

May Haggag
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Education:

Doctor of Philosophy, McMaster University, Canada, *September '21*

- Major: Civil Engineering

Masters of Science, the American University in Cairo, Egypt, *February '16*

- Major: Construction Engineering

Bachelor of Science, the American University in Cairo, Egypt, *June '11*

- Major : Construction Engineering
- Minor : Business Administration
- Overall GPA : 3.953/4 (**Highest Honors**)

American High School Diploma, Dar El Tarbia Language School, Cairo, Egypt, *June '06*

Awards and Scholarships:

- Best Paper Award, The American Society of Civil Engineers' Engineering Mechanics Institute Conference, *June '19*
- Best Paper Award, The American Society of Civil Engineers' Engineering Mechanics Institute Conference, *May '18*
- Ontario Trillium Scholarship, McMaster University, *September '17 – August '21*
- Best Student Paper Award, World Symposium on Civil Engineering, *March '17*
- Graduate Fellowship, the American University in Cairo, *September '11 – February '16*
- Engineer Bahgat Hassanein Award in Construction Engineering, the American University in Cairo, *June '11*
- Boston Consultant Group Cup, the American University in Cairo, *May '10*
- Academic Excellence Award (Dean's List), the American University in Cairo, *May '09, May '10 and May '11, May '13*
- Merit Scholarship, the American University in Cairo, *September '06 – June '11*
- Exemplary Student Award, Dar El Tarbia Language School, *June '06*
- Best Academic Achievement Award, Dar El Tarbia Language School, *June '06*

Computer and Linguistic Abilities:

- Fluency in written and spoken Arabic and English.
- Excellent knowledge in Microsoft Office.
- Excellent knowledge in AutoCAD, Primavera, SAP2000, ETABS and ANSYS.
- Excellent knowledge on R, and Python.
- Basic knowledge of Water Cad, Sewer Cad and STAAD.
- Excellent internet research skills.

Work Experience:

Data Analyst, Co-operators Group Limited, *August '22 - Present*

- Working with big data to analyze the causes of structure fire in residential buildings.

- Working on assessing structure fire risk in residential buildings using data-driven techniques.
- Working on predicting both the probability and adverse impacts of structure fire on residential buildings using machine learning-based methods.

Post-Doctoral Fellow, *McMaster University, Civil Engineering Department, October '21 - Present*

- Working on various research projects which focus on building sustainability and resilience under different hazards and risks.

Teacher Assistant, *McMaster University, Civil Engineering Department, September '17 - December '20*

- Assisted in teaching Engineering Mechanics and Sustainability and Ethics in Engineering.

Teacher Assistant, *The American University in Cairo, Construction Engineering Department, September '11 - August '17*

- Assisted in teaching undergraduate courses which include Engineering Mechanics, Engineering Analysis and Computation, Structural Analysis, Environmental and Sanitary Engineering, Construction Materials and Quality Control, Advanced Construction Materials and Quality Control, Senior Graduation Project One (Structural Design and Environmental Engineering) and Senior Graduation Project Two (Construction Management).

Teacher Assistant, *The American University in Cairo, School of Continuing Education, January '14 - August '17*

- Assisted in teaching risk management courses under the project management program.

Senior Commercial Engineer, *Muharram Bakhum, March '14 – August '17*

- Reviewed bids from consultants, contractors and suppliers.
- Prepared consultants' and contractors' contracts and monthly invoices.
- Updated project schedules by studying project plans and specifications.
- Controlled project schedules by monitoring project progress, coordinating activities, and resolving problems.
- Controlled project costs by approving expenditures and administering contractor contracts.
- Prepared requests for proposals, terms of references and evaluation criteria.
- Evaluated consultants' proposals and prepared evaluation reports.
- Prepared project status reports by collecting, analyzing, summarizing information and trends and recommending actions.

Proposals & Business Development Engineer, *Muharram Bakhom, October '13 – March '14*

- Prepared technical offers which include work methodologies, project scope of services, and personnel staffing schedules.
- Prepared financial offers which include fees, staff rates, and payment conditions.
- Prepared company profile, prequalification documents and other documents related to company registrations.
- Scheduled business development meetings on behalf of the company and gave presentations to clients as part of the business development plan.

Junior Proposals Engineer, *Dar El Handasah Shair and Partners, June '12 – October '13*

- Assisted in preparing technical and financial proposals in the Middle East, European, Asian and African countries.

- Worked in contract administration and analyzed the contract critical clauses in relation to proposals at hand.

Junior Development Engineer, Madinet Nasr for Housing and Development, January '12 – June 2012

- Managed the construction work of residential projects
- Developed feasibility studies for different proposed residential projects.
- Coordinated between different parties to facilitate the construction and handover of different residential projects

Trainee, ENPPI, Summer '10

- Enhanced AutoCAD, Sap and Staad skills.
- Reviewed AutoCAD Drawings for different concrete foundations and steel frames.

Soil engineer Intern, Ardman Ace, Summer '10

- Inspected soil samples of different projects i.e. Egyptian metro line under construction.
- Performed various soil experiments i.e. sieve, hydrometer and unconfined strength.

Extracurricular Activities:

Group Leader, BCG AUC Strategy Cup Case Competition, Fall'10

- Worked in a team to analyze a case and find out solutions on how to handle it, prepared a power point presentation that included these outcomes and won the first rank cup in the competition

Student Admin Help, The American University in Cairo, Construction Engineering Department, Spring '10

- Compiled and sorted the applications of the newly enrolled undergraduate students.
- Helped undergraduate students with registration and advising problems.

Group Leader, BCG AUC Strategy Cup Case Competition, Spring'10

- Worked in a team to analyze a case and find out solutions on how to handle it and prepared a power point presentation that included these outcomes.

Academic Committee Head, Construction Engineering Association (CEA), AUC, Spring'09 – Spring '10

- Helped in rewriting and renewing a book which the club offered to give construction engineering students better knowledge on their undergraduate and graduate lives.

Logistics Committee Head, Resala, AUC, Spring ' 08 – Fall '08

- Led the organization of weddings for orphaned brides.
- Raised funds for orphaned brides' marriage expenses.
- Worked with several impoverished neighborhoods all over different Egyptian governorates to help provide people with key life necessities.

Academic Committee Head, Volunteers in Action (VIA), AUC, Spring '09 - Fall' 09

- Taught uneducated people of different ages Arabic and English languages.

Publications:

- Haggag, M., Ismail, M. K., & El-Dakhakhni, W. (Under Review). Interpretable Data-Driven Models for Capacity and Failure Mode Prediction of Reinforced Concrete Columns.
- Haggag, M., Rezk, E., & El-Dakhakhni, W. (Under Review). Machine Learning Prediction of Climate-Induced Disaster Property Damages Considering Hazard- and Community-Related Attributes.
- Haggag, M., Rezk, E., & El-Dakhakhni, W. (In Press). Machine Learning Prediction of Climate-Induced Disaster Injuries. *Natural Hazards*.
- Haggag, M., Yosri, A., El-Dakhakhni, W., & Hassini, E. (2022). Interpretable data-driven model for Climate-Induced Disaster damage prediction: The first step in community resilience planning. *International Journal of Disaster Risk Reduction*, 73, 102884.
- AbdelAleem, B. H., Ismail, M. K., Haggag, M., El-Dakhakhni, W., & Hassan, A. A. (2022). Interpretable soft computing predictions of elastic shear buckling in tapered steel plate girders. *Thin-Walled Structures*, 176, 109313.
- Haggag, M., Yorsi, A., El-Dakhakhni, W., & Hassini, E. (2021). Infrastructure performance prediction under Climate-Induced Disasters using data analytics. *International Journal of Disaster Risk Reduction*, 56, 102121.
- Haggag, M., Siam, A. S., El-Dakhakhni, W. & Hassini, E. (2021). Data Analytics Applications for City Resilience under Climate-Induced Hazards, The Canadian Society of Civil Engineers annual Conference 2021
- Haggag, M., Siam, A. S., El-Dakhakhni, W., Coulibaly, P., & Hassini, E. (2021). A deep learning model for predicting climate-induced disasters. *Natural Hazards*, 107(1), 1009-1034.
- Haggag, M., Ezzeldin, M., El-Dakhakhni, W., & Hassini, E. (2020). Resilient cities critical infrastructure interdependence: a meta-research. *Sustainable and Resilient Infrastructure*, 1-22.
- Haggag, M., Fahmy, E. H., Abdel-Mooty, M., & Safar, S. (2017). Development of Interaction Diagram for Eccentrically Loaded RC Sandwich Walls with Different Design Parameters. In *Proceedings of the International Multi Conference of Engineers and Computer Scientists* (Vol. 2).
- Haggag, M., Fahmy, E. H., Abdel-Mooty, M., & Safar, S. (2016) *Numerical Investigation of Eccentrically Loaded Reinforced Concrete Sandwich Walls*. In *Proceedings of the CSCE Annual Conference, Resilient Infrastructure*, London, Ontario, 1-4 June, 2016.

Conference Presentations:

- Climate Resilience Planning using Machine Learning Techniques, Elsevier, Urban Transitions Global Summit 2022, Sitges, Barcelona
- Data-Driven Methods for Building Energy Consumption Efficiency under Climate Change, The American Society of Civil Engineers, Engineering Mechanics Institute Conference 2019, Pasadena, United States

Data Analytics Applications for Mitigation of Climate-Induced Risks: Towards City Resilience, The American Society of Civil Engineers, Engineering Mechanics Institute Conference 2019, Pasadena, United States

Machine Learning for City Resilience Assessment. The American Society of Civil Engineers, Engineering Mechanics Institute Conference 2018, Cambridge, United States

Personal data:

Date of Birth: November 17th, 1988
Place of Birth: Zamalek, Cairo, Egypt
Nationality: Egyptian

Reference Furnished Upon Request
