Journals Impact Factor: 3.1	2024

Applied Sciences	2023
Reviewed Papers for Journals	
Impact Factor: 2.5	
Applied Sciences	2023
Reviewed Papers for Journals	
Impact Factor: 2.5	
Symmetry	2023
Reviewed Papers for Journals	
Impact Factor: 2.7	
Applied Sciences	2023
Reviewed Papers for Journals	
Impact Factor: 2.7	
Sustainability	2023
Reviewed Papers for Journals	
Impact Factor: 3.9	
Energies	2023
Reviewed Papers for Journals	
Impact Factor: 3.2	
Journal of Marine Science and Engineering	2022
Reviewed Papers for Journals	
Impact Factor: 2.9	
Applied Sciences	2022
Reviewed Papers for Journals	
Impact Factor: 2.5	
Scientific Reports	2022
Reviewed Papers for Journals	
Impact Factor: 4.996	
Frontiers in Earth Science Editorial Office	2022
Reviewed Papers for Journals	
Impact Factor: 3.661	
Engineering Geology	2022
Reviewed Papers for Journals	
Impact Factor: 6.902	
	2021
Reviewed Papers for Journals	
Impact Factor: 0	
	2021
Reviewed Papers for Journals	
Impact Factor: 1.827	