TORONTO METROPOLITAN UNIVERSITY (FORMERLY RYERSON UNIVERSITY) DEPARTMENT OF CIVIL ENGINEERING FACULTY OF ENGINEERING & ARCHITECTURAL SCIENCE (FEAS) TORONTO, ONTARIO CANADA Cell Phone: +1 (647) 5400-985 What'sapp number:(002)01221379277 Email:mostaf.hassan@torontomu.ca

MOSTAFA MOHAMED MOSTAFA MOHAMED HASSAAN, B.Sc., MASC, PHD, EIT

Summary:

I got my Ph.D. from the civil engineering department at Toronto Metropolitan University (formerly Ryerson University) in January 2025. The title of my Ph.D. thesis is "Evaluating the Durability of RC Bridges Under Climate Change Scenarios: A Study of Carbonation and Chloride-Induced Corrosion." The cumulative grade point average (GPA) for my Ph.D. degree is (4.20/4.33). The grades for the Ph.D. courses at the Department of Civil Engineering at Toronto Metropolitan University are attached below. In addition, I am a researcher specializing in structural engineering topics. Moreover, I studied many courses related to structural engineering in my bachelor's degree, including the design of RC structures, steel structures, and RC foundations. I also learned several courses in my master's science degree related to structural engineering, such as: earthquake engineering, composite structures, finite element methods, and advanced construction materials. I have great experience in non-destructive testing techniques, including (i.e., inner electrical resistivity measurements) for vital reinforced concrete structures.

	Courses	Grades
*	CV8301 (Appl of Finite Element)	(A+)
*	CV8311(Risk and Reliability for Eng.)	(A-)
*	CV8106 (Advances in Concrete Materials)	(A+)
*	CV8307 (Adv. Reinforced Concrete Design) (A+)
*	CV8020 (Ph.D. Research Seminar)	(PASS)
*	CV8100 (Directed Studies: Eng.)	(A+)
*	PhD Candidacy Examination	(PASS)
*	PhD Research Seminars	(PASS)
EDUCATION & CREDEN (2025)	N TIALS TORONTO METROPOLITAN UNIVE DOCTOR OF PHILOSOPHY IN CIVII Thesis Title: Evaluating the Durabil Carbonation and Chloride-Induced Co	RSITY (FORMERLY RYERSON UNIVERSITY) ENGINEERING (PHD), <i>GPA (4.20/4.33)</i> ity of RC Bridges Under Climate Change Scenarios: A Study of prrosion
(2019)	ARAB ACADEMY FOR SCIEN ALEXANDRIA, EGYPT Master of Science, Structural Engin Thesis Title: Structural Health Monito	NCE, TECHNOLOGY AND MARITIME TRANSPORT - neering, <i>GPA</i> (4.00/4.00) pring of RC Containments in Nuclear Power Plants

(2014) ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND MARITIME TRANSPORT -ALEXANDRIA, EGYPT Bachelor of Science (with honors), Construction & Building Engineering Department Graduation Project: Structural Design for RC. Arch Bridge. GPA 3.84/4.00 (ranked 2nd out of 90 students)

Academic Experience	ARAB ACADEMY FOR SCIENCE, TECHNOLOGY & MARITIME TRANSPORT - ALEXANDRIA, Egypt	
	Graduate Teaching Assistant	
	• Teaching	
(9/2014-2/2019)	Supervisor in ISO committee.	
	• Supervisor in the final exam committee.	
	• Performed research in M.Sc. thesis and publications at international conferences.	
	ARAB ACADEMY FOR SCIENCE, TECHNOLOGY & MARITIME TRANSPORT - ALEXANDRIA,	
(2/2010 8/2020)	EGIRI Teaching Assistant	
(5/2019- 8/2020)	• Teaching	
	• Research	
	TORONTO METROPOLITAN UNIVERSITY (TMU), TORONTO ONTARIO CANADA	
(9/2020-1/2025)	Graduate Teaching and Research Assistant	
	• Teaching courses in the civil engineering department related to the design of reinforced concrete structures for undergraduate students.	
	 Teaching a prestigious course called 'Introduction to Engineering' related to first- 	
	year engineering undergraduate students.	
	• Performing research related to my Ph.D. thesis.	
	• Performing some publications for a part of my Ph.D. thesis in reputable journals and	
	international conferences related to the Canadian Society of Civil Engineering	
	(CSCE).	
Honours &	• AASTMT President Award for Distinguished Academic Achievement (2009-2014)	
Awards	Awarded per semester to students with the highest GPA.	
	 Egyptian Engineers Syndicate Award of Merit for Distinguished Academic Achievemer through the head-alor's degree project. 	
	 Full Scholarship from AASTMT for pursuing M Sc. Degree 	
	 Full Scholarship from Toronto Metropolitan University for pursuing a Ph.D. degree in 	
	structural engineering.	
	• I have been awarded as a <i>Domestic Student</i> (Conversion for International Student) at	
	Toronto Metropolitan University from September 2022 till August 2024.	
	• I have been awarded an <i>Ontario graduate scholarship (OGS)</i> from September 2023 till	
Field of	 August 2024. Computational Simulation and Modeling for RC Structures Using SAP2000 ANSYS12 	
Interact	ETABS.	
Interest	Structural Analysis.	
	Design and Analysis of Reinforced Concrete Structures.	
	Construction Materials.	
	Reliability Analysis.	
	Reinforced Concrete Bridges.	
	Structural Health Monitoring (SHM).	
	 Analysis of Time Series Data. Drahahilita and Statistica 	
	Frobability and Statistics.	
	 Subclura Dynamics. Design of RC Structure (1) (CB354) @AASTMT 	
	 Design of RC Structure (2) (CB455) @AASTMT 	
Teaching	Theory of Structures (CB240) @AASTMT	
	Construction Materials (CB352) @AASTMT	
	 Design of RC and Metallic structure (CB351) @AASTMT Popeir and Meintengage of BC Structure (CB557) @AASTMT 	
	 Repair and Mannehance of KC Structure (CD557) @AASTM1 Building Construction (CB322) @AASTMT 	
	 Building materials (CB350) @AASTMT 	
	Design of Steel Structure (CB444) @AASTMT	
	 Introduction to Engineering (CEN100) @ Toronto Metropolitan University (TMU) 	

- Structural Concrete Design I (CVL410) @ Toronto Metropolitan University (TMU)
- ◆ Introduction to Structural Design (CVL500) @ Toronto Metropolitan University (TMU)
- Structural Concrete Design II (CVL904) @ Toronto Metropolitan University (TMU)
- Renovation/Repair of Existing Structures (CVL906) @ Toronto Metropolitan University (TMU)
- Invigilation for some courses related to the Department of Civil Engineering at TMU

D 1-Elmasry, M.I., El Alashkar, N.H., Hassan, M. (2018), Stability of Concrete Containments under
 Jet Impact Loads," GEOMEAST 2018, November 24-28, Giza, Egypt.

2- Elmasry, M.I., El Alashkar, N.H., Hassan, M. (2020), Analysis of RC Containments of Nuclear Plants Under Multiple Jet Impact Loads," XI International Conference on Structural Dynamics (EURODYN 2020), June 22-24, Athens, Greece.

3- Hassan, M., ElMasry, M.I.S., El Ashkar, N.H. (2021), Structural Health Monitoring for Reinforced Concrete Containment Using Inner Electrical Resistivity Method, Open Journal of Civil Engineering, Vol.11 (3), pp.317-341. <u>https://doi.org/10.4236/ojce.2021.113019</u>

4- Hassan, M., ElMasry, M.I., ElAshkar, N.H. (2021), Effect of Impact Boeing 707-320 on External RC Containment of Nuclear Power Plant for Different Compressive Strength of Concrete, Saudi Journal of Civil Engineering, 5(8), pp.282-304. https://doi.org/10.36348/sjce.2021.v05i08.004

5- Hassan, M., ElMasry, M.I., ElAshkar, N.H. (2021), Detection of Cracks in Heavy Weight Concrete Using Inner Electrical Resistivity Method, Saudi Journal of Civil Engineering, 5(9), pp.355-366. <u>https://doi.org/10.36348/sjce. 2021.v05i09.004</u>

6- Hassan, M., Amleh, L., Othman, H. (2022), Effect of Different Cement Content and Water Cement Ratio on Carbonation Depth and Probability of Carbonation Induced Corrosion for Concrete, Cement Wapno Beton, 27(2), pp.126-143. <u>https://doi.org/10.32047/CWB.2022.27.2.4</u>

7- Hassan, M., Amleh, L., Othman, H. (2023), Effect of Climate Change on Projection of Carbonation Depth and Its Probability of Carbonation-Induced Corrosion, CSCE Annual Conference - Moncton, NB.

8- Hassan, M., Amleh, L. (2024), Influence of Climate Change on the Probability of Carbonation-Induced Corrosion, Periodica Polytechnica Civil Engineering Journal, 68(1), pp.57-67. https://doi.org/10.3311/PPci.22101

9- Hassan, M., ElMasry, M.I.S., El Ashkar, N.H. (2024), Measurements International Journal of Civil Engineering and Technology, 15 (1), pp.47-65. <u>https://iaeme.com/MasterAdmin/Journal_uploads/IJCIET/VOLUME_15_ISSUE_1/IJCIET_15_0</u> <u>1_005.pdf</u>

10- Hassan, M., Amleh, L., Hussein, L. (2024), Projection of the Carbonation Depths, and its Probability of Corrosion Initiation for the Uncracked and Cracked Concrete Including Various Percentages of Fly Ash, International Review of Civil Engineering Journal, 15 (5).

11- Amleh, L., Hassan, M., Hussein, L. (2024), Influence of Climate Change on the Probability of Chloride-Induced Corrosion Initiation for the RC Bridge Deck made of Geopolymer Concrete, Sustainability Journal, 16(18), 8200, <u>https://doi.org/10.3390/su16188200</u>

12- Hassan, M., ElMasry, M.I.S., El Ashkar, N.H. (2025), Detection of Various Types of Cracks Using The Inner Electrical Resistivity Measurement In Reinforced Concrete Members: A Review, International Journal of Civil Engineering and Technology (IJCIET), 16(1), pp.1-9. https://iaeme.com/MasterAdmin/Journal_uploads/IJCIET/VOLUME_16_ISSUE_1/IJCIET_16_0 1_001.pdf

13- Amleh, L., Hassan, M., Hussein, L. (2025), Influence of Various Crack Widths in RC Bridge Decks on Time of Chloride-Induced Corrosion Initiation, Under Review.

14- Amleh, L., and Hassan, M. (2025), Assessing Nonstationary Climate Trends: Implications for Maximum Temperature Projections in Toronto, Under Review.

SELECTED PUBLICATIONS