

MAZEN J. AL-KHEETAN

Date of Birth: 19th April 1988

Nationality: Jordanian

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➤ CURRENT POSITIONS

- Assistant Dean for Quality Assurance and E-learning, College of Engineering, Mutah University, Jordan (October 2023 till present).
- Assistant Professor, Department of Civil and Environmental Engineering, Mutah University, Jordan (August 2019 till present).
- Associate Editor at Results in Engineering journal, Elsevier (June 2023 till present).
- Associate Editor at ICE Journal Transport (August 2020 till present).
- Editorial Board Member at the International Journal of Pavement Research and Technology (September 2021 till present).

➤ ACADEMIC QUALIFICATIONS

- PhD in Civil Engineering, July 2019, Brunel University London, UK.
- MSc. in Civil Engineering: Highways and Transportation, September 2015, The University of Nottingham, UK.
- BEng in Civil Engineering, 2011, Mutah University, Jordan.

➤ AWARDS

1. Highly cited researchers' award, Mutah University (2019, 2020, 2021, and 2022)
2. Emerald Literati 2019 Highly Commended Award
3. One of the most-read papers in Structural Concrete Journal (2018 and 2019)
4. Vice-Chancellor's travel prize – Brunel University London (Twice)
5. Government Scholarship to complete PhD study
6. Mutah University President's list
7. Mutah University Dean's list (three times)

➤ EMPLOYMENT HISTORY

- October 2023 – present: Assistant Dean for Quality Assurance and E-learning, College of Engineering, Mutah University, Jordan.
- August 2019 – present: Assistant Professor in Civil Engineering, Mutah University, Jordan.
- September 2020 – September 2021: Head of the Civil and Environmental Engineering Department, Mutah University, Jordan.
- September 2016 – May 2019: Graduate Teaching Assistant, Brunel University London.
- March 2016 – July 2019: Research Assistant, Brunel University London.
- September 2011 – August 2014: Project Engineer, Habash-Deir Contracting Company, Jordan:
 - ✓ Queen Alia International Airport Expansion Project.
 - ✓ Abdali Mall Project.
- June 2011 – September 2011: Trainee Civil Engineer, Arabian Construction Company (ACC), Jordan:
 - ✓ Rotana Hotel Project.

➤ **LIST OF PUBLICATIONS**

[Google Scholar](#) | Citations 867; h-index:17 (Until October 2023)

[SCOPUS](#) | Citations 671; h-index:17 (Until October 2023)

• **Journal articles:**

1. Al-Noaimat, Y.A., Chougan, M., **Al-Kheetan, M.J.**, Yio, M.H.N., Wong, H.S., and Ghaffar, S.H. (2023). Upcycling end-of-life bricks in high-performance one-part alkali-activated materials. *Developments in the Built Environment*, 16, p. 100231
2. **Al-Kheetan, M.J.** (2023). Waste Not, Want Not: Sustainable Use of Anti-Stripping-Treated Waste Ceramic in Superpave Asphalt Mixtures. *Sustainability*, 15(9), p. 7579.
3. Bayaidah, R.H., Habashneh, A.O., Al-Ma'aitah, S.H., Alfahajin, M.S., **Al-Kheetan, M.J.**, Jweihan, Y.S., Alrwashdeh, S.S., Al-Hamaiedeh, H., and Ghaffar, S.H. (2023). Utilisation of raw oil shale as fine aggregate to replace natural sand in concrete: Microstructure, surface chemistry and macro properties. *Results in Engineering*, 19, p. 101265.
4. Al-Noaimat, Y.A., Chougan, M., **Al-Kheetan, M.J.**, Al-Mandhari, O., Al-Saidi, W., Al-Maqbali, M., Al-Hosni, H., and Ghaffar, S.H. (2023). 3D printing of limestone-calcined clay cement: A review of its potential implementation in the construction industry. *Results in Engineering*, 18, p. e01818.
5. Lamastra, F.R., Montesperelli, G., Galvanetto, E., Chougan, M., Ghaffar, S.H., **Al-Kheetan, M.J.**, and Bianco, A. (2023). An Insight into Durability, Electrical Properties and Thermal Behavior of Cementitious Materials Engineered with Graphene Oxide: Does the Oxidation Degree Matter?. *Nanomaterials*, 13(4), pp. 726.
6. Byzyka, J., Davie, H., **Al-Kheetan, M.J.**, and Rahman, M. (2023). A Study on Cold Laid Microsurfacing Containing Water-Based Epoxy Modified Bitumen Emulsion. *International Journal of Pavement Research and Technology* (Published online, In-press).
7. El-Seidy, E., Chougan, M., Sambucci, M., **Al-Kheetan, M.J.**, Biblioteca, I., Valente, M., and Ghaffar, S.H. (2023). Lightweight alkali-activated materials and ordinary Portland cement composites using recycled polyvinyl chloride and waste glass aggregates to fully replace natural sand. *Construction and Building Materials*, 368, p. 130399.
8. **Al-Kheetan, M.J.** (2023). Performance improvement of hemp-shiv cementitious composites through hot water and steam treatment. *Construction and Building Materials*, 367, p. 130315.
9. Al-Noaimat, Y.A., Chougan, M., Ghaffar, S.H., and **Al-Kheetan, M.J.** (2023). A review of 3D printing low-carbon concrete with one-part geopolymer: Engineering, environmental and economic feasibility. *Case Studies in Construction Materials*, 18, p. e01818.
10. Chougan, M., Ghaffar, S.H., and **Al-Kheetan, M.J.** (2023). Graphene-based nano-functional materials for surface modification of wheat straw to enhance the performance of bio-based polylactic acid composites. *Materials Today Sustainability*, 21, p. 100308.
11. Chougan, M., Lamastra, F.R., Caschera, D., Kaciulis, S., Bolli, E., Mazzuca, C., Ghaffar, S.H., **Al-Kheetan, M.J.**, Montesperelli, G., and Bianco, A. (2023). Cementitious nanocomposites engineered with high-oxidized graphene oxide: Spotting the nano to macro correlation. *Ceramics International*, 49(1), pp. 964-973.

12. Jweihan, Y.S., Romanoschi, S.A., **Al-Kheetan, M.J.**, Tarawneh, A., Momani, Y., Alrwashdeh, S.S., and Grujicic, M.J. (2023). Improvements to the Duplicate Shear Test (DST) Device for Measuring the Fundamental Shear Properties of Asphalt Concrete Mixes. *International Journal of Pavement Research and Technology*, 16, pp. 1255-1266.
13. Al-Raqeb, H., Ghaffar, S.H., **Al-Kheetan, M.J.**, and Chougan, M. (2023). Understanding the Challenges of Construction Demolition Waste Management towards Circular Construction: Kuwait Stakeholder's Perspective. *Cleaner Waste Systems*, 4, p. 100075.
14. **Al-Kheetan, M.J.** (2022). Properties of lightweight pedestrian paving blocks incorporating wheat straw: Micro- to macro-scale investigation. *Results in Engineering*, 16, p. 100758.
15. Al-Awabdeh, F.W., **Al-Kheetan, M.J.**, Jweihan, Y.S., Al-Hamaiedeh, H., and Ghaffar, S.H. (2022). Comprehensive investigation of recycled waste glass in concrete using silane treatment for performance improvement. *Results in Engineering*, 16, p. 100790.
16. Alrwashdeh, S.S., Ammari, H., Jweihan, Y.S., Abu Qadourah, J., **Al-Kheetan, M.J.**, and Al-Falahat, A.M. (2022). Refurbishment of Existing Building toward a Surplus Energy Building in Jordan. *The Open Construction and Building Technology Journal*, 16, pp. 1-13.
17. Chougan, M., Ghaffar, S.H., Nematollahi, B., Sikora, P., Dorn, T., Stephan, D., Albar, A., and **Al-Kheetan, M.J.** (2022). Effect of natural and calcined halloysite clay minerals as low-cost additives on the performance of 3D-printed alkali-activated materials. *Materials & Design*, 223, p. 111183.
18. El-Seidy, E., Sambucci, M., Chougan, M., **Al-Kheetan, M.J.**, Biblioteca, I., Valente, M., and Ghaffar, S.H. (2022). Mechanical and physical characteristics of alkali-activated mortars incorporated with recycled polyvinyl chloride and rubber aggregates. *Journal of Building Engineering*, 60, p. 105043.
19. Yousuf, H., **Al-Kheetan, M.J.**, Rahman, M.M., Ghaffar, S.H., Braimah, N., and Chamberlain, D.A. (2022). Introducing a novel concept of wick drainage in masonry structures. *Journal of Building Engineering*, 51, p. 104332.
20. **Al-Kheetan, M.J.**, Azim, T., Byzyka, J., Ghaffar, S.H., and Rahman, M.M. (2022). Performance of magnetite-based stone mastic asphalt (SMA) as a superior surface course material. *Construction and Building Materials*, 322, p. 126463.
21. Jweihan, Y.S., Romanoschi, S.A., Grujicic, M.J., Talebsafa, M., Popescu, C., Coca, A.M., and **Al-Kheetan, M.J.** (2022). Development of Shear Tester with Normal Stress (STNS) for Asphalt Concrete Mixes. *International Journal of Pavement Research and Technology*, 15(5), pp. 1093-1105.
22. Chougan, M., Lamastra, F.R., Bolli, E., Caschera, D., Kaciulis, S., Mazzuca, C., Montesperelli, G., Ghaffar, S.H., **Al-Kheetan, M.J.**, and Bianco, A. (2021). Extra-low dosage graphene oxide cementitious nanocomposites: a nano- to macroscale approach. *Nanomaterials*, 11(12), p. 2378.
23. Al-Zu'bi, M., Fan, M., Al Rjoub, Y., Ashteyat, A., **Al-Kheetan, M.J.**, and Anguilano, L. (2021). The effect of length and inclination of carbon fiber reinforced polymer laminates on shear capacity of near-surface mounted retrofitted reinforced concrete beams. *Structural Concrete*, 22(6), pp. 3677-3691.

24. **Al-Kheetan, M.J.**, Ghaffar, S.H., Awad, S., Chougan, M., Byzyka, J., and Rahman, M.M. (2021). Microstructural, Mechanical and Physical Assessment of Portland Cement Concrete Pavement Modified by Sodium Acetate under Various Curing Conditions. *Infrastructures*, 6(8), p. 113.
25. **Al-Kheetan, M.J.**, Byzyka, J., and Ghaffar, S.H. (2021). Sustainable Valorisation of Silane-treated Waste Glass Powder in Concrete Pavement. *Sustainability*, 13(9), p. 4949.
26. Lamastra, F.R., Chougan, M., Marotta, E., Ciattini, S., Ghaffar, S.H., Caporali, S., Vivio, F., Montesperelli, G., Ianniruberto, U., **Al-Kheetan, M.J.**, and Bianco, A. (2021). Toward a better understanding of multifunctional cement-based materials: The impact of graphite nanoplatelets (GNPs). *Ceramics International*, 47(14), pp. 20019-20031.
27. **Al-Kheetan, M.J.**, Al-Tarawneh, M., Ghaffar, S.H., Chougan, M., Jweihan, Y.S., and Rahman, M.M. (2021). Resistance of Hydrophobic Concrete Pavement with Different Moisture Contents to Advanced Freeze-thaw Cycles. *Structural Concrete*, 22, pp. E1050-E1061.
28. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2020). Moisture evaluation of concrete pavement treated with hydrophobic surface impregnants. *International Journal of Pavement Engineering*, 21(14), pp. 1746-1754.
29. Chougan, M., Ghaffar, S.H., **Al-Kheetan, M.J.**, and Gecevicius, M. (2020). Wheat straw pre-treatments using eco-friendly strategies for enhancing the tensile properties of bio-based polylactic acid composites. *Industrial Crops and Products*, 155, p. 112836.
30. Albar, A., Chougan, M., **Al-Kheetan, M.J.**, Swash, M.R. and Ghaffar, S.H., (2020). Effective extrusion-based 3D printing system design for cementitious-based materials. *Results in Engineering*, 6, p. 100135.
31. **Al-Kheetan, M.J.**, Rahman, M.M., Ghaffar, S.H., Al-Tarawneh, M. and Jweihan, Y.S., (2020). Comprehensive Investigation of the Long-term Performance of Internally Integrated Concrete Pavement with Sodium Acetate. *Results in Engineering*, 6, p. 100110.
32. Chougan, M., Marotta, E., Lamastra, F., Vivio, F., Montesperelli, G., Ianniruberto, U., Ghaffar, S.H., **Al-Kheetan, M.J.**, and Bianco A., (2020). High performance cementitious nanocomposites: the effectiveness of nano-Graphite (nG). *Construction and Building Materials*, 259, p. 119687.
33. Ghaffar, S.H., **Al-Kheetan, M.J.**, Ewens, P., Wang, T., and Zhuang, J., (2020). Investigation of the Interfacial Bonding Between Flax/wool twine and Various Cementitious Matrices in Mortar Composites. *Construction and Building Materials*, 239, p. 117833.
34. **Al-Kheetan, M.J.**, Ghaffar, S.H., Madyan, O.A., and Rahman, M.M., (2020). Development of Low Absorption and High-Resistant Sodium Acetate Concrete for Severe Environmental Conditions. *Construction and Building Materials*, 230, p. 117057.
35. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2019). Optimum Mix Design for Internally Integrated Concrete with Crystallizing Protective Material. *ASCE Journal of Materials in Civil Engineering*, 31(7), p. 04019101.
36. **Al-Kheetan, M.J.**, and Rahman, M.M., (2019). Integration of Anhydrous Sodium Acetate (ASAc) into fresh concrete to improve resistance against harmful impact of de-icing salt in concrete pavement. *JOM Journal of the Minerals, Metals & Materials Society*, 71(12), pp. 4899-4909.

37. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2019). Fundamental Interaction of Hydrophobic Materials with Concrete with Different Moisture Contents in Saline Environment. *Construction and Building Materials*, 207, pp. 122-135.
 38. **Al-Kheetan, M.J.**, Rahman, M.M., Balakrishna, M.N., and Chamberlain, D.A., (2019). Performance Enhancement of Self-Compacting Concrete in Saline Environment by Hydrophobic Surface Protection. *Canadian Journal of Civil Engineering*, 46(8), pp. 677-686.
 39. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2018). Development of hydrophobic concrete by adding dual-crystalline admixture at mixing stage. *Structural Concrete*, 9(5), pp. 1504-1511.
 40. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2018). A Novel Approach of Introducing Crystalline Protection Material and Curing Agent in Fresh Concrete for Enhancing Hydrophobicity. *Construction and Building Materials*, 160, pp.644-652.
 41. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2018). Remediation and Protection of Masonry Structures with Crystallising Moisture Blocking Treatment. *International Journal of Building Pathology and Adaptation*, 36(1), pp. 77-92.
 42. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2017). Influence of Early Water Exposure on Modified Cementitious Coating. *Construction and Building Materials*, 141, pp.64-71.
- **Book Chapters:**
 43. Chougan, M., **Al-Kheetan, M.J.**, Ghaffar, S.H. (2023). Additive Manufacturing and the Construction Industry. In: Lynn, T., Rosati, P., Kassem, M., Krinidis, S., Kennedy, J. (eds) *Disrupting Buildings*. Palgrave Studies in Digital Business & Enabling Technologies. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-031-32309-6_7
 - **Conferences:**
 44. **Al-Kheetan, M.J.**, Rahman, M.M., and Ghaffar, S.H., (2020). Advanced Freeze-Thaw Assessment of Internally Integrated Concrete Pavement with Sodium Acetate. *International Conference on Civil Infrastructure and Construction (CIC 2020)*. Doha, Qatar, 2-5 February, DOI: <https://doi.org/10.29117/cic.2020.0041>
 45. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2018). The Influence of Near-Surface Moisture and Specimen Thickness on Concrete Protection Treatment. *Transportation Research Board 97th Annual Meeting, Washington, D.C., United States, 7-11 January*.
 46. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2017). Comparative Study of Different Hydrophobic Materials in Concrete Pavement Protection. *The 8th International Conference on Water Repellent Treatment and Protective Surface Technology for Building Materials (Hydrophobe VIII)*. Hong Kong, China, 7-9 December, <http://www.hydrophobe.org/pdf/hongkong/A-2-4>
 47. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2017). Influence of Crystalline Admixture on Fresh Concrete to Develop Hydrophobicity. *Transportation Research Board 96th Annual Meeting, Washington, D.C., United States, 8-12 January*.

48. **Al-Kheetan, M.J.**, Rahman, M.M., and Chamberlain, D.A., (2017). Influence of Hydrophobic Admixture and Curing Agent on Water Resistant Concrete. *Transportation Research Board 96th Annual Meeting*, Washington, D.C., United States, 8-12 January.

➤ **FUNDED PROJECTS AND GRANTS**

- Recycling of Materials Industrial Waste Into a New Composite Alloy Using Sintering Technique:
Funder: Mutah University
Duration: June 2021 – June 2024
Project value: \$250,000

➤ **TEACHING PROFILE**

- Pavement Design
- Highway Engineering
- Construction Materials and Concrete Technology (Module leader)
- Surveying for Engineers
- Engineering Economy
- Engineering Drawing
- Engineering Drawing with Computer Aiding Programs
- Highway Engineering lab
- Construction Materials and Concrete Technology lab

➤ **PROFESSIONAL ACTIVITIES**

- **Editorial**

- Associate Editor at Results in Engineering journal, Elsevier (June 2023 till present).
- Associate Editor at the Proceedings of the Institution of Civil Engineers (ICE): Transport (August 2020 till present).
- Editorial Board Member at the International Journal of Pavement Research and Technology, Springer (September 2021 till present).

- **Journal Refereeing**

Invited reviewer for the following selected journals: International Journal of Pavement Engineering (Taylor & Francis), ACI Materials Journal, Journal of Materials in Civil Engineering (ASCE), International Journal of Pavement Research and Technology (Springer), Scientific Reports (Nature), Proceedings of the Institution of Civil Engineers – Transport (ICE), Journal of Building Engineering (Elsevier), Construction and Building Materials (Elsevier), Results in Engineering (Elsevier), Royal Society Open Science (The Royal Society), KSCE Journal of Civil Engineering (Springer), JOM The Journal of The Minerals, Metals & Materials Society (Springer), Structural Concrete (Wiley), Transportation Research Record (SAGE), ACS Applied Materials & Interfaces, ACS Omega, Building Research and Information (Taylor & Francis), SN Applied Sciences (Springer), Transactions of Nonferrous Metals Society of China (Elsevier), Iranian Journal of Science and Technology-Transactions of Civil Engineering (Springer), Advances in Materials Science and Engineering (Hindawi), Advances in Concrete Construction (Techno-Press), Computers and Concrete (Techno-Press), Nanomaterials (MDPI), Materials (MDPI), Buildings (MDPI), Applied Sciences (MDPI), Infrastructures (MDPI), Sustainability (MDPI), Symmetry (MDPI), Crystals (MDPI).

➤ **TRAINING COURSES AND COMPUTER SKILLS**

- Introduction to teaching for postgraduate research students - Brunel University London.
- Research Data Management – Brunel University London.

- MATLAB for Engineers – Brunel University London.
- SPSS: The basics – Brunel University London.
- PRIMAVERA P3 – Jordan Engineers Association.
- Design of Concrete Structures – Jordan Engineers Association.
- Project Management – Jordan Engineers Association.
- ICDL (International Computer Driving License).

➤ MEDIA INTEREST

- Scientists Create New Salt-Resistant Concrete, *Asharq Al-Awsat Newspaper*, 31st July 2019: <https://aawsat.com/english/home/article/1837386/scientists-create-new-salt-resistant-concrete>
- ابتكار خرسانة مقاومة لملح إذابة الثلوج، صحيفة الشرق الأوسط، 30 يوليو (تموز) 2019: <https://aawsat.com/home/article/1835246/%D8%A7%D8%A8%D8%AA%D9%83%D8%A7%D8%B1-%D8%AE%D8%B1%D8%B3%D8%A7%D9%86%D8%A9-%D9%85%D9%82%D8%A7%D9%88%D9%85%D8%A9-%D9%84%D9%85%D9%84%D8%AD-%D8%A5%D8%B0%D8%A7%D8%A8%D8%A9-%D8%A7%D9%84%D8%AB%D9%84%D9%88%D8%AC>
- Research team develops new salt-resistant concrete mix, *Bridge Design & Engineering*, 31st July 2019: <https://www.bridgeweb.com/Research-team-develops-new-salt-resistant-concrete-mix/5034>
- Univ. of London Researchers Pave the Way to Salt-Resistant Concrete, *International Society for Concrete Pavements*, 13th August 2019: <https://www.concretepavements.org/2019/08/13/univ-of-london-researchers-pave-the-way-to-salt-resistant-concrete/>
- Researchers develop a stronger, salt-resistant concrete, *Equipment world*, 8th August 2019: <https://www.equipmentworld.com/researchers-develop-a-stronger-salt-resistant-concrete/>
- Enhancing the Hydrophobicity of Concrete in Harsh Conditions, *European Coatings*, 13th December 2017: <https://www.european-coatings.com/Raw-materials-technologies/Applications/Enhancing-the-hydrophobicity-of-concrete-in-harsh-conditions>
- Researchers Identify Concrete Protection Method, *Paint Square*, 12th December 2017: <https://www.paintsquare.com/news/?fuseaction=view&id=17786>
- Novel Approach to Concrete Protection Slows Deterioration in Harsh Conditions, *Phys.org*, 5th December 2017: <https://phys.org/news/2017-12-approach-concrete-deterioration-harsh-conditions.html>
- New Concrete Evidence. Deterioration Slowed by Novel Approach to Protection, *Brunel University London*, 5th December 2017: <https://www.brunel.ac.uk/news-and-events/news/articles/New-concrete-evidence.-Deterioration-slowed-by-novel-approach-to-protection>

➤ LANGUAGES

- Arabic: Native.
- English: Fluent.

➤ REFERENCES

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