

Dr. Badee Alshameri

Associate Professor, PhD, MS, BS

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

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Scopus ID: 37090373300 | **ResearchGate ID:** Badee Alshameri | **Google Scholar ID:** Badee Alshameri

Profile Summary

Dr Badee Alshameri has over 19 years of comprehensive experience in various roles (academic & industry) and countries (Pakistan, Malaysia, Yemen) including 8 years of remarkable leadership in department management and field project execution. He successfully led a team of engineers and technicians to complete **43** geotechnical design and soil investigation projects in the last 6 years. Dr Alshameri has published **51** peer-reviewed publications with **Total IF: 133.7**, **i10-index 28**, **h-index 20**, and secured **PKR 21.3M** in competitive grants. A significant majority (>92%) of these publications feature him as the first or corresponding author. He has been awarded as **best Researcher, Innovator, Teacher and NUST Top Performance Awards** during his tenure in NUST.

Qualifications

- **Doctor of Philosophy in Civil Engineering (Geotechnical Engineering) [2013-2017]**
Universiti Tun Hussein Onn Malaysia (UTHM), Malaysia
- **Master of Engineering (Civil-Geotechnics) [2008-2011]**
Universiti Teknologi Malaysia (UTM), Malaysia
- **Bachelor's Degree in Earth Science [1995-1999]**
Sana'a University, Yemen

Academic Appointments

- **National University of Sciences and Technology (NUST), Pakistan**
Associate Professor, Head of Department, Geotechnical Engineering [2024-Present]
Head of Department, Geotechnical Engineering [2019- Present]
Regular Visiting Faculty [2019]
- **Ibn Seena'a International University for Science and Technology, Yemen**
Head of Civil Engineering Department, part time [2011-2012]
- **Ministry of Education, Yemen**
Teacher [2000-2007]

Industry & Consultancy Appointments

- **Eduglobe Malaysia Sdn. Bhd., Malaysia**
Consultant & Trainer, part time [2017-2018]
- **Yemen Company for Investment Oil & Minerals (YICOM), Yemen**
Geotechnical Engineer [2011-2017]
- **Engineering Local Office, Yemen**
Engineering Geologist, part time [2007]

Awards & Honors

- **Alumni Expert, Universiti Tun Hussein Onn Malaysia (UTHM) [2024]**
- **School Best Teacher Award, NUST, Pakistan [2023]**
- **School Best Researcher Award, NUST, Pakistan [2023]**
- **NUST Top Performance Award, NUST, Pakistan [2023]**
- **School Best Innovator Award, NUST, Pakistan [2022]**
- **NUST Top Performance Award, NUST, Pakistan, [2021]**
- **HEC Approved PhD Supervisor** in the discipline of Engineering & Technology, HEC, Pakistan [2021]
- **Maximum Number of Funded Projects**, School of Civil and Environmental Engineering, NUST, Pakistan [2020]
- **Three Stars Publication Award**, Centre for Graduate Studies, UTHM, Malaysia [2017]
- **Malaysian Technical Cooperation Programme (MTCP) Scholarship**, MOHE, Malaysia [2014]
- **PhD Scholarship**, Ministry of Higher Education, Yemen [2013]
- **Master Scholarship**, Ministry of Higher Education, Yemen [2008]

Grants, Funding & Patent

- **Principal Investigator, PKR 9.72 million**, Effect of Creep, temperature and loading cycling of soil geomembrane interface shear strength, National Research Program for Universities (NRPU), HEC, Pakistan [2022-2026]
- **Co-Principal Investigator, PKR 11.58 million**, Time-Dependent Mechanical Behavior of New Type of Light Weight Cemented Granular Geomaterials (CGG), NRPU, HEC, Pakistan [2022-2026]
- **Principal Investigator**, Patent Application No: 98/2024, Filed Patent Titled: Composition and Method for Construction Enhanced Cricket Pitches, Intellectual Property Organization, Pakistan [2024]

Research Interest & Expertise

- Geotechnical sustainability, slope stability & soil and ground improvement, application in physical model.
- Geophysical applications (e.g. Seismic Refraction, MASW & Bender Element methods) in geotechnics
- Geotechnical foundation design (shallow and deep foundations), soil investigation & third-party evaluator
- Supervision of laboratory and field soil tests.

Publications

Publication Rate as a First or Corresponding Author in WOS/Scopus: > 92%

i10-index: 28 | h-index 20 | Total IF: 133.7

Full list link: <https://scholar.google.com/citations?hl=en&user=3IgB8AUAAAAJ>

Selected Peer-Reviewed Journal Articles (Web of Sciences & Scopus):

- Attique, M. Hassan, W. **Alshameri, B.** Ghani, S. Junaid, M Iqbal, F. Hassan, J. (2025) Soil- Geomembrane interfaces performance under monotonic temperature cycles: implications for infrastructure durability. *Results in Engineering*. 28, 1-16 (108268). <https://doi.org/10.1016/j.rineng.2025.108268>.
- 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>.
- 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>
- **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>.
- 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>.
- 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>.
- **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>
- 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>.
- 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>
- **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/seagi.2017.30>.

Thesis:

- **Alshameri, B.**, (2017). Combining Seismic and Geotechnical Methods to Improve the Prediction of Physical Soil Properties. PhD thesis, UTHM. Malaysia.
- **Alshameri, B.**, (2010). Engineering properties of older alluvium. Master dissertation, UTM. Malaysia.

Skills

Technical Skills

- **Software:** Rocscience (Settle3D, RS2, RS3, RSPile), Plaxis, SeisOptPicker; SeisImager/SW, Microsoft office programs
- **Laboratory testing:** Bender Element, Unconfined Compression Test, Direct Shear Test, Soil Classification. Index Soil Properties.
- **Field Investigation:** Seismic Refraction, MASW, Standard Penetration Test (SPT), Pressuremeter Test, Plate Load Test.
- **Design:** Shallow & Deep Foundations, Third Party Evaluator, Soil Improvement Techniques.

Soft skills:

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

Editorial and Keynote Speaker Appointments

- **Editorial Board Members [2026]**

Discover Civil Engineering, Springer Nature Switzerland AG, e-ISSN: 2948-1546, Switzerland

- **keynote Speaker & Session Chair [2025]**

17th International Conference on Geotechnical Engineering and the 8th International Symposium on Geohazards (17ICGE & 8ISG), Pakistan

- **Executive Editorial Board [2025]**

Al Qalam 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, Turkiye

Reviewing Experiences

Geotechnical and Geological Engineering (10 papers), KSCE Journal of Civil Engineering (7 papers), PLOS ONE (5 papers), Bulletin of Engineering Geology and the Environment (2 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) 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), IJUM 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)

Consultancy of Soil Investigation Projects & Third-Party Evaluator (Selected List)

Executed over 43 industrial projects in the last 6 years

Soil Investigation and Shallow/Deep Foundation Design

- Jinnah Medical Complex and Research Center, sector I-16, Islamabad Capital Development Authority (CDA), Pakistan [2025]
- Upgradation of NCRD Complex, Phase-III, Islamabad, Pakistan Public Works Department (PWD), Pakistan [2024]
- Transmission Tower at 132 KV, Mirpur, Islamabad Electric Supply Company (IESCO), Pakistan [2023]
- 132 KV Grid Station at Shakrial Rawalpindi, IESCO, Pakistan [2023]
- BOQs (Male), Project Management Office (PMO), NUST university, Pakistan [2023]
- PCC Drain/Nullah Along Sr (West) & (South) Sector D-12/1-2, Islamabad, CDA, Pakistan [2023]
- Panahgah's for Pakistan Baitul Maal at Tarlali Kalan and Tarnol Islamabad, PWD, Pakistan [2022]
- National Academy of Public Finance & Accounts, Islamabad., Development Consultancy Services, Pakistan [2021]
- Cell Box Culverts in Section I-11/2, Islamabad, Pakistan, CDA, Pakistan [2021]
- 132 KV Grid Station at Sahaar Mirpur AJK, Kashmir, Pakistan, IESCO, Pakistan [2021]
- NUST Creative Learning School at NUST H-12 Campus, Islamabad, Pakistan, PMO, NUST, Pakistan [2020]
- Baliqis General Library Library, Maqdisu Street, Sana'a, Yemen, Capital Authority, Yemen [2007]
- Tower Parking, Zubayri Street, Sana'a, Yemen, Mareb Yemen Insurance Company, Yemen [2007]

Geophysical Survey (Selected List)

- Resistivity survey, Kallar Kahar area. Earth Services (PVT) Ltd. Pakistan [2025]
- Shallow seismic survey (Refraction and MASW), Khyber Pakhtunkhwa. BK Consultants (PVT) Lt, Pakistan [2024].

Other Consultancy including Third-Party Evaluator, TPE (Selected List)

- TPE: Static Plate Load Test at German Embassy, Islamabad, Qavi Engineers (Pvt) Ltd, Pakistan [2022]
- TPE: Commercial Building at Islamabad-Murree Expressway, Murree, Earth Services, Pakistan [2021]
- Pressuremeter Test, DHA Phase-V Islamabad, Pakistan, Universal Drilling Engineers, Pakistan [2020]

Courses Taught at University Level

- Advanced Geotechnical Design (CE-828), Postgraduate (MS & PhD), NUST, Pakistan [2020 to Present]
- Advanced Soil Mechanics (CE-831), Postgraduate (MS & PhD), NUST, Pakistan [2020 to Present]
- Foundation Engineering (CE-405), Undergraduate, NUST, Pakistan [2024 to Present]
- Rock Mechanics I (CE-884), Postgraduate (MS & PhD), NUST, Pakistan [2022]
- Soil Mechanics II (CE-324), Undergraduate, NUST, Pakistan [2019 to Present]
- Soil Mechanics I (CE-222), Undergraduate, NUST, Pakistan [2020 to Present]
- Mechanical Properties of Soils (CE-428), Postgraduate (MS & PhD), NUST, Pakistan [2022]
- Research Methodology, Postgraduate (MS), Eduglobe Malaysia Sdn Bhd, Malaysia [IV-2018]
- Geological and Commercial Risk, Postgraduate (MS), Eduglobe, Malaysia [III-2018]
- Soil Mechanics I (C1123), Undergraduate, Ibn Seena'a Inter. Univ. for Science and Tech., Yemen [2012, 2011]
- Engineering Geology (C1313), Undergraduate, Ibn Seena'a Inter. Univ. for Science and Tech., Yemen [2012, 2011]

Student Supervision & Mentorship

Awards & Honors (Students Under my Supervision/Mentorship)

- **Stipendium Hungaricum scholarship**, Fawad Sheikh (MS students), Budapest University of Technology and Economics, Hungary, PhD in Civil Engineering, [2025]
- **Second Position in Category of Best Industrial Projects**, NUST, Pakistan, [2025]
- **Rector's Gold Medal**, NUST, Pakistan, [2024]

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

Supervision List:

PhD Candidates

- Optimization of Bored Pile Capacity Based on Failure Settlement Prediction and Failure Criteria, Jalali, U. H. [Ongoing]
- Utilization of calcium and silica-based waste materials for the stabilization of dispersive soil, Hassan, W. [2025]

Master Students (MS)

- Generalized Chemistry-Informed Framework for Predicting Mechanical Properties of Lime-Solid Waste Stabilized Fine Grained Cohesive Soils. Attique, M. [Ongoing]
- Geo-SAT Based Sustainability Evaluation of Embankment Stabilization: Incorporating the Fourth E (Economy) Into Slope Stability Analysis Riaz, K. [Ongoing]
- Computational Analysis of Cut Slope Stability in Sandy Strata Using Finite Element Modeling: A Case Study of Deep Excavation in Flat Terrain. Raza, H.A. [Ongoing]
- 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)

- Dynamic Soil Loading: Seismic Response & Liquefaction Potential Analysis & Its Simulations Through Augmented Reality Models, Noor-Alhuda et al. [2026]
- Digitized Foundation Design Recommendations based on AI/GIS-Driven Geo-technical sub-soil characterization of Islamabad. Ilyas et al. [2026]
- Digital Twin Oriented Hybrid Modelling for Foundation Settlement Prediction. Ayla et al. [2026]
- Climate Change Impact on Internal Erosion and Soil Strength in Embankment Dams. Aryan et al. [2026]
- 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]

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]

Selected Workshops & Short Courses

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

- Effective Problem-Solving and Decision-Making, University of California, Irvine, online via Coursera [13/8/2020]
- Management Skills, NUST, Pakistan [15/1/2020]
- Communication with Impact, NUST, Pakistan [10/5/2019]
- Team & Relationship Building Skills, PDC, NUST, Pakistan [2/5/2019]
- 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]
- A 3-Day Workshop on SASW For Geotechnical Applications, UKM, Malaysia, CPD: 10 [8-10/12/ 2014]
- 2-Day Workshop on Geophysical Method for Geotechnical and Geohazard Engineering 2014, Malaysian Meteorological Department, Selangor, Malaysia, CPD: 10 [5-6/11/2014]
- Soft Soil Engineering International Conference 2013-SEIC'13, UTHM, Malaysia, BEM & Construction Industry Development Board, Malaysia, CPD: 15, CCD: 20 [2013]
- Recent Issues and Development in Geotechnical Engineering, UTM, Malaysia, BEM, CPD: 5 [2010]
- Recent Issues and Development in Highway & Transportation Engineering, UTM, Malaysia, BEM, CPD: 5 [2010]

Selected Certificates of Appreciation

- Trainer for Workshop of Scientific Writing and Publication, UTHM Global Society (UGS), UTHM, Malaysia [16/3/2017]
- Organizing the Geotechnical Festival Engineering, UTHM, Malaysia [2016]
- Attend the Seminar on the Development of Road Network Maintenance and Rehabilitation Program, UTHM, Malaysia [2015]
- Presenter, Office for Research, Innovation, Commercialization and Consultancy Management-ORICC, UTHM, Malaysia [2014]
- Committee Members in Logistic Unit, Operasi Khidmat Masyarakat 2014 (OPKIM 2014), UTHM, Malaysia [2014]
- Recognition of Participation, Support and Contribution towards the Success of the Event, Operasi Khidmat Masyarakat 2014 (OPKIM 2014), UTHM, Malaysia [2014]

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