

Zachary HAMIDA, Ph.D.

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EDUCATION

- 2017-2020 Ph.D. in CIVIL ENGINEERING,
Polytechnique Montreal, Montreal
Thesis: “Stochastic Modelling of Infrastructures Deterioration and Interventions based on Network-Scale Visual Inspections” | [Polytechnique Page](#)
| Prof. James-A GOULET (Adviser)
- 2014-2016 M.Sc. in COMPUTATIONAL SCIENCE,
American University of Beirut, Beirut
Thesis: “Hybrid Optimization Techniques for Oil Field Development”
| Prof. George SAAD (Adviser) & Prof. Fouad AZIZI (Co-Adviser)
- 2008-2013 B.E. in CIVIL ENGINEERING
University of Aleppo, Aleppo
FYP: “Structural Analysis & 4D Simulation for Multi-Storey Building”
| Prof. Ammar KADAAN (Adviser)

SCHOLARSHIPS & CERTIFICATES

- APR. 2021 Higher Education Teaching Certificate. Harvard BOK Center.
- SEP. 2014 Graduate Research Assistantship (GRA). American University of Beirut.
- SEP. 2014 Partial Scholarship in Visual Communication. Istituto Europeo di Design (IED), Florence.
Creative Diary 2014, PORTFOLIO: be.net/zachamida.

RESEARCH EXPERIENCE

- 2021-present | Postdoctoral Research Associate
Polytechnique Montreal
Developing a framework for planning network-scale maintenance activities on the network of bridges in the province of Quebec.
- 2017-2020 | Doctoral Research Assistant
Polytechnique Montreal
Developed probabilistic models capable of modelling the deterioration behaviour and the effect of interventions based on visual inspections from a network of bridges.
- 2014-2017 | Graduate Research Assistant
American University of Beirut
Worked on optimization the allocation of injection and production wells in oil reservoirs

TEACHING EXPERIENCE

- WINTER, 2021 | Teaching Assistant
CIV6540: Probabilistic Machine learning for Civil Engineers

PUBLICATIONS

- Journal Papers: | **Hamida, Z.** & Goulet, J-A. (2021). "A Stochastic Model for Estimating the Network-Scale Deterioration and Effect of Interventions on Bridges". Struct. Control & Health Monitoring. [DOI](#)
- | **Hamida, Z.** & Goulet, J-A. (2021). "Quantifying the Effects of Interventions Based on Visual Inspections of Bridges Network". Structure and Infrastructure Engineering. [DOI](#)
- | **Hamida, Z.** & Goulet, J-A. (2021). "Network-Scale Deterioration Modelling of Bridges Based on Visual Inspections and Structural Attributes". Structural Safety. [DOI](#)
- | **Hamida, Z.** & Goulet, J-A. (2020). "Modeling Infrastructure Degradation from Visual Inspections Using Network-Scale State-Space Models". Struct. Control & Health Monitoring. [DOI](#)
- | **Hamida, Z.**, Azizi, F. & Saad, G. (2017). "An Efficient Geometry-based Optimization Approach for Well Placement in Oil Fields". Journal of Petroleum Science and Engineering. [DOI](#).
- Conf. Paper: | **Hamida, Z.** & Goulet, J-A. (2019). "State-Space Models for Network-Scale Analysis of Bridge Inspection Data". 13th International Conference on Applications of Statistics and Probability in Civil Engineering. Seoul, South Korea. [DOI](#).
- Report: | **Hamida, Z.** & Goulet, J-A. (2021). "Prédire la dégradation et comprendre l'effet des interventions : une méthode d'apprentissage machine adaptée aux rapports d'inspection issus d'une large population de structures". Ministère des Transports du Québec (MTQ).

ACTIVITIES

GUITAR, RUNNING AND CYCLING.