



Name: Dr. Mohammad Hany Yassin

Rank: Associate Professor - Civil Engineering

Personal Information

Nationality:	Canadian
AU Joining Date:	17 Apr 2016
E-Mail Address:	m.yassin@au.edu.kw

Professional Information

Education:	- (Ph.D.) Doctor of Philosophy in Civil Engineering ETS, Universite de Quebec Montreal, QC., Canada, 2015 <i>Thesis: Nonlinear Seismic Soil-Pile Interaction Analysis for Bridges Founded in Quebec Soil</i> - Certificate in University Teaching Concordia University, Montreal, QC., Canada, 2012 - (M. A. Sc.) Master of Applied Science in Civil Engineering Concordia University, Montreal, QC., Canada, 2008 <i>Thesis: Post-Earthquake Fire Performance of Building Structures</i> - Bachelor of Engineering B. Eng., Civil Engineering University of Damascus, Damascus, Syria, 2005
Specialization:	- Planning and Designing of Bridges - Structural Engineering - Seismic Design of structures - Structures Retrofitting with FRP - Seismic Soil-Structure Interaction
Current Academic Position:	- Associated Professor - Civil Engineering AU-Kuwait 2016-Present - Affiliate Faculty, Allied Graduate Faculty Idaho State University (ISU), USA, February 2025 – Present - Visiting Professor École de Technologie Supérieure (ETS), Canada January 2025 – Present

Current Professional Positions:	- Licensed Professional Engineers Ontario (P.E.O. #100134143) - Member of American Society of Civil Engineering (ASCE #12346916) - Member of Canadian Society of Civil Engineering (CSCE #096454) - Oracle Certified Associate Programmer (OCA) - Member of Syrian Engineers Syndicate, Damascus, Syria
Previous Administrative Position Held:	- Acting Head of Civil Engineering 2021-2022
Previous Academic Positions Held:	- 2010-2012 Part-time Faculty Member, Department of Building, Civil & Environmental Engineering, Concordia University, Montreal, QC., Canada - 2006-2009 Teaching Assistant, Department of Building, Civil & Environmental Engineering, Concordia University, Montreal, QC., Canada
Fellowships And Honors:	- December 2019 Australian Embassy Award of Wining Project in the College of Engineering in AU, Kuwait - December 2019 Award of Wining Project in the Civil Engineering Department, AU, Kuwait - April 2019 Award of Wining Project in the Civil Engineering Department, AU, Kuwait - 09/2011-05/2015 Research Scholarship, ETS, University de Quebec, Montreal, QC, Canada - 09/2006-04/2009 Teaching Assistantship, Concordia University Montreal, QC., Canada - 09/2006-04/2008 Research Scholarship, Concordia University, Montreal, QC., Canada
Teaching Experience:	<u>At the Australian University, Kuwait</u> <i>Introductory / Fundamentals</i> - Statics (15FCVE210 & CIVL100) - Strength of Materials (15FCVE223 and CIVL210) for Civil, Mechanical and Petroleum Engineering Students - Engineering Materials (15FCVE212) - Solid Mechanics (21SCVE320 & 21MEC321) for Civil and Mechanical Engineering Students <i>Intermediate / Core Civil Engineering</i> - Civil Construction (21SCVE311) - Analysis of Structures (21SCVE322) - Concrete Structures (15FCVE221)

- Steel Structures (15FCVE222)

Advanced Design

- Concrete Design (21SCVE411)
- Steel Structures (21SCVE422)

Project-Based Learning (PBL) and Design

- Engineering Skills (PBL) (21SCVE310) – for Civil and Mechanical Students
- Engineering Design & Management Planning (PBL) (16SMCE321 & 21SCVE323/324) – for Civil and Mechanical Students
- Engineering Design & Management Planning (PBL) (21SCVE323/324) – for Civil and Mechanical Students
- Engineering Design Implementation (PBL) (21SCVE413/414)
- Engineering Project (PBL) (15FCVE224)
- Internship Student Supervision (21SCVE333) – for all School of Engineering disciplines
- Water & Environmental Design (PBL) (16SCVE421 & 21SCVE423/424)
- Technology Project Planning (PBL) (21SCVE410)
- Technology Project Implementation (PBL) (21SCVE420)

At Concordia University (Adjunct Faculty)

- Civil Project Design
- Building Project Design

At Concordia University (Auxiliary Teaching Faculty)

Core/Advanced Civil & Structural

- Structural Analysis II
- Design of Reinforced Concrete Structures
- Applied Ordinary Differential Equations
- Building Eng. Design Project
- Civil Eng. Design Project
- Introduction to Structural Dynamics
- Mechanical Analysis
- Mechanics of Materials
- Numerical Methods in Engineering

Professional Training & Development Courses

- Oracle Programming PL/SQL
- Oracle SQL
- VBA for Excel
- Java Programming
- Ms. Project
- AutoCAD

Industrial And Technical Experience:

- **Affiliate Faculty, Allied Graduate Faculty** (February 2025 – Present)
Idaho State University (ISU), USA
 - Engaged in collaborative research and graduate student supervision in civil and structural engineering. Contribute to joint research projects, proposal development, and interdisciplinary initiatives in structural health monitoring, sustainable materials, and seismic analysis.
- **Visiting Professor** (January 2025 – Present)
École de Technologie Supérieure (ETS), Canada
 - Participating in research collaborations, guest lectures, and academic mentoring within the structural engineering and materials research division. Support ongoing graduate research initiatives and contribute to the advancement of seismic and bridge engineering studies.
- **Associate Professor** Civil Engineering (Sep 2025 – Present)
Assistant Professor Civil Engineering (Ap 2016 - Aug 2025)
Acting Head of Civil Engineering: (Sep 2022 – Aug 2023)
Australian University, Kuwait
 - Responsible for teaching structural courses, curriculum development, research, and student mentorship in the Civil Engineering Department.
 - Led departmental operations and academic program management as Acting Head, overseeing strategic planning, curriculum development, faculty recruitment, and accreditation processes.
 - Played a key role in AU's transition from college to university, ensuring curriculum alignment with university-level standards and accreditation requirements.
 - Contributed to budget planning, industry collaboration, and departmental representation in strategic university initiatives.
 - Engaged in research activities, securing grants, publishing in peer-reviewed journals, and presenting at international conferences.
- **Bridge Engineer** (Apr 2013 – Sep 2015)
International Bridge Technologies (SYSTRA), Montreal, QC, CA.
 - Experienced civil engineer specializing in bridge design and construction, with a successful history of efficiently executing projects. Proficiently handled tasks involving the analysis and design of bridges and transportation structures.
 - Key responsibilities included:

- Conducting comprehensive structural design for roadway bridges.
- Contributing to the technical preparation of proposals.
- Coordinating the production of precise shop drawings.
- Supervising and providing guidance to junior engineers and technicians.
- Assisting in the review and validation of bridge designs.
- Creating technical reports and utilizing Excel sheets for streamlined analysis.
- Developing customized Excel sheets and VBA macros for advanced design processes.
- Actively participating in conferences, seminars, client interactions, and general meetings.
- **Structural Research Engineer** (Apr 2009 – May 2013)
DRSR, École de technologie supérieure, Montreal, QC., Canada
 - During my tenure as a Structural Engineer, I had the privilege of contributing to bridge projects administered and funded by the Ministry of Transportation of Quebec (Ministère des Transports du Québec). During which I had the following key responsibilities:
 - Conducting load rating and assessments for existing suspended bridges, aligning with new regulations and standards.
 - Executing 3D modeling and performed nonlinear seismic analysis for enhanced structural assessment.
 - Conducting research on the influence of soil-structure interaction on the overall seismic performance of bridges.
 - Developing multiple Excel technical sheets to facilitate efficient data analysis.
- **Adjunct Faculty Member** (Sep 210 - Apr 2012)
Concordia University, Montreal, QC., Canada
 - Engaged and dedicated Adjunct Faculty Member at Concordia University's Civil Engineering Department, contributing to the academic growth and development of students. Delivering lectures on two units, facilitating a dynamic learning environment that fosters in-depth understanding. Actively involved in exam preparation and administration, ensuring comprehensive assessment. Providing mentorship and guidance to students, nurturing their progress in final projects. Key tasks included:

- Conducted engaging lectures on two units within the Civil Engineering Department, enhancing students' knowledge and comprehension.
- Prepared and administered examinations, evaluating students' grasp of course materials and concepts.
- Offered supervision and guidance to students as they worked on their final projects, fostering their practical application of academic knowledge.
- As an Adjunct Faculty Member, I upheld high academic standards while contributing to a collaborative and enriching learning experience for students.
- **Teaching Assistant** (Sep 2006 - Apr 2008)
Concordia University, Montreal, QC., Canada
 - Engaged and proactive Teaching Assistant dedicated to supporting professors and enhancing student learning experiences. Collaborated closely with instructors to prepare course materials, aid in instructional delivery, and facilitate problem-solving sessions. Played an integral role in exam preparation, invigilation, and grading. Demonstrated structural lab experiments and provided guidance on capstone projects, contributing to overall educational excellence. Key tasks included:
 - Collaborated with professors to meticulously prepare unit materials, ensuring effective delivery of curriculum.
 - Assisted in class instruction, aiding students in comprehending complex concepts and resolving challenges.
 - Supported exam logistics, from preparation to invigilation and grading, maintaining academic integrity.
 - Conducted hands-on lab experiments, showcasing structural principles in practical settings.
 - Guided students in their capstone projects.

SELECTED INDUSTRIAL PROJECTS

- **New Champlain Bridge Corridor Project** (November 2014-2016) | Montreal, Quebec, Canada: Integral participant in the New Champlain Bridge Corridor Project, involved in both proposal and final design phases. Orchestrated the design of the east approach superstructure, meeting Euro Code, CHDBC, and project specifications. Developed pier



diaphragms for roadways and the Transit corridor. Translated design requirements into practical solutions, meticulously detailing members, and connections for compliance. Employed structural modeling for precise design action determination, backed by thorough calculation reports and Excel sheets. Navigated complex coordination within the project team, supervising drafting efforts and ensuring drawing accuracy. An essential contributor to the project's successful execution, upholding design standards and advancing project goals.

- **Goethals Bridge Replacement** (January 2014-October 2014) | New



York - New Jersey, USA: Played a pivotal role in the Goethals Bridge Replacement project, leading an independent design assessment for a complex bridge approach comprising four roadway structures and a

railway bridge. Diligently verified design compliance with project specifications, codes, and standards, substantiating accuracy through meticulous calculations and computer models. Executed an array of analyses, from linear to nonlinear, static to dynamic, and influence line to P-delta. Conducted specialized studies to enhance local design and detail considerations, offering comprehensive written reports, actively engaging in project meetings and design conferences, and meticulously validating drawings and specifications. A key contributor, ensuring structural integrity and adherence to exacting industry standards in the project's successful execution.

- **Ohio River Cable Stay Bridge** (April 2013-December 2013) | Ohio,



USA: Played a pivotal role in the Ohio River Cable Stay Bridge project, leading a comprehensive independent design validation of the main cable-stay bridge. Orchestrated intricate bridge computer models, integrated soil-pile interaction,

and executed advanced analyses. Conducted autonomous design evaluations spanning substructure, floor beams, deck slab, cable stay-girder anchorage assembly, and girder and beam components. My meticulous assessments ensured structural soundness, met design standards, and contributed significantly to the project's successful completion.

	- Evaluation of Île d'Orléans Bridge (April 2011-December 2012)  Quebec City, QC., Canada: The seismic capacity of the Île d'Orléans Bridge, a century-old cable-stayed bridge located in Quebec City, was evaluated through comprehensive structural assessments. Load rating and evaluations were conducted for the existing suspended structure to ensure compliance with updated regulations and standards. A 3D FE model was developed to assess the SSI effects on the current structure under seismic loading, including multiple soil reinforcement scenarios. Nonlinear seismic analysis was performed to enhance the accuracy of the structural assessment. To streamline data analysis, multiple Excel technical sheets were developed, facilitating efficient processing and interpretation of structural data.
Research Interest:	- Evaluation and Design of Bridge Structures; including Cable-Stayed, Box Girder and Pre-Stressed Concrete and Steel Bridges - Civil Engineering Materials - Performance of Structures under Extreme Loading; including Impact - Rehabilitation of Structures using FRPs - Performance of Structures Strengthened with FRPs - Structural Performance of Buildings under Fire - Data mining and AI applications in civil engineering
Research Grants:	- 2025: "Deep Learning-Enhanced Automated Visual Inspection for Improved Structural Health Monitoring" – KD 44,500 (\$145,000), Principal Investigator– KFAS Grant #CN24-15EV-2305 - 2025: Advancing Fouling Prediction and Mitigation Strategies in Al Zour Refinery (ZOR) Preheat Exchangers: Leveraging Empirical Evidence and Artificial Intelligence – KD 29,200 (\$95,000), Co-Investigator KFAS Grant # CN2415EC2302 - 2024: Novel AI-based Concrete Elasticity Determination using DIC Technology – KD 5000 (\$16,200), jointly funded by the Australian University and Idaho State University, Principal Investigator (Grant no. IRC-2023/2024-SRC-PR05). - 2024: Laboratory Evaluation of Carbon Fibre Reinforced Polymer (CFRP) Bars to Improve Joints in Natural Fibre Reinforced Concrete (NFRC) Pavements – KD 5000 (\$16,200), jointly funded by the Australian University and Idaho State

	University, Co-Investigator (Grant no. IRC-2023/2024-SRC-PR06). - 2021: "Application of Lamb waves for structural health monitoring of Kuwait infrastructure" KD20200 (\$66600), Co-Investigator– KFAS Grant# PR19-15EC-09. - 2020: "Real Time Spatial Measurements for Bridge Structures Using Fiber Optics Techniques, KFAS" KD 5500 (\$18500), Co-Investigator– KFAS Grant# PR20-15EE-01 - 2020: "Development of Sustainable Thermal Resistant Concrete Using PTF" KD 5750 (\$19000), Principal Investigator– KFAS Grant# PN20-35EV-02 - 2020: "Development of Innovative Material as an Energy Storage and Thermal Resistance for Energy Efficiency in Kuwait's Building" KD4250 (\$13760), Co-Investigator– KFAS Grant# CN20-35-EM-04 - 2017: "Modeling the Rutting Behavior of Asphalt Mixtures Obtained by Accelerating Testing Device Using Finite Element (FE) method," (seed fund, 1,500 KD (\$5,000)), Co-Investigator - AU Grant# IRC-2017-18-COE-CE-PR03 - 2019: Award of Wining Project from the Australian Embassy to Kuwait 2019 - 2019: Award of Wining Project in the Civil Engineering Department, Australian University Spring-2019 - 2018: Award of Wining Project in the Civil Engineering Department, Australian University Fall-2018 - 2018 Teaching Excellence in the department of Civil Engineering - 2011-2015: Research scholarship, ETS, Canada - 2006-2008: Research scholarship, Concordia University, Canada
Research and Publications including Journal and Books:	- Yassin M.H., Lakys R., Merouani Z.E., Jumah A "Performance Analysis of Palm Tree Microfibers in Concrete" Scientific Reports, 2024, DOI: 10.1038/s41598-024-84111-x - Yassin M.H., Al Hajaj Z., Lakys R., Merouani Z.E., Jumah A., Forthcoming. "The Influence of Palm Tree Fiber Addition on the Physical, Mechanical and Thermal Properties of High Strength Concrete", ASCE's Journal of Materials in Civil Engineering, 2024, DOI: 10.1061/JMCEE7/MTENG-19000 - Yassin M.H., Farhat M., Nahas M., Saad A., "Investigation of Fiber Bragg Grating Sensor Measurability in Concrete beams under Static Load Conditions" Heliyon, 2024, https://doi.org/10.1016/j.heliyon.2024.e40105

	- Yassin M.H., Farhat M., Nahas M., Soleimanpour R., “Fiber Bragg Grating (FBG)-Based Sensors: A Review of Technology and Recent Applications in” Discover Civil Engineering, 2024, DOI: 10.1007/s44290-024-00141-4 - Soleimanpour R., Yassin M.H., Mehdizadeh A., Chronopoulos D., “Locating cracks in isotropic plates using nonlinear guided waves”, Applied Acoustics, Volume 211, 2023,109522, ISSN 0003-682X - Lakys R., Saad A., Ahmed T., & Yassin M. H., “Investigating the drivers and acceptance of sustainable materials in Kuwait: A case study of CEB,” Case Studies in Construction Materials Journal, 17, e0133, 2022. https://doi.org/10.1016/j.cscm.2022.e01330 - Saad A., Ahmed T., Yassin M.H., Radwan A., Ezzedine A., “Out-of-Plane Structural Performance of Compressed Earth Block Walls Subject to Quasistatic Loading,” Advances in Civil Engineering Materials Journal, 11 (2022) 20210038. https://doi.org/10.1520/ACEM20210038.
Paper Presentations at Professional Conferences:	- Al Hajaj Z., Yassin M.H., “Flax fiber reinforced concrete for sustainable building material”, The 20th International Conference on Sustainable Energy Technologies, August 2023, Nottingham, UK. - Al Hajaj Z., Yassin M.H., “The influence of incorporating natural fiber on the mechanical performance of natural fiber reinforced concrete”, The First GCC Engineering Symposium, October 2023, Kuwait University, Kuwait. - Lakys, R. Yassin M.H., Jumaah A., “Sustainable Alternatives for Concrete by Adding Different Types of Natural and Industrial Waste Materials”, The 2nd International Conference on Civil Infrastructure and Construction (CIC 2023), February 2023, Qatar University, Doha, Qatar - Yassin M.H., Al Hajaj Z., Lakys R., “Experimental Study on the Thermal Characterization of PTF Concrete”, 7th international conference on civil structural and transportation engineering: Niagara falls, Canada, DOI: 10.11159/iccste22.188 - Lakys R., Yassin M.H., Merouani Z., “Preliminary Study on the Effect of Adding Palm Tree Fronds to Concrete”, 7th international conference on civil structural and transportation engineering: Niagara Falls, Canada, DOI: 10.11159/iccset22.189 - Yassin M.H., Lakys R., Ahmed T., Al-Refaei S., Omar B. A.-S., Altaher R. S., Optimizing the Thermal Resistance of Concrete

	Using The Palm Tree Fronds Fibers, International Conference on Civil Infrastructure and Construction (CIC 2020), DOI: https://doi.org/10.29117/cic.2020.0057 - T. Ahmed, and M H. Yassin. "Modeling the Rutting Behavior of Asphalt Mixtures Obtained by Accelerated Testing Device," Proceedings of the Gulf Conference on Sustainable Built Environment, March 2019, Kuwait, pp. 109-121. - Yassin M.H., Iqbal F., Bagchi A., Kodur V.K.R., "Assessment of Post-Earthquake Fire Performance of Steel-Frame Buildings" 14th World Conference on Earthquake Engineering, Beijing, China October 2008. - Yassin M.H., Bagchi A., Kodur V.K.R., "Numerical Model for Assessing the Post-Earthquake Fire Resistance of wood-stud wall", CSCE 2009 Annual General Conference, St. John's, Newfoundland, and Labrador May 2009 - Yassin M.H., Bagchi A., Kodur V.K.R., "Structural Performance of Stud Walls under Normal and Post-Earthquake Fire Exposure", ASCE and SEI Structures Congress, Vancouver, Canada April 2008, https://doi.org/10.1061/41016(314)61
College Service including committee Membership:	- Validation & Moderation Committee - Curriculum Committee - Credit Transfer (CT) Committee - PBL Committee - Students Appeals & Complaints Committee - Labs & Workshop Committee - Research & Faculty Development Committee - Auditing & QM Committee - Accreditation Committee - Departmental Disciplinary Committee - Academic Promotion and Appointment Committee - Structural units Committee, Civil Engineering Department, - Department search committee - Academic Advisor, Civil Engineering
National Service:	- NA
College Committees:	- College of Engineering Council (2022-2023) - Industrial Advisory Board Committee (2022-2023) - Faculty with Industrial Experience Committee 2017 - Distance Learning Committee (AU, 2020)