

Abdul Salam Buller (Ph.D.)

STRUCTURAL ENGINEERING

House. No:A-33, Mehran Employees Housing Society Nawabshah, Sindh, Pakistan

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Summary

Associate Professor in Department of Civil Engineering (TIEST), NED University of Engineering and Technology Karachi, specialized in structural engineering. Having experience in construction of mega building structures and teaching of major courses related to civil engineering. Strong background in mechanical testing of self-healing mortar and utilization of cementitious materials in concrete.

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 Geomaterials

Quaid-e-Awam University of Engineering, Science and Technology (QUEST)

Nawabshah, Pakistan

MASTER OF ENGINEERING 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 of Engineering, Science and Technology (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

Professional Experience

Civil (TIEST), In NED University of Engineering and Technology

Mithi, Pakistan

ASSOCIATE PROFESSOR (BPS-20)

June. 2023– Till to date

- Teaching Courses related to Civil Engineering (Undergraduate Students)
- Research Activities and Research Publications
- Providing guidance and supervision to graduate as well as undergraduate Students

July, 2023

Dr. A.S Buller - Resume

Quaid-e-Awam University of Engineering, Science and Technology (QUEST)

Nawabshah, Pakistan

ASSISTANT PROFESSOR (BPS-19)

Jan. 2020– June. 2023

- Teaching Courses related to Civil Engineering (Undergraduate Students)
- Conducting research and encouraging students towards the latest research trends
- Providing guidance and supervision to graduate as well as undergraduate Students
- Participating in departmental meetings, and providing academic support to professors and faculty

Quaid-e-Awam University of Engineering, Science and Technology (QUEST)

Nawabshah, Pakistan

LAB ENGINEER (BPS-17)

Jan. 2014– Jan. 2020

- Demonstrating Students About the Practical's Related to Structures and Soil Mechanics
- Preparing class Files for PEC Team Visit and Helps Faculty by Conducting/Engaging Classes
- Assist 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

- Layout of Structural Component Given in Drawings Using Total Station.
- Execution of Civil Work.
- Making BOQ of the Project.
- Meeting with Client and Owner for Making Efficient and Timely Construction

Undergraduate Projects 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.

Courses Taught

- Strength of Materials-I
- Plain & Reinforced Concrete
- Reinforce & Prestressed Concrete
- Theory of Structures
- Foundation Engineering
- Civil Engineering Materials

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 crack healing concept in self-compacting concrete
- Tension stiffening effect determination in concrete by using self-healing concept

July, 2023

Dr. A.S Buller - Resume

- 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

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%

Skills

- **Software** AutoCAD, Origin Pro, MS Office, LaTeX
- **Academics** Academic Research, Data Collection and Analysis, Student Research Guidance
- **Language** English, Urdu, Sindhi, Saraiki

Certifications

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

Review For Following Journals

- Structural Concrete
- Construction and Building Materials
- Materials (MDPI)
- Sustainability (MDPI)
- Buildings (MDPI)

Publications

Journal Publication

1. **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*. (SCIE, I.F=2.09)
2. **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. (SCIE, I.F=1.27)
3. 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. (SCIE, I.F=3.74)

4. 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. **(SCIE, IF=3.90)**
5. 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. **(SCIE, IF=3.80)**
6. 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. **(SCIE, IF=2.70)**
7. 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. **(SCIE, IF=7.69)**
8. 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. **(SCIE, IF=7.69)**
9. Lashari, A. R., Ali, Y., **Buller, A. S.**, & Memon, N. A. (2022). "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. **(SCIE, IF=4.17).**
10. 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. **(SCIE, IF=3.35)**
11. **Buller, A. S.**, Ali, T., Abro, F. U. R., Shabbir, S., & Mastoi, S. (2022). "Effect of Silica Fume on Mechanical and Durability Performance Evaluation of Concrete". *QUEST-Research Journal*, **(Accepted for Publication)**
12. **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.
13. 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.
14. 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.
15. Memon, B. A., Oad, M., Buller, A. H., Shar, S. A., & **Buller, A. S.** (2019). "Effect of Mould Size on Compressive Strength of Green Concrete Cubes". *Civil Engineering Journal*, 5(5), 1181-1188.
16. 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).
17. 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.
18. Mastoi, S., Kalhoro, N. B., Mugheri, A. B. **Buller, A.S.** M., 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.
19. 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.

Journal Papers Under Review

1. **Buller, A.S.**; Abro, F.R.; Radu, D, Ali. T; Bheel, N.D; Almujiabah, H.R., "Effect of Silica Fume on Fracture and Durability Performance of Fiber-Reinforced Concrete at Different Curing Conditions," *Case Studies in Construction Materials*, 2023. **(SCIE, IF= 6.17)**
2. Bheel, N.D.; Gohar, N.; Ali. M; **Buller, A.S.**; Almujiabah, H.R; "Effect of Silica Fume, Rice Husk Ash and Marble Dust Powder as Tertiary Cementitious Material on the Mechanical properties and Embodied Carbon of Concrete," *Developments in The Built Environment*, 2023. **(SCIE, IF= 8.17)**
3. Ali. T.; **Buller, A.S.**; Abro, F.R.; Radu, D, Bheel, N.D; Almujiabah, H.R., "Effect of Rice Husk Ash and Coal Bottom Ash as Partial Replacement of Cement and Sand On Mechanical and Durability Performance of Aerated Concrete," *Construction and Building Materials*, 2023. **(SCIE, IF= 7.4)**
4. **Buller, A.S.**; Abro, F.R.; Ali. T; Channa, I.A; Shabbir, S, "Combined Effect of Coal Bottom Ash and Fly Ash on Strength and Durability Performance of Concrete," *Mehran University Research Journal of Engineering and Technology*, 2023.

Conference Publication

5. **Buller, A.S.**; Abro, F.R.; Ali; Jakhrani, S.H and Buller, A.H., "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.
6. **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.
7. 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.
8. Abro, F. R.; **Buller, A.S.**; Jang, S.Y.; and Lee, K.M., "Chloride Migration Coefficient of Cracked Mortar Incorporating Self- Healing Mate-rials" In the proceedings of International Conference on Sustainable Materials, Systems and Structures (SMSS 2019), Rovinj, Croatia, Mar. 20-22, 2019.
9. 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.
10. 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.