

Curriculum Vitae



Yasmin Zuhair Issa Murad

*Civil Engineering Department
Faculty of Engineering
The University of Jordan
Amman 11942, Jordan
Email: y.murad@ju.edu.jo*

Education

- **PhD Structural Engineering, Imperial College London**, London, UK, 2016
- **DIC, Diploma Imperial College London**
- **MSc Structural Engineering**, University of Jordan, Amman, Jordan, 2010
- **BSc Civil Engineering**, University of Jordan, Amman, Jordan (Excellent grade)
- **High school**, Islamic Educational College, Amman, Jordan (Excellent grade)

Awards

- **Listed in the world's Top 2% Scientists list according to a study conducted by Stanford University and Elsevier.**
- **I have been recently promoted to the professor degree with 7 times the required points for promotion for the first time in the College of Engineering at the University of Jordan.**
- **Outstanding Woman Researcher award in Structural Engineering, Venus International Foundation, 2024.**
- **The Early Career Award, Emerald, 2024.**
- **Best Paper Award, Conference, Switzerland, 2019.**

Guest editor for the Following Journals

Journal of Sustainability (Scopus Q1 and Impact factor 3.89) 2022-present

Journal of Frontiers in Materials (Scopus Q2 and Impact factor 3.98) 2022-present

Journal of Frontiers in Built Environment (Scopus Q1) 2022-present

Advisory Board Member for the Journal of Research on Engineering Structures and Materials (Scopus Q4) 2023-present

International Advisory Committee Member for the 10th International Conference on Recent challenges in Engineering and Technology, at Bali, Indonesia.

Working experience

- **Professor** at Civil Engineering Department, University of Jordan, Amman, Jordan (March 2024- present)
- **Associate Professor** at Civil Engineering Department, University of Jordan, Amman, Jordan (March 2020- 2024)
- **Assistant Professor** at Civil Engineering Department, University of Jordan, Amman, Jordan (March 2016- 2020)
- **Supervisor of the American Concrete Institute (ACI)** students' chapter at the University of Jordan (2021-Present)
- **Graduate Teaching Assistant** at Civil Engineering Department for MSc classes, Imperial College London, London, UK (2012-2016)
- **Research** at Civil Engineering Department, Imperial College London, London, UK (2012-2016)
- **Lecturer** at Civil Engineering Department, University of Jordan, Amman, Jordan (2011)
- **Structural Engineer** at the Ministry of Public Works and Housing, Amman, Jordan (2009-2010)
- **Structural Engineer** at Zamil steel Company, Amman, Jordan (2009)

Governmental, Educational and Volunteering Committee Memberships

- **Judging team member** at the Ministry of Public Works and Housing for accreditation of new products (July 2018-present)

- **Member of the Jordan Green Housing Council**
- **American Concrete Institute (ACI) member**
- **Member of the Civil Scientific Committee of the Jordanian Engineers Association**
- **Member of the Committee for the Development of Construction Work in the Jordanian Engineers Association**
- **Member of the Construction Materials and Quality Assurance Committee at the Jordan Engineers Association.**
- **ABET Accreditation team member** at the University of Jordan (July 2017-present)
- **Scientific Research team member** at the University of Jordan. (Jan 2017-present)
- **Syllabus team member** at the University of Jordan.
- **Member of the Industrial and Quality Assurance Committee** at the University of Jordan.
- **Member of the School of Engineering's History Book Committee** at the University of Jordan.
- **Member of the Election Committee** at the University of Jordan.
- **American Society of Civil Engineers (ASCE) Bridge Competition team member** at the University of Jordan. (March 2017-present)
- **ASCE Research Committee** at the University of Jordan
- **Committee member for MSc theses** at the structural Engineering department in the University of Jordan (Sep 2018-present)

PhD thesis title

Analytical and Numerical Assessment of Seismically Vulnerable Corner Connections under Bidirectional loading in RC framed structures.

MSc thesis title

Steel fiber influence on the experimental behaviour of reinforced concrete columns and walls.

BSc graduation project title

Structural design of the Jordan Institution for Standards and Metrology.

Research Interest

Earthquake Engineering
Strengthening and Rehabilitation of RC structures
Materials
Gene Expression Programming

Publications

49 articles accepted in Scopus-indexed Journals and 3 Conference papers

1. Murad, Y. (2020). Joint shear strength models for exterior RC beam-column connections exposed to biaxial and uniaxial cyclic loading. *Journal of Building Engineering*, 30. <https://doi.org/10.1016/j.jobe.2020.101225>
2. Murad, Y., Abu-Haniyi, Y., Alkaraki, A., & Hamadeh, Z. (2019). An experimental study on cyclic behaviour of reinforced concrete connections using waste materials as cement partial replacement. *Canadian Journal of Civil Engineering*, 46(6). <https://doi.org/10.1139/cjce-2018-0555>
3. Murad, Y., Al-Bodour, W., & Abu-Hajar, H. (2019). Cyclic behavior of RC beam-column joints made with sustainable concrete. *International Review of Civil Engineering*, 10(6). <https://doi.org/10.15866/irece.v10i6.17193>
4. Murad, Y., Imam, R., Abu Hajar, H., Habeh, D., Hammad, A., & Shawash, Z. (2019). Predictive compressive strength models for green concrete. *International Journal of Structural Integrity*, 11(2). <https://doi.org/10.1108/IJSI-05-2019-0044>
5. Murad, Y., & Zaid, J. A. (2019). Finite element modelling of reinforced concrete beams strengthened with different configuration of carbon fiber sheets. *International Review of Civil Engineering*, 10(4). <https://doi.org/10.15866/irece.v10i4.16870>
6. Murad, Yasmin, & Abd Aljabbar, H. (2019). The Influence of Basalt and Steel Fibers on the Flexural Behavior of RC Beams. *International Journal of Civil and Environmental Engineering*, 13(9), 548–551. https://www.researchgate.net/publication/335665848_The_Influence_of_Basalt_and_Steel_Fibers_on_the_Flexural_Behavior_of_RC_Beams
7. Murad, Yasmin, & Abdel-Jabar, H. (2021a). Shear behavior of RC beams made with plastic and steel wires: Experimental and numerical study. *Case Studies in Construction Materials*, 14. <https://doi.org/10.1016/j.cscm.2020.e00481>
8. Murad, Yasmin, & Abdel-Jabar, H. (2021b). Flexural Behavior of RC Beams Made with Electric PVC Wires and Steel Fibers. *Practice Periodical on Structural Design and Construction*, 26(4), 04021040. [https://doi.org/10.1061/\(ASCE\)SC.1943-5576.0000613](https://doi.org/10.1061/(ASCE)SC.1943-5576.0000613)
9. Murad, Yasmin, Abdel-Jabar, H., Diab, A., & Abu Hajar, H. (2020). Exterior RC joints subjected to monotonic and cyclic loading. *Engineering Computations (Swansea, Wales)*, 37(7), 2319–2336. <https://doi.org/10.1108/EC-06-2019-0269>
10. Murad, Yasmin, & Abdel-Jabbar, H. (2022). Shear behavior of RC beams prepared with basalt and polypropylene fibers. *Case Studies in Construction Materials*, 16, e00835. <https://doi.org/10.1016/J.CSCM.2021.E00835>
11. Murad, Yasmin, & Abu-AlHaj, T. (2021a). Flexural strengthening and repairing of heat damaged RC beams using continuous near-surface mounted CFRP ropes. *Structures*, 33, 451–462. <https://doi.org/10.1016/J.ISTRUC.2021.04.079>
12. Murad, Yasmin, & Abu-AlHaj, T. (2021b). Novel 3D printed bars for retrofitting heat damaged RC beams. *Structures*, 34, 3427–3435.

- <https://doi.org/10.1016/J.ISTRUC.2021.09.102>
13. Murad, Yasmin, Ashteyat, A., & Hunaifat, R. (2019). Predictive model to the bond strength of FRP-to-concrete under direct pullout using gene expression programming. *JOURNAL OF CIVIL ENGINEERING AND MANAGEMENT*, 25(8), 773–784. <https://doi.org/10.3846/jcem.2019.10798>
 14. Murad, Yasmin, Bodour, W. AL, & Ashteyat, A. (2020). Seismic retrofitting of severely damaged RC connections made with recycled concrete using CFRP sheets. *Frontiers of Structural and Civil Engineering*, 14, 554–568. <https://doi.org/10.1007/s11709-020-0613-8>
 15. Murad, Yasmin, Nsairat, A., Khawaldeh, M., Ayasrah, M., Othman, Z., Nayfeh, M., Ahmad, A., Al-Share', F., Sreihin, D., Alsawalqa, S., Murad, L., & Qtaishat, J. (2022). Mechanical and Durability Properties of Green Concrete. *International Review of Civil Engineering*.
 16. Murad, Yasmin, Tarawneh, A., Arar, F., Al-Zu'bi, A., Al-Ghwairi, A., Al-Jaafreh, A., & Tarawneh, M. (2021). Flexural strength prediction for concrete beams reinforced with FRP bars using gene expression programming. *Structures*, 33, 3163–3172. <https://doi.org/10.1016/J.ISTRUC.2021.06.045>
 17. Murad, Yasmin Z, Tarawneh, B. K., & Ashteyat, A. M. (2020). Prediction model for concrete carbonation depth using gene expression programming. *Computers and Concrete*, 26(6), 497. <https://doi.org/10.12989/CAC.2020.26.6.497>
 18. Murad, Yasmin Zuhair. (2016). Analytical and numerical assessment of seismically vulnerable corner connections under bidirectional loading in RC framed structures. *ProQuest Dissertations And Theses; Thesis (Ph.D.)--Imperial College London, ISNI: 0000 0004 6061 5584*. <https://spiral.imperial.ac.uk/handle/10044/1/44493>
 19. Murad, Yasmin Zuhair. (2022). Retrofitting heat-damaged non-ductile RC beam-to-column joints subjected to cyclic and axial loading with FRCM composites. *Journal of Building Engineering*, 48, 103952. <https://doi.org/10.1016/J.JOBE.2021.103952>
 20. Murad, Yasmin Zuhair, & Abdel-Jabbar, H. (2020). *Mechanical Properties of Concrete Made with Electric Wires, Steel Fibers, Basalt Fibers and Polypropylene Fibers*. 909–916. <https://doi.org/10.29117/cic.2020.0119>
 21. Murad, Yasmin Zuhair, & Alseid, B. H. (2021). Retrofitting interior RC beam-to-column joints subjected to quasi-static loading using NSM CFRP ropes. *Structures*, 34, 4158–4168. <https://doi.org/10.1016/J.ISTRUC.2021.10.024>
 22. Murad, Yasmin Zuhair, Hunifat, R., & AL-Bodour, W. (2020). Interior Reinforced Concrete Beam-to-Column Joints Subjected to Cyclic Loading: Shear Strength Prediction using Gene Expression Programming. *Case Studies in Construction Materials*, 13, e00432. <https://doi.org/10.1016/j.cscm.2020.e00432>
 23. Saadah, M., Ashteyat, A., & Murad, Y. (2021). Shear strengthening of RC beams using side near surface mounted CFRP ropes and strips. *Structures*, 32, 380–390. <https://doi.org/10.1016/J.ISTRUC.2021.03.038>
 24. Shatarat, N., Hunifat, R., Murad, Y., Katkhuda, H., & Abdel Jaber, M. (2019). Torsional capacity investigation of reinforced concrete beams with different configurations of welded and unwelded transverse reinforcement. *Structural Concrete*, suco.201900054. <https://doi.org/10.1002/suco.201900054>
 25. Tarawneh, A., Almasabha, G., & Murad, Y. (2022). ColumnsNet: Neural Network Model for Constructing Interaction Diagrams and Slenderness Limit for FRP-RC Columns. *Journal of Structural Engineering*, 148(8), 04022089. [https://doi.org/10.1061/\(ASCE\)ST.1943-541X.0003389](https://doi.org/10.1061/(ASCE)ST.1943-541X.0003389)
 26. Yasmin, M. (2021). Compressive strength prediction for concrete modified with nanomaterials. *Case Studies in Construction Materials*, 15, e00660.

- <https://doi.org/10.1016/J.CSCM.2021.E00660>
27. Yasmin Murad, Samih Qaqish, & Nayef Alsumair. (2019). Mechanical Properties of Sustainable Steel Fiber Concrete | Request PDF. *Conference: The Second Balqa International Engineering Conference (BIEC 2019)*. https://www.researchgate.net/publication/341626779_Mechanical_Properties_of_Sustainable_Steel_Fiber_Concrete
 28. Zuhair Murad, Y. (2021). Predictive model for bidirectional shear strength of reinforced concrete columns subjected to biaxial cyclic loading. *Engineering Structures*, 244, 112781. <https://doi.org/10.1016/J.ENGSTRUCT.2021.112781>
 29. Abu Hajar, H. A., Murad, Y. Z., Shatanawi, K. M., Al-Smadi, B. M., & Abu Hajar, Y. A. (2019). Drought assessment and monitoring in Jordan using the standardized precipitation index. *Arabian Journal of Geosciences*, 12(14). <https://doi.org/10.1007/s12517-019-4590-y>
 30. Abu Hajar, H. A., Tweissi, A., Abu Hajar, Y. A., Al-Weshah, R., Shatanawi, K. M., Imam, R., Murad, Y. Z., & Abu Hajar, M. A. (2020). Assessment of the municipal solid waste management sector development in Jordan towards green growth by sustainability window analysis. *Journal of Cleaner Production*, 258. <https://doi.org/10.1016/j.jclepro.2020.120539>
 31. Al-Bodour, W.; Murad, Y.; Imam, R.; Smadi, Y. Shear Strength Investigation of the Carbon Fiber Reinforced Polymer-Wrapped Concrete Beams Using Gene Expression Programming and Finite Element Analysis. *Journal of Structural Integrity and Maintenance* <https://doi.org/10.1080/24705314.2021.1971891> 2022, 7, 15–24, doi:10.1080/24705314.2021.1971891.
 32. AL-Bodour, W., Tarawneh, B., & Murad, Y. (2020). Gene Expression Programming: A Model to Predict the Standard Penetration Test N60 Value from Cone Penetration Test Data. *Soil Mechanics and Foundation Engineering*. <https://doi.org/Accepted for publication>
 33. Al-Faqra, E., Murad, Y., Abdel Jaber, M., & Shatarat, N. (2021). Torsional behaviour of high strength concrete beams with spiral reinforcement. <https://doi.org/10.1080/13287982.2021.1962489>, 22(4), 266–276. <https://doi.org/10.1080/13287982.2021.1962489>
 34. Al-Zaidaneen, H., Murad, Y., Jaber, M. A., & Shatarat, N. (2021). Shear Strength of Light-Weight Reinforced Concrete Beams with Continuous Rectangular Spiral Reinforcement. *International Journal of Civil Engineering* 2021, 1–13. <https://doi.org/10.1007/S40999-021-00667-Z>
 35. Alrajfi, E., Ashteyat, A. M., & Murad, Y. Z. (2021). Shear behaviour of RC beams made with natural, recycled aggregate concrete and reclaimed asphalt aggregates under normal and elevated temperature. *Journal of Building Engineering*, 40, 102681. <https://doi.org/10.1016/J.JOBE.2021.102681>
 36. Ashteyat, A. M., Al Rjoub, Y. S., Murad, Y., & Asaad, S. (2019). Mechanical and durability behaviour of roller-compacted concrete containing white cement by pass dust and polypropylene fibre. *European Journal of Environmental and Civil Engineering*. <https://doi.org/10.1080/19648189.2019.1652694>
 37. Ashteyat, A., Obaidat, Y. T., Murad, Y. Z., & Haddad, R. (2020). Compressive strength prediction of lightweight short columns at elevated temperature using gene expression programming and artificial neural network. *Journal of Civil Engineering and Management*, 26(2), 189–199. <https://doi.org/10.3846/jcem.2020.11931>
 38. Bodour, W. Al, Hanandeh, S., Hajjij, M., & Murad, Y. (2021). Development of Evaluation Framework for the Unconfined Compressive Strength of Soils Based on

- the Fundamental Soil Parameters Using Gene Expression Programming and Deep Learning Methods. *Journal of Materials in Civil Engineering*, 34(2), 04021452. [https://doi.org/10.1061/\(ASCE\)MT.1943-5533.0004087](https://doi.org/10.1061/(ASCE)MT.1943-5533.0004087)
39. Imam, R., Murad, Y., Asi, I., & Shatnawi, A. (2021). Predicting Pavement Condition Index from International Roughness Index using Gene Expression Programming. *Innovative Infrastructure Solutions*, 6(3). <https://doi.org/10.1007/s41062-021-00504-1>
 40. Murad, Y. (2018a). An experimental study on flexural strengthening of RC beams using CFRP sheets. *International Journal of Engineering and Technology(UAE)*, 7(4). <https://doi.org/10.14419/ijet.v7i4.16546>
 41. Murad, Y. (2018b). The influence of CFRP orientation angle on the shear strength of RC beams. *Open Construction and Building Technology Journal*, 12(1). <https://doi.org/10.2174/1874836801812010269>
 42. Murad, Y. Z., Nsairat, A., Khawaldeh, M., Ayasrah, M., Othman, Z., Nayfeh, M., Alothmani, A., Al-Share', F., Abdel-Jabar, H., Sreihin, D., Alsawalqa, S., Murad, L., & Qtaishat, J. (2022). Mechanical and Durability Properties of Green Concrete. *International Review of Civil Engineering (IRECE)*, 13(4), 309–317. <https://doi.org/10.15866/IRECE.V13I4.20280>
 43. Qaisi, O. A. L., Ashteyat, A. M., & Murad, Y. Z. (2022). Experimental study of flexural behaviour of RC beams strengthened using near surface mounted CFRP strips and ropes. *European Journal of Environmental and Civil Engineering* <https://doi.org/10.1080/19648189.2022.2111606>
 44. Murad, Y., & Alseid, B. (2022). Poly-lactic acid and carbon fibers 3D printed bars for seismic retrofitting RC beam-to-column joints subjected to elevated temperature. *Structures*, 43, 1530–1547. <https://doi.org/10.1016/J.ISTRUC.2022.07.066>
 45. Murad, Yasmin Zuhair, Aljaafreh, A. J., Almashaqbeh, A., & Alfaouri, Q. T. (2022). Cyclic Behaviour of Heat-Damaged Beam−Column Joints Modified with Nano-Silica, Nano-Titanium, and Nano-Alumina. *Sustainability 2022, Vol. 14, Page 10916*, 14(17), 10916. <https://doi.org/10.3390/SU141710916>
 46. Murad, Yasmin Z., & Abdel-Jabar, H. (2022). Flexural behavior of RC beams made with basalt and polypropylene fibers: Experimental and numerical study. *Computers and Concrete*, 30(3), 173. <https://doi.org/10.12989/CAC.2022.30.3.165>
 47. AL-Rakhameen, A., Murad, Y., Jaber, M. A., & Shatarat, N. (2022). Torsional behavior of spirally reinforced concrete beams. *Innovative Infrastructure Solutions* 2022 7:6, 7(6), 1–16. <https://doi.org/10.1007/S41062-022-00927-4>
 48. Murad, Yasmin Zuhair, Tarawneh, A., Saleh, E. F., Musmar, M., AlMashaqbeh, A., Alfaouri, Q. T., & Aljaafreh, A. J. (2023). Mechanical properties of heat damaged oil shale ash concrete. *Innovative Infrastructure Solutions*, 8(1). <https://doi.org/10.1007/S41062-022-00995-6>
 49. Tarawneh, A., Alghossoon, A., Saleh, E., Almasabha, G., Murad, Y., Abu-Rayyan, M., & Aldiabat, A. (2022). Machine Learning Prediction Model for Shear Capacity of FRP-RC Slender and Deep Beams. *Sustainability (Switzerland)*, 14(23). <https://doi.org/10.3390/SU142315609>
 50. Almasabha, G., Murad, Y., Alghossoon, A., Saleh, E., & Tarawneh, A. (2023). Sustainability of Using Steel Fibers in Reinforced Concrete Deep Beams without Stirrups. *Sustainability*, 15(6), 4721. <https://doi.org/10.3390/SU15064721>
 51. Murad, Y. , Saleh, E., Tarawneh, A., Alghossoon, A., Almasabha. (2023). Shear Strength Prediction of Concrete Beams Reinforced with FRP Bars and Stirrups Using Gene Expression Programming Sustainability, Accepted

52. E. Saleh, Y. Murad, A. Tarawneh, A. Alghossoon, and G. Almasabha, "Automated analysis and design for recycled aggregate reinforced concrete beams," *Struct. Concr.*, 2023, doi: 10.1002/SUCO.20230035

Funded Research Projects

1. The effect of partial replacement of cement in reinforced joints under cyclic loading. King Abdullah II Design And Development Bureau KADDB, 2016.
2. Effectiveness of production of cement grout using oil shale ash, Deanship of Scientific Research, University of Jordan, 2017.

Courses and Lectures

Research Methodology (MSc level)
Scientific Research Methodology (MSc level)
Special Topics (BSc, MSc level)
Matrix Analysis of Structures (MSc level)
Advanced Numerical Methods (MSc level)
Reinforced Concrete 1 (BSc level)
Reinforced Concrete 2 (BSc level)
Statics (BSc level)

Master Thesis Supervising

1. Experimental Study on The Structural Behavior of RC Beams Strengthened with Different Types of Fibers, By Haneen Abdel-Jabbar, 2019.
2. Experimental Study on the Structural Behaviour of RC beams Strengthened with Different Types of Carbon Fibers. By Tareq Al-Haj , 2019
3. Seismic Retrofitting of Heat-Damaged Beam-Column Connections Using Near Surface Mounted Using Near Surface Mounted Carbon Fiber Reinforced Polymers (CFRP) Ropes, By Baraa Al-Sayyed, 2020.
4. Retrofitting heat-damaged RC slabs using innovative materials, By Abbad Zayed, 2022.

5. Strengthening and Retrofitting heat-damaged Two-way flat slabs with innovative materials, By Omar Saleh, 2023.
6. Cyclic Behavior of Heat-Damaged RC Beam-Column Joints Strengthened using Several Types of Nanomaterials, By Ahmad Jaafreh, 2021.
7. Cyclic Behavior of Exterior Heat-Damaged RC Beam-to-Column Joints Strengthened with Different Types of Materials, By Ayoub Mashaqbeh, 2021.
8. Cyclic Behavior of RC Beam-to-Column Joints Strengthened with Different Types of Materials, By Qusai Faouri, 2021.
9. Experimental and Numerical Investigation on the biaxial cyclic behavior of corner RC beam-to-column joints, By Fadel Jaber, 2023.
10. The behaviour of heat damaged reinforced concrete corner beam-column joints under biaxial cyclic loading, By Asem Ghazal, 2023.
11. Experimental and Numerical investigation on the biaxial cyclic behaviour of corner RC beam to column joints, By Hamza Obaidat, 2023.
12. Experimental and Numerical Investigation on the biaxial cyclic behavior of corner RC beam-to-column joints strengthened using special reinforcement material, By Osama Ali, 2023.