

Dr Musab Rabi
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A confident and articulate Associate Professor in Structural Engineering, with excellent research skills, keen to enhance students' learning experience and to conduct high quality research in the field of Structural Engineering.

EDUCATION AND QUALIFICATIONS

2017 – 2020	PhD in Structural Engineering Brunel London University, United Kingdom
2015 – 2016	MSc Civil Engineering Anglia Ruskin University, United Kingdom Distinction
2010 – 2015	BSc Civil Engineering University of Jordan, Amman, Kingdom of Jordan “Very Good”, GPA 3.13/4.
2009 – 2010	General Secondary School , Amman, Kingdom of Jordan. Grade: 96.3%

Scholarships: The first degree was sponsored by the Ministry of Higher Education and Scientific Research as a result of outstanding achievement in the General Secondary School.

Master and PhD degrees were sponsored by Jerash University

RESEARCH PROJECTS

PhD Structural Engineering	Analysis and design of stainless steel reinforced concrete structural elements
MSc Civil Engineering	Finite element analysis of web-opening on performance of concrete beams
BSc Civil Engineering	Study of pavement serviceability index (PSI) based on AASHTO standards

Work and experience

Dates	Job title	Name of company
2/2020 – Current	Assistant Professor	Jerash University
9/2017 – 12/2019	Teaching Assistant	Brunel University London

Professional bodies

Member of the Jordan Engineers Association (Jordan).

Member of the Institution of Structural Engineers (UK).

TRAINING

Training type	Institution	Training
AutoCAD	University of Jordan	48 hours
Etabs	University of Jordan	30 hours
LUSAS	Anglia Ruskin University	Self-learning
ABAQUS	Brunel University London	Self-learning
Introduction to Teaching and Supporting Learning for Postgraduate Research Students	Brunel University London	One day session

Editorial work

Reviewer at the following journals:

- Construction and Building Materials Journal
- Engineering structures
- Results in Engineering
- Structures and Buildings (Proceedings of the ICE)
- MPDI Buildings
- steel research international
- Multidiscipline Modeling in Materials and Structures
- Smart Infrastructure and Construction (Proceedings of the ICE)
- Steel and Composite Structures, An International Journal
- Scientific reports
- MPDI Computational and Applied Mathematics
- Engineering and Applied Science Research
- Revista de la Construcción. Journal of Construction
- SN Applied Sciences

- Discover civil engineering
- Jordan Journal of Civil Engineering
- Advances in Concrete Construction, An International Journal

Journals

- **Rabi, M.**, Shamass, R. and Cashell, K.A., 2024. Description of the constitutive behaviour of stainless steel reinforcement. *Case Studies in Construction Materials*, 20, p.e03013.
- Al-Kheetan, M.J., Jweihan, Y.S., **Rabi, M.** and Ghaffar, S.H., 2024. Durability Enhancement of Concrete with Recycled Concrete Aggregate: The Role of Nano-ZnO. *Buildings*, 14(2), p.353.
- Abarkan, I., **Rabi, M.**, Ferreira, F.P.V., Shamass, R., Limbachiya, V., Jweihan, Y.S. and Santos, L.F.P., 2024. Machine learning for optimal design of circular hollow section stainless steel stub columns: A comparative analysis with Eurocode 3 predictions. *Engineering Applications of Artificial Intelligence*, 132, p.107952.
- Jweihan, Y.S., Al-Kheetan, M.J. and **Rabi, M.**, 2023. Empirical Model for the Retained Stability Index of Asphalt Mixtures Using Hybrid Machine Learning Approach. *Applied System Innovation*, 6(5), p.93.
- **Rabi, M.**, Abarkan, I. and Shamass, R., 2023. Buckling resistance of hot-finished CHS beam-columns using FE modelling and machine learning. *Steel Construction*.
- **Rabi, M.**, 2023. Bond prediction of stainless-steel reinforcement using artificial neural networks. *Proceedings of the Institution of Civil Engineers-Construction Materials*, pp.1-11.
- **Rabi, M.**, Ferreira, F.P.V., Abarkan, I., Limbachiya, V. and Shamass, R., 2023. Prediction of the cross-sectional capacity of cold-formed CHS using numerical modelling and machine learning. *Results in Engineering*, 17, p.100902.
- **Rabi, M.**, Shamass, R. and Cashell, K.A., 2022. Structural performance of stainless steel reinforced concrete members: A review. *Construction and Building Materials*, 325, p.126673.
- **Rabi, M.**, Shamass, R. and Cashell, K.A., 2022. Experimental investigation on the flexural behaviour of stainless steel reinforced concrete beams. *Structure and Infrastructure Engineering*, pp.1-13.
- **Rabi, M.**, Cashell, K.A. and Shamass, R., 2021. Ultimate behaviour and serviceability analysis of stainless steel reinforced concrete beams. *Engineering Structures*, 248, p.113259.
- **Rabi, M.**, Cashell, K.A., Shamass, R. and Desnerck, P., 2020. Bond behaviour of austenitic stainless steel reinforced concrete. *Engineering Structures*, 221, p.111027.
- **Rabi, M.**, Cashell, K.A. and Shamass, R.J.E.S., 2019. Flexural analysis and design of stainless steel reinforced concrete beams. *Engineering Structures*, 198, p.109432.

Books and chapters

- Mustapha Karkarna, Y., Bahadori-Jahromi, A., Jahromi, Z., Halliwell, E. and **Mohammad Rabi, M.**, 2022. Reinforced concrete design with stainless steel. IntechOpen. Available at: <http://dx.doi.org/10.5772/intechopen.106327>

Conferences

- **Rabi, M.**, (2023), The 3rd International Civil Engineering & Architecture Conference, Turkey.
- **Rabi, M.**, (2022), The 8th Jordan International Civil Engineering Conference Smart Civil Engineering, Amman, Jordan (JICEC8), Jordan.
- **Rabi, M.**, (2022) 'Flexural behaviour of stainless steel reinforced concrete beams', keynote speaker at the Second International Conference on Non-Destructive Evaluation of Composite Structures (NDECS'2022), Tetouan, Morocco.
- **Rabi, M.**, Cashell, K.A. and Shamass, R. (2019) 'Analysis of concrete beams reinforced with stainless steel'. Proceedings of the fib Symposium 2019: Concrete-Innovations in Materials, Design and Structures, Krakow, Poland, (pp. 690-697).
- **Rabi, M.**, Cashell, K.A. (2019) 'Investigation on the behaviour of concrete beams with stainless steel reinforcement', 21st Young research conference, the institution of structural engineers (IStructE), London, UK.
- **Rabi, M.**, Cashell, K.A. (2019) 'Design of reinforced concrete beams with stainless steel', Civil and Environmental Engineering research conference, London, UK.
- **Rabi, M.**, Cashell, K.A. (2019) 'Novel design approach for stainless steel reinforced concrete beams', Brunel University research student conference, London, UK.

KEY SKILLS

Research skills	Demonstrated by writing a PhD thesis and MSc dissertation, as well as writing two journal papers and a peer-reviewed conference paper
Self-motivated	Highly motivated individual, demonstrated through desire to achieve maximum academic results
Time management	Excellence in time management demonstrated through conducting several research projects on time
Team spirit	Developed excellent teamwork skills during several research projects and through the training program
Desire to learn	Always looking to expand knowledge and skills
Computer skills	Excellent working knowledge

REFERENCES

Reference	Email	Institution
Dr. Katherine Cashell	k.cashell@ucl.ac.uk	University College London
Dr. Rabee Shamass	rabee.shamass@brunel.ac.uk	Brunel University London