

Abdul Salam Buller (Ph.D.)

Associate Professor
Department of Civil Engineering
Thar Institute of Engineering, Sciences and Technology (TIEST)
NED University of Engineering & Technology, Karachi 75270, Pakistan
☎+923213342572 | ✉ enr.salam@cloud.neduet.edu.pk



SUMMARY

Dedicated Associate Professor in Civil Engineering with over 15 years of experience in teaching, research, and professional practice. Specializes in construction materials and geotechnical engineering, with a proven record of accomplishment of developing innovative teaching methods and contributing to significant research advancements. Known for strong communication skills and the ability to engage and inspire students from diverse backgrounds.

PROFESSIONAL EXPERIENCE

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| Civil (TIEST), In NED University of Engineering and Technology | Mithi, Pakistan |
| ASSOCIATE PROFESSOR | June. 2023– Till to date |
| <ul style="list-style-type: none">Teaching Courses related to Civil Engineering (Undergraduate Students)Research Activities and Research PublicationsProviding guidance and supervision to graduate as well as undergraduate StudentsSupervision of MS and Ph.D. Student | |
| Quaid-e-Awam University (QUEST) | Nawabshah, Pakistan |
| ASSISTANT PROFESSOR | Jan. 2020– June. 2023 |
| <ul style="list-style-type: none">Teaching Courses related to Civil Engineering (Undergraduate Students)Conducting research and encouraging students towards the latest research trendsProviding guidance and supervision to graduate as well as undergraduate StudentsParticipating in departmental meetings, and providing academic support to professors and faculty | |
| Quaid-e-Awam University (QUEST) | Nawabshah, Pakistan |
| LAB ENGINEER | Jan. 2014– Jan. 2020 |
| <ul style="list-style-type: none">Demonstrating to Students About the Practical Related to Structures and Soil MechanicsPreparing class Files for PEC Team Visit and Helps Faculty by Conducting/Engaging ClassesAssist Faculty with Clerical Tasks Such as Copying Papers, Collecting Assignments, and Preparing Materials for upcoming classes.Taught Small Groups of Students Focused on Specific Parts of Coursework. Documented Attendance and Completed Assignments to Maintain Full Class and Student Records. | |
| M/S Maqbool Ahmed & Co | Nawabshah, Pakistan |
| SITE ENGINEER | Jan. 2012– Jan. 2014 |
| <ul style="list-style-type: none">Layout of Structural Component Given in Drawings Using Total Station.Execution of Civil Works.Making BOQ of the Project.Meeting with Client and Owner for Making Efficient and Timely Construction | |

Oct, 2025

Dr. A.S Buller - Resume

EDUCATION

Sungkyunkwan University (SKKU)

Suwon, South Korea

Ph.D. IN STRUCTURAL ENGINEERING

Aug. 2015 – Feb. 2020

- Graduated with 4.24/4.5 CGPA
- Dissertation Topic: Mechanical Recovery of Cracked Fiber-Reinforced Mortar Incorporating Crystalline Admixture, Expansive Agents, and Geo-materials

Quaid-e-Awam University (QUEST)

Nawabshah, Pakistan

MASTER IN CONSTRUCTION ENGINEERING & MANAGEMENT

Jan. 2012 – Nov. 2014

- Graduated with 83.2% (1st Position in Class)
- Dissertation Topic: Experimental Study on Enhancement of Strength of Concrete by Using Silica Fume as a Partial Replacement of Cement

Quaid-e-Awam University (QUEST)

Nawabshah, Pakistan

BACHELOR OF ENGINEERING IN CIVIL ENGINEERING

Dec. 2007– Dec. 2011

- Graduated with 85.5% (3rd Position in Class)
- Dissertation Topic: Experimental Study on Enhancement of Strength and Controlling Water Penetration of Concrete by Using Resin Coating

University Admission Test Preparations

May. 2007– Dec. 2007

- During this period, I was engaged in the entry test (for Universities) preparations. At that Time university session usually starts in the start of every year.

ADMINISTRATIVE RESPONSIBILITIES

- As Area Coordinator in the Department of Civil Engineering (TIEST), NED, University of Engineering and Technology, Karachi, Sindh, Pakistan.
- Supervisor, Laboratory of Engineering Mechanics, Department of Civil Engineering (TIEST), NED, University of Engineering and Technology, Karachi, Sindh, Pakistan.
- Convener of Departmental Maintenance Committee, Department of Civil Engineering (TIEST), NED, University of Engineering and Technology, Karachi, Sindh, Pakistan.
- Convener of Mess and Canteen Management Committee, Department of Civil Engineering (TIEST), NED, University of Engineering and Technology, Karachi, Sindh, Pakistan
- FYDP Coordinator at Department of Civil Engineering (TIEST), NED, University of Engineering and Technology, Karachi, Sindh, Pakistan.
- Convener “Student Consultative Bureau” QUEST, Campus Larkano (Now The University of Larkano)
- Warden at “ZA Bhutto Hostel” QUEST, Campus Larkano (Now The University of Larkano)

UNDERGRADUATE PROJECT SUPERVISED

- Development of Banana Fiber Concrete.
- Effect of Fly Ash on Mechanical and Durability Performance of Concrete.
- Strength Properties of Concrete Made with CBA as Fine Aggregate Replacement.
- Use of Natural Fibers and Their Effect on Concrete Performance.
- Effect of Waster locally available materials on Self-Healing capacity of concrete

MASTERS AND PHD SUPERVISION

- Co-Supervising Two PhD students with Topic:
 - Characterization of Fiber-Reinforced Self-Healed Geopolymer Concrete against Mechanical Performance for future sustainable development
 - Future of AI-Based Self-Adaptive Concrete and its Life Cycle Assessment
- Co-Supervised Masters Student with Topic
 - The effect of Partial Replacement of Cement on the Crack Healing Mechanism of Self-Healed PP Fiber Reinforced Concrete Exposed to CO₂ and Chloride Environment
 - Experimental Investigation on Effect of Silica Fume on Mechanical Performance of Self Compacting Concrete
 - Effects of Waste Marble Powder and Steel Fibers on the Mechanical and Durability Performance of Sustainable Concrete
 - Effect of Ground Granulated Blast Furnace Slag (GGBS) as a Partial of Cement on Mechanical and Durability Performance of Concrete

COURSES TAUGHT

- Strength of Materials-I
- Reinforced Concrete Design-I
- Reinforced Concrete Design-II
- Theory of Structures
- Foundation Engineering
- Civil Engineering Materials
- Geotechnical Engineering
- Fluid Mechanics-IIs
- Mechanics of Solid-II
- Structural Analysis-II
- Masonry Structures

RESEARCH INTEREST

- Development of crack-free concrete by using self-healing of crack concept
- Utilization of supplementary cementitious materials (SCM), recycled aggregates, polymers, and other industrial by-products in concrete and their effects on superior durability/mechanical performance of concrete
- Self-compacting concrete and introducing the crack healing concept in self-compacting concrete
- Tension stiffening effect determination in concrete by using the self-healing concept
- Structural application of Engineered Cementitious Composites (ECC)
- Backed clay concrete and its behavior under crack healing effect
- Fiber-reinforced concrete
- Self-curing concrete and application of nanomaterials in concrete to develop self-healed/self-repaired concrete

CURRICULUM DEVELOPMENT

- Supervised, the development of a new curriculum for the UG program for the Engineering program at the Civil Engineering Department QUEST Campus Larkano from 2014-2015
- Supervised, the development of a new curriculum for the UG program for the Engineering program at the Civil Engineering Department (TIEST) Mithi, NED University Karachi from 2023-2024
- Member of Board of Studies of Civil Engineering department (TIEST) Mithi, NED University Karachi
- Member of Board of Studies of Civil Engineering department QUEST, Campus Larkano (Now The University of Larkano)

RESEARCH SNAPSHOT

- ORCID ID: 0000-0002-1057-9955
- Research Gate ID: engr.salam@neduet.edu.pk
- Scopus ID: abdulsalam@skku.edu
- Google Scholar ID: buller.salam@quest.edu.pk
- Google Scholar h Index: 13
- Google Scholar i10 Index: 16
- LinkedIn ID: buller.salam@quest.edu.pk
- Total Citations: 532

ACHIEVEMENTS/GRANTS

- Award of **3.4 Million PKR** as Principal Investigator (P.I) Under Sindh Research Support Program from Sindh Higher Education Commission, Pakistan (2024) for Two years on the topic "Effect of Industrial Waste and Supplementary Materials on Production of High-Performance Self-Healed Concrete"

AWARDS

- Fully Funded PhD Scholarship under Project 'HEC-HRDI-UESTPS-UET. Pakistan in Phase I (Country: South Korea,)
- Got 3rd Position in B.E (Civil) Throughout Four Year Degree Program with 85.85%

PROFESSIONAL MEMBERSHIP AND ASSOCIATION

- American Society of Civil Engineers (application in process)
- Institution of Engineers Pakistan
- Association of Consulting Engineers Pakistan

REVIEWER OF JOURNALS

- Structural Concrete
- Scientific Reports
- Construction and Building Materials
- Sustainable Chemistry and Pharmacy
- International Journal of Science and Technology, Transactions of Civil Engineering
- Materials (MDPI)
- Sustainability (MDPI)
- Buildings (MDPI)
- Engineering Technology & Applied Sciences Research

CERTIFICATIONS

- Auto cad (2D & 3D)
- HEC Approved Supervisor
- Lifetime Registered Engineer (Pakistan Engineering Council) Since 2012

SKILLS

- **Software** AutoCAD, Origin Pro, MS Office, LaTeX
- **Academics** Academic Research, Data Collection and Analysis, Student Research Guidance
- **Language** English
- **AI in Civil** Working on AI concept in Civil Engineering especially in Self-healing of concrete

LIST OF PUBLICATION

Journal Publication

1. Ali, T., **Buller, A. S.**, Shabbir, S., Azam, M., Lashari, M. H., & Ahmed, Z. (2026). Optimization of GGBS as a Partial Replacement of Cement for Enhanced Strength and Durability of Sustainable Concrete. *Global Research Journal of Natural Science and Technology*, 1-13.
2. Ali, T., Shabbir, S., **Buller, A. S.**, Tusamar, A., & Lashari, M. H. (2026). Effect of Silica Fume And Steel Fibers on Mechanical And Durability Properties of Self-Compacting Concrete. *Spectrum of Engineering Sciences*, 4(1), 989-1002.
3. Ali, T., Lashari, M. H., Shabbir, S., Zaman, A., & **Salam, A.** (2026). Effects of Waste Marble Powder and Steel Fibers on the Mechanical and Durability Performance of Sustainable Concrete.
4. Ali, M., **Buller, A. S.**, Ali, T., Shabbir, S., Ahmed, A., & Rehman, J. U. (2025). Effect of Fly Ash and Indus River Sand on Mechanical, Durability and Environmental Performance of Autoclaved Aerated Concrete (AAC). *Tehnički vjesnik*, 32(3), 860-867. (**Scopus Q3, IF = 1.4**)
5. Buller, A. H., Husain, N. M., **Buller, A. S.**, Channa, I. A., Ali, T., Shabbir, S., & Sodhar, I. N. (2025). Effect of Recycled Aggregates on Physical and Mechanical Performance of Green Concrete Mix. *Tehnički vjesnik*, 32(1), 306-312. (**Scopus Q3, IF = 1.4**)
6. **Buller, A. S.**, Ali, M., Ali, T., & Bheel, N. (2024). "Effect of silica fume on fracture analysis, durability performance and embodied carbon of fiber-reinforced self-healed concrete". *Theoretical and Applied Fracture Mechanics*, 104333, 130. (**Scopus Q1, IF = 5.3**)
7. Bhutto, S., Abro, F.R., Ali, M., **Buller, A. S.**, Bheel, N., Gamil, Y., Najeh, T. & Almujiabah, H. R. (2024). Effect of banana tree leaves ash as cementitious material on the durability of concrete against sulphate and acid attacks. Vol. 10, No. 7. *Heliyon*. (**Scopus Q2, IF = 4.0**)
8. Bheel, N., Shams, M. A., Sohu, S., **Buller, A. S.**, Najeh, T., Ismail, F. I., Benjeddou, O (2024) "A comprehensive study on the impact of human hair fiber and millet husk ash on concrete properties: Response surface modeling and optimization". *Scientific Reports*. 14, 13569 (2024). <https://doi.org/10.1038/s41598-024-63050-7> (**Scopus Q1, IF = 4.3**)
9. Ali, T., Ahmed, I., Buller, A. S., Malik, A., Khoso, S., & Mata, L. A. (2024). Optimizing Concrete Sustainability And Performance: Investigating The Combined Effects Of Industrial Byproducts And Natural Fibers On Mechanical Properties And Durability. *International Journal of Energy, Environment and Economics*, 32(1), 137-152.
10. Abro, F.R.; **Buller, A.S.**; Ali, T.; Channa, I.A.; Abdin, Z.; & Zaheer, S.A; "Optimizing Coal Ash as a Sustainable Substitute of Cement and Aggregate in Structural Concrete. *Jurnal Kejuruteraan* 36(1) 2024: 191-198.
11. **Buller, A. S.**, Ali, T., Shabbir, S., Zaheer, S. A., Khoso, S., Mata, L.A., (2023). "Effect of Fly Ash and Polypropylene Fibers on Mechanical and Durability Performance of Early Age Green Concrete for Future Sustainable Development". *International Journal of Energy, Environment and Economics*. (**Scopus Q2**)
12. Lashari, A. R., Ali, Y., **Buller, A. S.**, & Memon, N. A. (2023). "Effects of partial replacement of fine

- aggregates with crumb rubber on skid resistance and mechanical properties of cement concrete pavements”. *International Journal of Pavement Engineering*, 1-11. (Scopus Q1, I.F=4.17).
13. Sahito, A.A., **Buller, A. S.**, Shabbir, S., Zaheer, S. A., Khoso, S., Mata, L.A., Naqash, M.T (2023). “Investigation the Performance of Sustainable Concrete Utilizing Silica Fume as Cement Alternative for Mechanical and Durability Assessment. *International Journal of Energy, Environment and Economics*. (Scopus Q2
 14. Ali, T., **Buller, A. S.**, Ahmed, Z., Shabbir, S., Lashari, A. R., & Hussain, G. (2022). “Investigation on Mechanical and Durability Properties of Concrete Mixed with Silica Fume as Cementitious Material and Coal Bottom Ash as Fine Aggregate Replacement Material”. *Buildings*, 12(1), 44. (Scopus Q1, I.F=3.80)
 15. Ali, Y., Hussain, F., Irfan, M, **Buller, A. S.** (2021). “An eXtreme Gradient Boosting Model for Predicting Dynamic modulus of Asphalt Concrete Mixtures”. *Construction and Building Materials* 295 (2021) 123642. (Scopus Q1, I.F=7.69)
 16. **Buller, A. S.**, Abro, F.R, Ali, T, Jakhrani, S. H, Buller, A.H, Abdin, Z. U. "Stimulated autogenous-healing capacity of fiber-reinforced mortar incorporating healing agents for recovery against fracture and mechanical properties" *Materials Science-Poland*, vol.39, no.1, 2021, pp.33-48. (Scopus Q3, I.F=1.27)
 17. Abro, F.u.R.; **Buller, A.S.**; Ali, T.; Ul-Abdin, Z.; Ahmed, Z.; Memon, N.A.; Lashari, A.R. “Autogenous Healing of Cracked Mortar Using Modified Steady-State Migration Test against Chloride Penetration”. *Sustainability* 2021, 13, 9519. (Scopus Q1, I.F=3.90)
 18. Ali, T.; Saand, A.; Bangwar, D.K.; **Buller, A.S.**; Ahmed, Z. “Mechanical and Durability Properties of Aerated Concrete Incorporating Rice Husk Ash (RHA) as Partial Replacement of Cement”. *Crystals*, 2021, 11, 604. (Scopus Q2, I.F=2.70)
 19. Inam, M. A., Khan, R., Yeom, I. T., **Buller, A. S.**, Akram, M., & Inam, M. W. (2021). “Optimization of antimony removal by coagulation-flocculation-sedimentation process using response surface methodology”. *Processes*, 9(1), 117. (Scopus Q2, IF=3.35)
 20. **Buller, A. S.**, Buller, A. M., Ali, T., Tunio, Z. A., Shabbir, S., & Malik, M. A. (2021). “Experimental Characterization of Bacterial Concrete against Mechanical and Durability Performance. Engineering”, *Technology & Applied Science Research*, 11(1), 6703-6707. (Scopus Q2)
 21. Buller, A. H., Memon, B. A., **Buller, A. S.**, & Sodhar, I. N. “Modeling Fire Effect of Reinforced Recycled Aggregate Concrete Beams by Regression Analysis”. *International Journal on Emerging Technologies* 12(1): 97-102(2021). (Scopus)
 22. Memon, B. A., Oad, M., Buller, A. H., Shar, S. A., **Buller, A. S.**, & Abro, F. U. R. (2019). Effect of mould size on compressive strength of green concrete cubes. *Civil Engineering Journal*, 5(5), 1181-1188.
 23. Sodhar, I. N., Buller, A. H., Jalbani, A. H., & **Buller, A. S.** “Influence of COVID-19 on Study”. *Journal of Critical Review*, No. 01, Vol. 8, 2021
 24. Mastoi, S., Mugheri, A. B. M., Kalhoro, N. B. & **Buller, A.S.** (2020). Numerical solution of Partial differential equations (PDE’s) for nonlinear Local Fractional PDE’s and Randomly generated grids. “*International Journal of Disaster Recovery and Business Continuity*”, 11(01), 2429-2436.
 25. Gilani, E., Soomro, M. A., Ali, T., Sahito, A. A., & **Buller, A. S.** (2020). “Effect of Stress Relief on Pile Capacity in Soft Clay”. *Indian Journal of Science And Technology*, 13(09), 1089-1097. (Scopus)
 26. **Buller, A. S***, Tunio, Z. A., Ali, T., Abro, F. U. R., & Abbasi, M. A. (2019). “Influence of Coarse Aggregate Gradation on the Mechanical Properties of Concrete, Part II: No-Fines Concrete”. *Engineering, Technology & Applied Science Research*, 9(5), 4623-4626. (Scopus Q2)

27. **Buller, A. S.**, Abro, F.R., Lee, K. M., & Jang, S. Y. (2019). "Mechanical Recovery of Cracked Fiber-Reinforced Mortar Incorporating Crystalline Admixture, Expansive Agent, and Geomaterial". *Advances in Materials Science & Engineering*. (Scopus Q2, I.F=2.09)
28. Ali, Y., Irfan, M., **Buller, A. S.**, Khan, H. A., & Gul, H. M. (2019). "A binary logistic model for predicting the tertiary stage of permanent deformation of conventional asphalt concrete mixtures". *Construction and Building Materials*, 227, 116608. (Scopus Q1, I.F=7.69)
29. Abro, F.R.; **Buller, A.S.**; Lee, K.-M.; Jang, S.Y. "Using the Steady-State Chloride Migration Test to Evaluate the Self-Healing Capacity of Cracked Mortars Containing Crystalline, Expansive, and Swelling Admixtures". *Materials* 2019, 12, 1865. (Scopus Q2, I.F=3.74)
30. Tunio, Z. A., Ali, T., **Buller, A. S***, Abro, F. U. R., & Abbasi, M. A. (2019). "Influence of Coarse Aggregate Gradation on the Mechanical Properties of Concrete, Part I: No-Fines Concrete". *Engineering, Technology & Applied Science Research*, 9(5), 4612-4615. (Scopus Q2)
31. Khoso, S., Jamro, I. A., Abbasi, S. A., Hassan, H. U., **Buller, A. S.**, Ansari, A. A., & Naqash, M. T. (2021). An experimental investigation using recycled coarse aggregate as an alternative material for sustainable concrete. *International Journal of Energy, Environment and Economics*, 29(4), 443-455.
32. Mastoi, S., Kalhor, N. B., Mugheri, **A. B**, **Buller, A.S**, Rajput, U. A., Mastoi, R. B., & Mastoi, N. (2021). "A Statistical Analysis for Mathematics & Statistics in Engineering Technologies (Random Sampling)". *International Journal of Management*, 12(3), 416-421.

Journal Papers under Review

1. Hussain. M, Abro, F. R., **Buller, A. S.**, Bheel, N. D, Ahmed. M, Abdulrazak. H & Suliman. K, "An Investigation into Concrete Mix Design Utilizing Artificial Neural Networks and Random Forest Regressor: A Comprehensive Comparison with Real-time Testing", *Scientific Reports* 2025. (Scopus Q1, IF = 3.4)
2. Buller, A. H., Husain, N. M., **Buller, A. S.**, Ali. T, Shabbir, S., & Sodhar, I. N. (2025). "Proposed Machine Learning Model for Evaluating Properties of Green Concrete Using Agricultural Waste". *Tehnički vjesnik*, 32(1), 306-312. (Scopus Q2, IF = 1.0)

Conference Publication

1. **Buller, A.S.**; Lim, M.J.; Abro, F. R.; and Lee, K.M. "Mechanical Performance Evaluation of Fiber Reinforced Mortar Incorporating Self-Healing Agents," in 8th International Conference of Asian Concrete Federation, Fuzhou, China, 2018, pp. 1161–1165.
2. **Buller, A.S.**; Lim, M.J.; Abro, F. R.; and Lee, K.M., "Evaluation of Self-Healing Performance of Fiber Reinforced Mortar Incorporating PVA Fibers PVA," in Proceedings of the Korean Concrete Institute Conference, Andong, Republic of Korea, November 2017.
3. Abro, F. R.; **Buller, A. S.**; Jang, S. Y.; and Lee, K. M., "Evaluation of Self-Healing Capacity of Cracked Mortars Incorporating Self-Healing Materials Regarding the Resistance to Chloride Penetration and Water Permeation" In the proceedings of 7th International conference on self- healing materials (ICSHM 2019), Yokohama, Japan, 2019 June 03-05, 2019.
4. Abro, F. R.; **Buller, A. S.**; Jang, S. Y.; and Lee, K. M., "Chloride Migration Coefficient of Cracked Mortar Incorporating Self- Healing Materials" In the proceedings of International Conference on Sustainable Materials, Systems and Structures (SMSS 2019), Rovinj, Croatia, Mar. 20-22, 2019.
5. Abro, F. R.; **Buller, A. S.**; Jang, S. Y.; and Lee, K. M., "Evaluation of self-healing capacity of cracked mortars by the steady-state chloride migration tests," in Sustainable Built Environment (SBE), Seoul, South Korea, December 2019.
6. Abro, F. R.; **Buller, A. S.**; Jang, S. Y.; and Lee, K. M., "Chloride Ion Migration Coefficient of Cracked

Mortar Specimens Using Steady-State Migration Test Method” The 8th international conference of Asian concrete foundation (ACF 2018), Fuzhou, China, Nov 4-7, 2018.