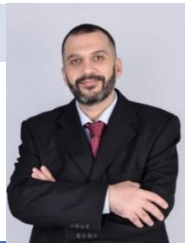
Mohammad Hany Yassin, PhD., P.Eng., M. ASCE, M. CSCE, OCA.



hany.yassin@gmail.com +965 65 77 1128 orcid.org | Google Scholar | LinkedIn Profile

PROFILE AND OBJECTIVE

Experienced faculty member and structural engineer with over 20 years in academia and industry. Currently serving as Associate Professor at Australian University (AU) and Affiliate Graduate Faculty at Idaho State University (ISU), contributing to research in materials science, structural health monitoring, and seismic engineering. Expertise spans structural analysis, bridge engineering, and seismic performance, with a parallel focus on sustainable construction materials, fiber-reinforced composites, and smart sensors. Proven contributions to Materials Science & Engineering through the development and evaluation of innovative cementitious composites, FRP bars, and natural fiber concretes. Dedicated to advancing interdisciplinary materials research for resilient infrastructure.

EDUCATION

2016	**(Ph.D.) Doctor of Philosophy in Civil Engineering** ***ETS, Universite de Quebec*** *Thesis: Nonlinear Seismic Soil-Pile Interaction Analysis for Bridges Founded in Quebec Soil*
2008	**(M.A.Sc.) Master of Applied Science in Civil Engineering** ***Concordia University*** *Thesis: Post-Earthquake Fire Performance of Building Structures*
2005	**Bachelor of Engineering B. Eng., Civil Engineering** ***University of Damascus***

SUMMARY of ACADEMIC POSITIONS & PROFESSIONAL EXPERIENCE

2025 - Present	Affiliate Faculty, Allied Graduate Faculty, Idaho State University (ISU), USA
2025 - Present	Visiting Professor, École de Technologie Supérieure (ETS), Canada
2025 - Present	Associate Professor, Civil Engineering Dept., Australian University, Kuwait
2016 - 2024	Assistant Professor, Civil Engineering Dept., Australian University, Kuwait
2022 - 2023	Acting Head, Civil Engineering Dept., Australian University, Kuwait
2013 - 2015	Bridge Engineering, SYSTRA, Canada
2010 - 2012	Adjunct Faculty, Concordia University, Canada
2009 - 2013	Structural Research Engineer, DRSR, École de technologie supérieure, Canada
2006 - 2008	Teaching Assistant, Concordia University, Canada

LICENSES, MEMBERSHIPS & CERTIFICATES

2015- present	Professional Engineer Ontario (*P.Eng.*) #100134143
2025-Present	Editorial Member Edelweiss Applied Science and Technology (e-ISSN: 2576-8484)
2023- Present	American Society of Civil Engineers (M. *ASCE*) #12346916
2023- Present	Structural Engineering Institute *(*M. *SEI)* #12346916
2023- Present	Canadian Society of Civil Engineers (M. *CSCE*) #096454
2012	Certificate in University Teaching; Concordia University, Canada
2004	Oracle Certified Associate Programmer (OCA), Oracle
2003	International Computer Driving License (ICDL), UNESCO

DETAILS of EXPERIENCE

Affiliate Faculty, Allied Graduate Faculty

Idaho State University (ISU), USA

February 2025 – Present

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

École de Technologie Supérieure (ETS), Canada

January 2025 – Present

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 & Acting Head of Civil Engineering Department

Australian University, Kuwait

April 2016 – Present (Acting Head: September 2022 – August 2023)

- Responsible for teaching, 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 a college to a 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

International Bridge Technologies (SYSTRA), Montreal, QC., Canada

04/2013 – 09/2015

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

DRSR, École de technologie supérieure, Montreal, QC., Canada

04/2009 – 05/2013

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

Concordia University, Montreal, QC., Canada

09/2010 – 04/2012

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, upheld high academic standards while contributing to a collaborative and enriching learning experience for students.*

Teaching Assistant

Concordia University, Montreal, QC., Canada

09/2006 – 04/2008

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.*

HONOR/AWARD/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

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.

PUBLICATIONS:

- **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.
- 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

LIST OF COURSES TAUGHT

At AU

- *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*
- *Civil Construction (21SCVE311)*
- *Concrete Design (21SCVE411)*
- *Steel Structures (21SCVE422)*
- *Analysis of Structures (21SCVE322)*
- *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)*
- *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)*
- *Statics (15FCVE210 & CIVL100)*
- *Steel Structures (15FCVE222)*
- *Concrete Structures (15FCVE221)*
- *Engineering Project (PBL) (15FCVE224)*

At Concordia University (Adjunct Faculty)

- *Civil Project Design*
- *Building Project Design*

At Concordia University (Auxiliary Teaching Faculty)

- *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 Course

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

References are available on request.