

Dr. Badee Alshameri

Associate Professor, PhD, MS, BS

University of Sciences & Technology (NUST), H-12, Islamabad, Pakistan

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Scopus: 37090373300

ResearchGate/ Google Scholar: Badee Alshameri/ Badee Alshameri

Personal Statement

Dr. Badee Alshameri has over 19 years of comprehensive experience in various roles (academic & industry) and countries (Pakistan, Malaysia, Yemen) including 7 years of remarkable leadership in department management and field project execution. He successfully led a team of engineers and technicians to complete numerous geotechnical design and soil investigation projects. During current role, he has been awarded as best Researcher, Innovator, Teacher and NUST Top Performance Awards at National University of Sciences & Technology, Pakistan

Research Area Interest & Expertise

- Geotechnical sustainability, slope stability & soil and ground improvement.
- Geophysical applications (e.g. Seismic Refraction, MASW & Bender Element methods) in geotechnics
- Application of the geotechnical and seismic methods on the physical model.
- Geotechnical foundation design (shallow and deep foundations)
- Soil investigation & Geotechnical third-party evaluator
- Supervision of laboratory and field tests such as: index soil tests, compaction/ proctor test, and soil shear strength tests (direct shear test, unconfined compression test, triaxial test, standard penetration test SPT, Pressuremeter test, Dynamic load test, plate load test)

Qualifications

- **Doctor of Philosophy in Civil Engineering (Geotechnical Engineering) [2013-2017]**

Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia

- **Master of Engineering (Geotechnical Engineering) [2008-2011]**

Universiti Teknologi Malaysia (UTM), Malaysia

- **Bachelor's Degree in Earth Science [1995-1999]**

Sana'a University, Yemen

Achievements

- **Filed Patent Titled "Composition and Method for Construction Enhanced Cricket Pitches" as Principal Investigator (PI)**, Patent Application No: 98/2024. Intellectual Property Organization, Pakistan [2024]
- **Appointed as a Universiti Tun Hussein Onn Malaysia (UTHM) Alumni Expert** in November 2024, [2024]
- **School Best Teacher Award** – 2023, National University of Sciences & Technology (NUST), Pakistan, [2024]
- **School Best Researcher Award** – 2023, National University of Sciences & Technology (NUST), Pakistan, [2024]
- **NUST Top Performance Award: Outstanding Performance at University Level During the Calendar Year 2023**, National University of Sciences & Technology (NUST), Pakistan, [2024]
- **Promoted to Associate Professor** National University of Sciences & Technology (NUST), Pakistan, [2024]
- **School Best Innovator Award** – 2022, National University of Sciences & Technology (NUST), Pakistan, [2023]
- **NUST Top Performance Award: Outstanding Performance at University Level During the Calendar Year 2021**, National University of Sciences & Technology (NUST), Pakistan, [2022]
- **Secured External Fund for Two Research Projects (total cost of 21.3 million PKR)** as Principal Investigator (PI) and Co-PI, National Research Program for Universities, Higher Education Commission, Pakistan, [2022]
- **Won the "Maximum Number of Funded Projects 2020"** at School of Civil and Environmental Engineering, National University of Sciences & Technology (NUST), Pakistan, [2021]
- **Recognized as HEC Approved PhD Supervisor** in the discipline of Engineering & Technology, Higher Education Commission (HEC), Pakistan, [2021]
- **Promoted, Head of geotechnical Engineering Department**, National University of Sciences & Technology (NUST), Pakistan, [2019]
- **Three Stars Publication Award**, Centre for Graduate Studies, UTHM, Malaysia, [2017]
- **Awarded Malaysian Technical Cooperation Programme (MTCP) Scholarship**, Ministry of Higher Education Malaysia. [2014]
- **Awarded PhD Scholarship** to Malaysia, Ministry of Higher Education Yemen, [2013]
- **Awarded Master Scholarship** to Malaysia, Ministry of Higher Education Yemen, [2008]

Experience

- **Head of Geotechnical Engineering Department [2019-Ongoing]**

National University of Sciences & Technology, Pakistan

- **Regular Visiting Faculty [2019]**

National University of Sciences & Technology, Pakistan

- **Consultant & Trainer [2017-2018]**

Eduglobe Malaysia Sdn. Bhd., Malaysia (Part time)

- **Geotechnical Engineer [2011-2017]**

Yemen Company for Investment Oil & Minerals, Yemen

- **Head of Civil Engineering Department [2011-2012]**

Ibn Seena'a International University for Science and Technology, Yemen (Part time)

- **Engineering Geologist [2007]**

Engineering Local Office, Yemen (Part time)

- **Teacher [2000-2007]**

Ministry of Education, Yemen

Achievements of Students Under my Supervision

- **Secure Rector's Gold Medal**, National University of Sciences & Technology (NUST), Pakistan, [2024]
- **Secure First Position in Category of Best Industrial Projects**, National University of Sciences & Technology (NUST), Pakistan, [2024]
- **Secure Third Position in Category of Best Industrial Projects**, National University of Sciences & Technology (NUST), Pakistan, [2024]
- **Awarded Dean's Doctoral Scholarship**, Muhammad Hamza Khalid (MS students), The University of Manchester, UK, PhD Civil Engineering [2023]
- **Awarded Hohai university first class scholarship**, Zeeshan Khursheed (MS students), Hohai university, China, PhD Civil Engineering (Major: Geotechnical Engineering), [2023]
- **Awarded PhD scholarship**, Sana Ullah (MS students), George Mason University, USA, PhD in Geotechnical Engineering, [2023]

Publications (Publication Rate as a First or Corresponding Author in WOS/Scopus: > 92%) (i10-index: 23, H-index 19)

Web of Sciences & Scopus:

- Hassan, W. **Alshameri**, B. Rashid, I. Shahzad, A. (2025) Sustainable Valorization of Biomass Residue for Remediations of Dispersive Clays: Integrating Environmental, Geotechnical, and Circular Economy Perspectives. *Construction and Building Materials*. 494, 143538. <https://doi.org/10.1016/j.conbuildmat.2025.143538>.
- Hassan, W. Mujtaba, H. **Alshameri**, B. Farooq, K. Aamir, T. Shahzad, A. (2025) Sustainable Remediation: The Role of Styrene-Butadiene Rubber (SBR) Latex and Chem-lite CR Powder (CCP) in Stabilizing Dispersive Clay. *Journal of Rock Mechanics and Geotechnical Engineering*. 17. <https://doi.org/10.1016/j.jrmge.2025.06.036>.
- Jalali, U.H. **Alshameri**, B. Khalid M.H., Hassan, W. Abdeldjouad, L. Jamil, S.M. Farooq, H. Maqsood, Z. (2025) Data-Driven Approach to Enhance Deep Foundation Safety: Reliable Methods for Predicting Bored Pile Capacity. *International Journal of Geo-Engineering*. 16(16). <https://doi.org/10.1186/s40703-025-00247-3>
- Attique, M. Hassan, S. **Alshameri**, B. Hassan, W. Ghani, S. Ansari, A. (2025) Evaluating the Impact of Various Tensile Strengths of Non-Woven Geotextiles on Subgrade CBR Enhancement: An Experimental Approach. *International Journal of Pavement Research and Technology*. 8:1-18. <https://doi.org/10.1007/s42947-025-00592-7>
- Hasseb, M. Maqsood, Z. Baqir, M. Sofia Sarwar, **Alshameri**, B. Hassan, W. Haider, A. et al. (2025) Sustainable fill solutions: recycling EPS waste in shredded EPS-clayed soil composites for improved mechanical and compaction behaviour." *Transportation Geotechnics*. 54: 101614. <https://doi.org/10.1016/j.trgeo.2025.101614>
- Khursheed, M.Z. **Alshameri**, B. Hassan, W. Abdeldjouad, L. (2025) A novel Numerical Approach for the Assessment of the Seepage Failure, Predictive Modelling of Seepage through Non-Homogenous Earth-Fill Dams Resting on Pervious Foundations Using Artificial Neural Networks. *Modeling Earth Systems and Environment*. 11; Article 64. <https://doi.org/10.1007/s40808-024-02227-5>.
- Hassan, W. Qasim, M. **Alshameri**, B. Shahzad, A. Khalid, M.H. Qamar, S.U. (2024) Geospatial Intelligence in Geotechnical Engineering: A Comprehensive Investigation into SPT-N, Soil Types, and Undrained Shear Strength for Enhanced Site Characterization, *Bulletin of Engineering Geology and the Environment*. 83, 380. <https://doi.org/10.1007/s10064-024-03884-7>.
- Qamar, S.A. **Alshameri**, B. Hassan, W. Maqsood, Z. Haider, A. (2024) 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. *Multiscale and Multidisciplinary Modeling, Experiments and Design*, 7: 5809–5827. <https://doi.org/10.1007/s41939-024-00560-x>.
- Nawaz, M.N. **Alshameri**, B. Maqsood, Z. & Hassan, W. (2024) Predictive Modelling of Cohesion and Friction Angle of Soil using Gene Expression Programming: A Step Towards Smart and Sustainable Construction. *Neural Computing and Applications*. <https://doi.org/10.1007/s00521-024-09626-w>.
- Khalid, M.K. Yasmin, T. **Alshameri**, B. Jamil, S.M. & Hassan, W. (2023) Comparison of Seepage Evaluation Methods for Earth-Filled Embankments: A Case Study of Sukian Dyke, Mangla Dam, *Modeling Earth Systems and Environment*. 10: 2257–2270. <https://doi.org/10.1007/s40808-023-01905-0>.
- Hassan, W. **Alshameri**, B. Maqsood, Z. Haider, A. Jamil, S.M. & Mujtaba, H. (2023) An innovative application of fine marble dust for the construction industry to mitigate the piping, internal erosion and dispersion problems of sodium-rich clays. *Construction and Building Materials*. 408, 133834, 1-14. <https://doi.org/10.1016/j.conbuildmat.2023.133834>.
- Alshameri**, B. (2023). Investigate and Analysis the Efficiency of Existing Recommendations of Near-Field Effect and Boundary conditions on Bender Element Technique. *Pure and Applied Geophysics*. 180(11): 3769-3785 <https://doi.org/10.1007/s00024-023-03347-2>.
- Sheikh, F. **Alshameri**, B. Maqsood, Z. Haider, A. & Hassan, J. (2023). PET Waste Management in Pakistan Through use of PET Shreds as Additive in Backfill Soil. *Environmental Monitoring and Assessment*. 195(10): 1239 (1-10). <https://doi.org/10.1007/s10661-023-11832-3>.
- Abid, U., Haider, A. **Alshameri**, B. Rehman, Z. Khan, A. Mahmood, N. & Hassan, S. (2023). Determination of Ground Motion Parameters of Urban Centers of Balochistan Province. *Soil Dynamics and Earthquake Engineering*. 175 (108221), 1-12. <https://doi.org/10.1016/j.soildyn.2023.108221>.
- Hassan, W. **Alshameri**, B. Haider, A. Maqsood, Z. Jamil, S.M. & Shahzad, A. (2023) 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. *Construction and Building Materials*. 400, 132780. 1-14. <https://doi.org/10.1016/j.conbuildmat.2023.132780>.

- Hassan, W. **Alshameri, B.** Jamil, S.M. Maqsood, Z. Haider, A. & Shahzad, A. (2023) Incorporating potassium-rich waste material in a sustainable way to stabilize dispersive clay: A novel practical approach for the construction industry. *Construction and Building Materials*. 400, 132717. 1-20. <https://doi.org/10.1016/j.conbuildmat.2023.132717>.
- Fatima, B., **Alshameri, B.**, Hassan, W., Maqsood, Z., Jamil, S.M., Madun, A. (2023) Sustainable incorporation of Plaster of Paris kiln dust for stabilization of dispersive soil: A potential solution for construction industry. *Construction and Building Materials*. 397,132459. 1-16. <https://doi.org/10.1016/j.conbuildmat.2023.132459>.
- Batool, K. **Alshameri, B.** Raza, F. Haider, A. Ali, M. (2023) Normalization of Geotechnical Sustainability Assessment Tool (Geo-SAT) using Multiple Criteria Decision Analysis for Dams. *Environment, Development and Sustainability*. 26(8), 19871–19905. <https://doi.org/10.1007/s10668-023-03442-3>.
- Hassan, H. Farooq, K. Mujtaba, H. **Alshameri, B.** Shahzad, A. Nawaz, M.N. & Azab, M. (2023) Experimental Investigation of Mechanical Behavior of Geosynthetics in Different Soil Plasticity Indexes. *Transportation Geotechnic*. 39(100935): 1-15. <https://doi.org/10.1016/j.trgeo.2023.100935>.
- Hassan, W., Raza, M.F, **Alshameri, B.**, Shahzad, A., Khaild, M.H. & Nawaz, M.N. (2022) Statistical interpolation and spatial mapping of geotechnical soil parameters of District Sargodha, Pakistan. *Bulletin of Engineering Geology and the Environment*. 82(1):1-23. <https://doi.org/10.1007/s10064-022-03059-2>.
- Hassan, W. **Alshameri, B.** Nawaz, M.N. Zain Ijaz, Qasim M. (2022) Geospatial and Statistical Interpolation of Geotechnical Data for Modelling Zonation Maps of Islamabad, Pakistan. *Environmental Earth Sciences*. 81(24): 1-23, <https://doi.org/10.1007/s12665-022-10669-2>.
- Nawaz, M.N. Qamar, S.U. **Alshameri, B.** Nawaz, M.M. Hassan, W. Awan, T.A. (2022) A Robust Prediction Model for Evaluation of Plastic Limit Based on Sieve # 200 Passing Material Using Gene Expression Programming. *PLOS ONE*. 17(10), 1-19. <https://doi.org/10.1371/journal.pone.0275524>
- Hassan, W. **Alshameri, B.** Nawaz, M.N. & Qamar, S.U. (2022) Experimental Study on Shear Strength Behavior and Numerical Study on Geosynthetic-Reinforced Cohesive Soil Slope. *Innovative Infrastructure Solutions*. 7(349), 1-18. <https://doi.org/10.1007/s41062-022-00945-2>.
- Nawaz, M.N. Qamar, S.U. **Alshameri, B.** Karam, S. Çodur, M.K. Nawaz, M.M. Riaz, M.S. and Azab M. (2022) The Study using Machine Learning Approach for Novel Prediction Model of Liquid Limit. *Building*. 12(10), 1551, 1-15. <https://doi.org/10.3390/buildings12101551>
- Hussain, B. Raza, F. **Alshameri, B.** & Khalid, M.H.(2022). Effect of Multiwalled Carbon Nanotubes (MWCNTs) on Mechanical Properties of Gypsum-treated Soil. *International Journal of Geosynthetics and Ground Engineering*. 8(5): 60, 1-10. <https://doi.org/10.1007/s40891-022-00408-9>.
- Alshameri, B.** (2022). Assessment of the Bender Element Sensors to Measure Seismic Wave Velocity of Soils in the Physical Model. *Open Geosciences*. 14(1): 691–705. <https://doi.org/10.1515/geo-2022-0384>
- Alshameri, B.** (2022). Prediction the Shear Strength and Shear Modulus of Sand-Clay Mixture Using Bender Element. *Journal of Applied Engineering Science*. 20(1): 168 – 176. <https://doi.org/10.5937/jaes0-30619>.
- Khalid, M.K. & **Alshameri, B.** (2022) Determination of Safe Depth and Lateral Distance of Unsupported Excavation Near Mat Foundation in Cohesive Soils Using PLAXIS. *Journal of Applied Science and Engineering*. 25(2); 249-260. [http://dx.doi.org/10.6180/jase.202204_25\(2\).0011](http://dx.doi.org/10.6180/jase.202204_25(2).0011). <http://jase.tku.edu.tw/articles/jase-202204-25-2-0011>.
- Mahmood, A., **Alshameri, B.**, Khalid, M. H., & Jamil, S. M., (2021). Comparative Study of Various Interpretative Methods of The Pile Load Test. *Innovative Infrastructure Solutions*. 7(1):102, 1-20. <https://doi.org/10.1007/s41062-021-00697-5>
- Malik, Z.B., **Alshameri, B.**, Jamil, S.M., & Umar, D. (2021). Experimental and Numerical Modeling of Bearing Capacity of Foundations on Soft Clay Stabilized with Granular Material. *International Journal of Geosynthetics and Ground Engineering*. 7(4), 91, 1-17. <https://doi.org/10.1007/s40891-021-00334-2>.
- Hassan, J., **Alshameri, B.**, & Iqbal, F. (2021) Prediction of California Bearing Ratio (CBR) Using Index Soil Properties and Compaction Parameters of Low Plastic Fine-Grained Soil. *Transportation Infrastructure Geotechnology* 9(6): 764–776. <https://doi.org/10.1007/s40515-021-00197-0>.
- Khalid, M.K. **Alshameri, B.** & Abid, U. (2021) Application of Kriging for Development of SPT N-Value Contour Maps and USCS Based Soil Type Qualitative Contour Maps for Islamabad, Pakistan. *Environmental Earth Sciences*. 80(11): 413/1-13. <https://doi.org/10.1007/s12665-021-09720-5>.
- Raza, F. **Alshameri, B.** & Jamil, S. M. (2021). Engineering Aspect of Sustainability Assessment for Geotechnical Projects. *Environment, Development and Sustainability*. 23(4): 6359–6394. <https://doi.org/10.1007/s10668-020-00876-x>
- Raza, F. **Alshameri, B.** & Jamil, S. M. (2021). Assessment of triple bottom line of sustainability for geotechnical projects. *Environment, Development and Sustainability*. 23(3): 4521–4558. <https://doi.org/10.1007/s10668-020-00786-y>
- Alshameri, B.** (2020). Maximum dry density of Sand-Kaolin Mixtures Predicted by using Fine Content and Specific Gravity. *SN Applied Sciences*. 2(10):1693. <https://doi.org/10.1007/s42452-020-03481-9>.
- Alshameri, B.** & Madun, A. (2019). Comprehensive Correlations between the Geotechnical and Seismic Data Conducted via Bender Element. *Geotechnical and Geological Engineering*. 37(6): 5077–5095. <https://doi.org/10.1007/s10706-019-00963-5>.
- Alshameri, B.**, Madun, A & Bakar, I. (2017). Assessment on the Effect of Fine Content and Moisture Content towards Shear Strength. *Geotechnical Engineering*. 48(4).76-86. <https://doi.org/10.14456/seagj.2017.51>.
- Alshameri, B.**, Madun, A. & Bakar, B. (2017). Comparison of the Effect of Fine Content and Density towards the Shear Strength Parameters. *Geotechnical Engineering*. 48(2). 104-110. <https://doi.org/10.14456/seagj.2017.30>.
- Alshameri, B.**, Bakar, I., Madun, A., Abdeldjouad, L., & Dahlan. S. H., (2016). Effect of Coarse Materials Percentage in the Shear Strength. *IOP Conference Series: Materials Science and Engineering*. 136, 012017 <https://doi.org/10.1088/1757-899X/136/1/012017>.
- Alshameri, B.**, Madun, A., Bakar, I. & Mohamad, E.T., (2015). Effect of Sensor Rotation on Assessment of Bender Element Apparatus. *Jurnal Teknologi*, 77(11), 51–57. <https://doi.org/10.11113/jt.v77.6420>.
- Alshameri, B.**, Bakar, I., Madun, A. and Mohamad, E.T. (2015). Effect of Alignment on the Quality of Bender Element Procedure. *Jurnal Teknologi*, 76(2), 73-80. <https://doi.org/10.11113/jt.v76.5436>.
- Mohamad, E.T., **Alshameri, B.**, Kassim, K.A. & Gofar, N. (2011). Shear strength behaviour for older alluvium under different moisture content. *Electronic Journal of Geotechnical Engineering*, 16(F). 605-617.

Other International Journal's Publication

- Khalid, MS. Rehman, Z. **Alshameri, B.** Maqsood, Z. Hussain, F. Khalid, M.I. Arbi, S.J. Haider, A. (2025) Application of multiple machine learning algorithms for intelligent prediction of the strength of fine-grained natural soils. *Arabian Journal of Geosciences*. 18:115. <https://doi.org/10.1007/s12517-025-12236-y>.

- Alshameri, B.** (2022). Effect of Coarse Content on Compaction Test. Civil Engineering Beyond Limit. 3(1) 1506, 1-4. <https://doi.org/10.36937/cebel.2022.1506>.
- Ayyub, A. **Alshameri, B.**, Jamil, S.M. and Nawaz, M.N. (2021) Analysis of Gabion Retaining Wall Using Analytical and Numerical modelling with Plaxis 2D. UW Journal of Science and Technology 5(1): 12-19.
- Azmi, M.I.S., Khairu, A., Abd Malik, Madun, A., Pakir, F. & **Alshameri, B.** (2021). The Influence of Mineralogy and Cation Exchange Capacity toward Electrical Resistivity Value. Journal of Sustainable Underground Exploration, 1(1): 52-57. <https://doi.org/10.30880/jsue.2021.01.01.008>.
- Sobri, M.S., Abd Malik, A.K., MMd Dan, M.F., Hussin, H., & **Alshameri, B.** (2021). Assessment of Tube Well Pumping Test Performance on Different Geological Formation, Journal of Sustainable Underground Exploration, 1(1): 25-31. <https://doi.org/10.30880/jsue.2021.01.01.004>.

Thesis:

Alshameri, B., (2017). Combining Seismic and Geotechnical Methods to Improve the Prediction of Physical Soil Properties. PhD dissertation, Universiti Tun Hussein Onn Malaysia. Malaysia.

Alshameri, B., (2010). Engineering properties of older alluvium. Master dissertation, Universiti Teknologi Malaysia. Malaysia.

International conferences:

Alshameri, B., Ismail Bakar & Aziman Madun. (2014). Assessment of Bender Element Apparatus Procedure Limitation for Alignment. Proceedings of SoftSoils 2014. Bandung, Indonesia. October 21-23rd 2014. J8;1-7

Alshameri, B., Mohamad, E.T., Bakar, I. & Madun, A. (2013). Performance of Some Rock Index Tests in Older Alluvium as Midpoint between the Soil and Rock. Soft Soil Engineering Challenges and Sustainable Solutions. Kuching, Sarawak, Malaysia. 17th-19th Sep 2013: pp T1-23.

Mohamad, E. T., **Alshameri, B.**, Md Isa, M. F., Kassim, K. A., Gofar, N., & Saad. R. (2011). The effects of moisture content on the behaviour of older alluvium. National Geoscience Conference 2011. The Puteri Pacific Johor Bahru, Johor, Malaysia. 11th–12th June 2011: pp P1-21.

Skills

Software experience

- Geotechnical Software: (a) Rocscience (Settle3D); (b) Plaxis
- Seismic software for shallow investigation: (a) SeisOptPicker; (b) SeisImager/SW
- Microsoft office programs

Design, Lab and Field Investigation:

Design of shallow & deep foundations; Shallow seismic survey (seismic refraction & MASW); Soil investigation, compaction & classification; Bender element; Unconfined compression test; Direct shear test; Pressuremeter test; Standard penetration test SPT; Plate load test

Soft skills:

Management; Teamwork; Leadership; Flexibility to work at variable positions & relocation

Editing

• Executive Editorial Board [2025]

AlQalam Journal of Medical and Applied Sciences (AJMAS), e-ISSN:2707-7179, Libya

• Board of Reviewers [2021]

Journal of Sustainable Underground Exploration, e-ISSN: 2821-2851, Malaysia

• Editorial Board [2020]

Journal of Civil Engineering Beyond Limits (CEBEL), e-ISSN: 2687-5756 Yurkiye

Reviewing Experiences

Geotechnical and Geological Engineering (9 papers), KSCE Journal of Civil Engineering (7 papers), PLOS ONE (5 papers), Journal of Materials in Civil Engineering (2 papers), International Journal of Geo-Engineering (2 papers), Open Geosciences (2 papers), Jurnal Teknologi (2 papers), Engineering Geology (1 paper) Bulletin of Engineering Geology and the Environment (1 paper), Measurement (1 paper), Natural Hazards (1), Environmental Earth Sciences (1 paper), Environment, Development and Sustainability (1 paper), Results in Engineering (1 paper), Transportation Infrastructure Geotechnology (1 paper), Heliyon (1 paper), SN Applied Sciences (1 paper), Journal of Applied Engineering Science (1 paper), IIUM Engineering Journal (1 paper), Malaysian Construction Research Journal (1 paper), Geotechnical Engineering (1 paper), Asian Journal of Geological Research (1 paper), NUST Journal of Engineering Sciences (2 papers), Soft Soil Engineering International Conference 2015 (SEIC'15) (2 papers)

Professional Memberships

- The Institution of Engineers Malaysia (IEM), [102224]
- Malaysia Board of Technologists (MBOT), [GT19080123]
- Malaysian Geotechnical Society (MGS), [MGS111/18]
- American Society of Civil Engineers (ASCE), [10498693]
- The Geological Society of America (GSM), [9240509]

Research Projects

- Effect of Creep, temperature and loading cycling of soil geomembrane interface shear strength, Principal Investigator (**9.72 million PKR**) NRP, HEC, Pakistan [2022-2026]
- Time-Dependent Mechanical Behavior of New Type of Light Weight Cemented Granular Geomaterials (CGG) Co-Principal Investigator (**11.58 million PKR**) [2022-2026]

Consultancy of Soil Investigation Projects & Third-Party Evaluator

Soil Investigation and Shallow/Deep Foundation Design

- Jinnah Medical Complex and Research Center, sector I-16, Islamabad Capital Development Authority (CDA), Pakistan [2025]
- 132 KV Grid Station at Attock-II under 7TG STG. Islamabad Electric Supply Company (IESCO), Pakistan [2025].
- 132 KV Grid Station Chakwal-II under 7TH STG. Islamabad Electric Supply Company (IESCO), Pakistan [2025].
- 132 KV Grid Station DHA Rose. Islamabad Electric Supply Company (IESCO), Pakistan [2025].
- 132 KV Grid Station DHA Phase-III Islamabad. Islamabad Electric Supply Company (IESCO), Pakistan [2024].
- Box Culverts at C-14, Islamabad. Capital Development Authority (CDA), Pakistan [2024]
- Upgradation of NCRD Complex, Phase-III, at Chak Shahzad, Islamabad, Pakistan Public Works Department (PWD), Pakistan [2024]
- 132 KV Grid Station at Cabinet Division Employees Cooperative Housing Society, Islamabad, Islamabad Electric Supply Company (IESCO), Pakistan [2023]
- 132 KV Grid Station at EMAAR Housing Society Shakrial, Rawalpindi, Islamabad Electric Supply Company (IESCO), Pakistan [2023]
- Transmission Tower at 132 KV, Chaksawari, Mirpur, Islamabad Electric Supply Company (IESCO), Pakistan [2023]
- 132 KV Grid Station at Shakrial Rawalpindi, Islamabad Electric Supply Company (IESCO), Pakistan [2023]
- BOQs (Male), Project Management Office (PMO), NUST university, Pakistan [2023]
- 132 kV Grid Station Khanpur Under 7th STG, Islamabad Electric Supply Company (IESCO), Pakistan [2023]
- 132 Kv Grid Station at Rawat-II (Rawat Industrial), Islamabad, Islamabad Electric Supply Company (IESCO), Pakistan [2023]
- PCC Drain/Nullah Along Sr (West) & (South) Sector D-12/1-2, Islamabad, Capital Development Authority (CDA), Pakistan [2023]
- 2 × NG-Staff Apartments at NUST H-12 Sector. Project Management Office (PMO), NUST university, Pakistan, [2022]
- NUST Girls hostel G+9 storeys, NUST University, H-12. Project Management Office (PMO), NUST university, Pakistan [2022]
- NUST Boys hostel, NUST University, H-12, Islamabad, Project Management Office (PMO), NUST university, Pakistan [2022]
- Panahgah's for Pakistan Baitul Maal at Tarlali Kalan and Tarnol Islamabad, Pakistan Public Works Department, Pakistan [2022]
- Culverts in Sector C-15, Islamabad, Capital Development Authority (CDA), Pakistan [2022]
- Box Culverts Chak Shahzad, Kuri Road, Islamabad, Capital Development Authority (CDA), Pakistan [2022]
- Culverts in Sector I-12, Islamabad, Capital Development Authority (CDA), Pakistan [2021]
- Establishment of National Academy of Public Finance & Accounts at H-8/4, Islamabad., Development Consultancy Services (Pvt) Ltd, Pakistan [2021]
- Plot No. 11 Street No. 09 Sector K Phase V DHA, Islamabad, NUST University, Pakistan [2021]
- 132 KV Grid Station DHA Phase-IV Rawalpindi, Capital Development Authority (CDA), Pakistan [2021]
- Flyover at Sector D PN Farms Islamabad, Anchor Development and Construction Company (ADCC) (Pvt.) Ltd., Pakistan [2021]
- Centre for International Peace and Stability-II, NUST, H-12 Islamabad, Project Management Office (PMO) NUST, Pakistan [2021]
- Covered Car Parking at FBR Headquarters Islamabad, Pakistan Public Works Department, Pakistan [2021]
- 132 KV Grid Station at I-11 Islamabad, Islamabad Electric Supply Company (IESCO), Pakistan [2021]
- NUST Interdisciplinary Cluster for Higher Education, NUST, H-12 Islamabad, Project Management Office (PMO) NUST, Pakistan [2021]
- Cell Box Culverts in Section I-11/2, Islamabad, Pakistan, Capital Development Authority (CDA), Pakistan [2021]
- 132 KV Grid Station at Sahaar Mirpur AJK, Kashmir, Pakistan, Islamabad Electric Supply Company (IESCO), Pakistan [2021]
- NUST Creative Learning School at NUST H-12 Campus, Islamabad, Pakistan, Project Management Office (PMO), NUST university, Pakistan [2020]
- KV Grid Station at Sohawa Jhelum, Pakistan, Islamabad Electric Supply Company (IESCO), Pakistan [2020]
- Baliqis General Library Library, Maqdisu Street, Sana'a, Yemen, Capital Authority, Yemen [2007]
- Tower Parking for Mareb Yemen Insurance Company, Zubayri Street, Sana'a, Yemen, Mareb Yemen Insurance Company, Yemen [2007]

Geotechnical Consultancy including Third-Party Evaluator

- Resistivity survey to assess stratum of subsurface Coal bed in Kallar Kahar area. Earth Services (PVT) Ltd. Pakistan [2025]
- Implementation a shallow seismic survey (Refraction and MASW) at Balakot Project, Mansehra District, Khyber Pakhtunkhwa. BK Consultants (PVT) Lt, Pakistan [2024].
- HEC Secretariat Building at HEC H-8 Premises, Islamabad, National Engineering Services Pakistan Pvt. Ltd. (NESPAK) [2024]
- Preliminary Geotechnical Investigation for NCLS College at NUST H-12 Islamabad, Project Management Office (PMO), NUST university, Pakistan [2024]
- Field Density Tests at German Embassy, Islamabad, DVK Construction Pvt Ltd [2024]
- Field Density Tests at German Embassy, Islamabad, DVK Construction Pvt Ltd [2023]
- Third party evaluator: Static Plate Load Test at German Embassy, Islamabad, Qavi Engineers (Pvt) Ltd, Pakistan [2022]
- Third party evaluator: Compaction Test of Technological Base Course with the Lightweight Drop Plate at German Embassy, Islamabad, Qavi Engineers (Pvt) Ltd, Pakistan [2021]
- Third party evaluator: Commercial Building at Islamabad-Murree Expressway, Murree, Earth Services, Pakistan [2021]
- Pressuremeter Test at DHA Phase-V Islamabad, Pakistan, Universal Drilling Engineers, Lahore, Pakistan [2020]

Courses Taught at University Level

- Advanced Geotechnical Design (CE-828), Postgraduate (MS & PhD), National University of Sciences & Technology (NUST), Pakistan [Spring 2025, 2024, 2023, 2022, 2021, 2020]
- Advanced Soil Mechanics (CE-831), Postgraduate (MS & PhD), National University of Sciences & Technology (NUST), Pakistan [Fall, 2024, 2023, 2022 2021, 2020]
- Foundation Engineering (CE-405), Undergraduate, National University of Sciences & Technology (NUST), Pakistan [Spring 2025]

- Rock Mechanics I (CE-884), Postgraduate (MS & PhD), National University of Sciences & Technology (NUST), Pakistan [Fall 2022]
- Soil Mechanics II (CE-324), Undergraduate, National University of Sciences & Technology (NUST), Pakistan [Spring 2025, 2024, 2022, 2021, 2020, 2019]
- Soil Mechanics I (CE-222), Undergraduate, National University of Sciences & Technology (NUST), Pakistan [Fall 2024, 2023, 2021, 2020]
- Mechanical Properties of Soils (CE-428), Postgraduate (MS & PhD), National University of Sciences & Technology (NUST), Pakistan [Fall 2022]
- Research Methodology, Postgraduate (MS), Eduglobe Malaysia Sdn Bhd, Malaysia [IV-2018]
- Geological and Commercial Risk, Postgraduate (MS), Eduglobe Malaysia Sdn Bhd, Malaysia [III-2018]
- Petrophysics, core Analysis and Formation Evaluation, Postgraduate (MS), Eduglobe Malaysia Sdn Bhd, Malaysia [I-2017]
- Soil Mechanics I (C1123), Undergraduate, Ibn Seena'a International University for Science and Technology, Yemen [Spring 2012, 2011]
- Engineering Geology (C1313), Undergraduate, Ibn Seena'a International University for Science and Technology, Yemen [Spring 2012, 2011]

Supervision List

PhD Candidates

- Analysis of Raft Foundation Supported by Rigid Concrete Piles & Stone Columns in Multi Layered Soil, Jalali, U. H. [Ongoing]
- Utilization of calcium and silica based waste materials for the stabilization of dispersive soil, Hassan, W. [2025]

Master Students (MS)

- Predicting the consolidation settlement using the Compression Index and Coefficient of Consolidation based on sieve#40, Khan, S. [2024]
- Stabilization of Dispersive Soil by using Plaster of Paris Kiln Dust, Fatima, B. [2023]
- Refinement of geotechnical sustainability assessment Tool (Geo-SAT) with project specific key indicators, Batool, K. [2023]
- Estimation of seepage through dam with core resting on pervious foundation by using SEEP/W and ANN, Khursheed, Z. [2023]
- Assessment of Atterberg Limits & materials passing over sieve #40 and #200, Sana Ullah [2022]
- An experimental study on improvement of clay subgrade of pavement using shredded plastic bottles, Sheikh, F. [2022]
- Determination of maximum safe depth of unsupported excavation pit and minimum safe horizontal distance from adjacent foundations, Khalid, M. H. [2022]
- Comparative analysis of ultimate bearing capacity of piles based on pile design load, static pile load test, graphical interpretative methods, and FEM, Jalali, U. H. [2022]
- Optimization of tensile strength of geosynthetic reinforcement for CBR value of soil, Hassan, S. [2022]
- Prediction of CBR and compaction parameters using index soil properties of Islamabad soils, Hassan, M.J. [2021]
- Effect of creep and temperature cycling On Tharparkar sand and HDPE Geomembrane interface shear strength, Iqbal, F. [2021]
- Analysis of gabion retaining wall for a site at Bahria Town Rawalpindi using analytically and numerical modeling with PLAXIS 2D, Ayyub, A. [2021]
- Sustainability of geotechnical projects: development of a sustainability assessment tool (GEO-SAT), Raza, F. [2019]

Final Year Project (Undergraduate Students)

- Design of Sustainable, Compressed Earth Blocks from Agro-Waste. A Novel Practical Approach for the Construction Industry, Hassan et al. [2025]
- Development of a Wireless Sensor Network for Landslide Monitoring & Early Warning, Jahan et al. [2024]
- Revolutionizing Cricket Infrastructure: Pioneering the Standard of Cricket Pitch Design, Yousafzai et al. [2024]
- Improve the geotechnical properties of soil using natural pozzolanic material, Hamza, et al. [2022]
- Improvement of Unconfined Compressive Strength of Clayey soil using Paper Pulp, Saeed M.D.& Azam, U. [2021]

Workshops, Short courses & Conferences

- Effective Problem-Solving and Decision-Making, An online non-credit course authorized by University of California, Irvine and offered through Coursera [13/8/2020]
- Management Skills, Professional Development Center, NUST, Pakistan [15/1/2020]
- Communication with Impact, U.S.-Pakistan Center for Advanced Studies in Energy (USPCAS-E), NUST, Pakistan [10/5/2019]
- Team & Relationship Building Skills, Professional Development Center, NUST, Pakistan [2/5/2019]
- Soft soil Engineering International Conference 2015, Langkawi, Malaysia [27-29/10/2015]
- A 3-Day Workshop on SASW For Geotechnical Applications, Universiti Kebangsaan Malaysia, Malaysia [8-]10/12/ 2014
- 2-Day Workshop on Geophysical Method for Geotechnical and Geohazard Engineering 2014, Malaysian Meteorological Department, Selangor, Malaysia [5-6/11/2014]
- Southeast Asia Conference on Soft Soils Engineering and Ground Improvement, Bandung, Indonesia [20-24/10/2014]
- Soft soil Engineering International Conference 2013, SEIC'13, Riverside Majestic Hotel Kuching, Sarawak, Malaysia [17-19/9/2013]
- Ways and Methods of Studying the Potential of the Oil Sectors YICOM, Yemen [30/1/2013]
- Oil and Gas Management, YICOM, Yemen [26/12/2012]
- Recent Issues and Development in Geotechnical Engineering, UTM, Malaysia [6/12/2010]
- Application of GIS in Civil Engineering, UTM, Malaysia [9/8/2010]
- Research methodology, UTM, Malaysia [18/2/2010]

Continuing Professional Development (CPD) & Continuous Contractor Development (CCD)

- Presenter, Soft Soil Engineering International Conference 2015, SEIC'15, UTHM, Malaysia, Board of Engineers Malaysia (BEM) & Construction Industry Development Board, Malaysia, CPD (12) / CCD (25) [2015]
- Participation in A 3-Day Workshop on SASW For Geotechnical Applications, Universiti Kebangsaan Malaysia, Malaysia, Board of Engineers Malaysia (BEM), CPD (10) [2014]
- Attendance, 2-Day Workshop on Geophysical Method for Geotechnical and Geohazard Engineering 2014, Malaysian Meteorological Department, Malaysia Board of Engineers Malaysia (BEM), CPD (10) [2014]
- Presenter, Soft Soil Engineering International Conference 2013-SEIC'13, UTHM, Malaysia, Board of Engineers Malaysia (BEM) & Construction Industry Development Board, Malaysia, CPD (15), CCD (20) [2013]
- Participation, Recent Issues and Development in Geotechnical Engineering, UTM, Malaysia Board of Engineers Malaysia (BEM), CPD (5) [2010]
- Participation, Recent Issues and Development in Highway & Transportation Engineering, UTM, Malaysia, Board of Engineers Malaysia (BEM), CPD (5) [2010]

Certificates

- Certificate of Appreciation to Participate as Trainer for Workshop of Scientific Writing and Publication UTHM Global Society (UGS), UTHM, Malaysia 16/3/2017
- Certificate of Appreciation in Organizing the Geotechnical Festival Engineering, UTHM, Malaysia [2016]
- Certificate of Appreciation in Attend the Seminar on the Development of Road Network Maintenance and Rehabilitation Program, UTHM, Malaysia [2015]
- Certificate of Appreciation as a Presenter , Office for Research, Innovation, Commercialization and Consultancy Management-ORICC, UTHM, Malaysia [2014]
- Certificate of Appreciation as a Committee Members in Logistic Unit, Operasi Khidmat Masyarakat 2014 (OPKIM 2014), UTHM, Malaysia [2014]
- Certificate of Appreciation in Recognition of Participation, Support and Contribution towards the Success of the Event, Operasi Khidmat Masyarakat 2014 (OPKIM 2014), UTHM, Malaysia [2014]
- Certificate of Appreciation as a Technical Committee, Faculty of Civil Engineering, Universiti Teknologi Malaysia [2010]
- Certificate of Academic Excellence, Yemeni Students Society in UTM, Malaysia [2010]
- Certificate of Appreciation, International Society Students, UTM, Malaysia [2008]
- Organize Local Science Exhibition, Sabin General Office of Education, Sana'a, Yemen [2006]
- Certificate of Appreciation, Arabia Al-Saidah High School, Yemen [2006]
- Certificate of Appreciation., Al-Sabin High School, Yemen [2004]
- Certificate of Appreciation, Al-Falah High School, Yemen [2003]
- Certificate of Appreciation, Guild Yemeni Teachers, Yemen [2002]

Training Courses

- **Course of Oil & Gas Safety Passport (OGSP) Level 1 [2016]**
Safety Training on the oil and gas sector, UTHM, Malaysia
- **Conversation Skills-Advanced 2H [2012-2013]**
Development Conversation Skills, Exceed Language Centre, Yemen
- **Business Meeting, Presentations and Negotiations [2012]**
Learning about Business Meeting, Presentations and Negotiations, Exceed Language Centre, Yemen
- **Safety induction course for construction workers [2010]**
Training to get Green Card for safety and Health, HIDEF Training & Consultancy-UTM, Malaysia
- **Application field for Resistivity method [1999]**
Explore groundwater & analysis soil & rock characteristics, Sana'a University, Yemen [1999]

Driver's License Countries

- Pakistan (valid)
- Malaysia (not renewed)
- Yemen (not renewed)

Language

- Arabic (Native language)
- English

Referees

Referees available on request