

Michael Cohen

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Department of Civil & Environmental Engineering
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EDUCATION

- Doctor of Philosophy** June 2018
Department of Civil and Environmental Engineering, University of Waterloo
Dissertation: “Numerical Analysis of Debonding Mechanisms of Externally Bonded FRP Reinforcement in RC Beams”
- Master of Applied Science** October 2012
Department of Civil Engineering, University of Ottawa
Thesis: “Structural Behaviour of Self Consolidating Steel Fiber Reinforced Concrete Beams”
- Bachelor of Applied Science** June 2006
Department of Civil Engineering, Al-Mustansiriyah University
Ranked 8th in a class of 168 students

HONORS AND AWARDS

- Sandford Fleming Foundation Award** 2016
This award is granted annually by the Department of Civil Engineering at the University of Waterloo to one Teaching Assistant based on the nomination of undergraduate students.
- Teaching Assistantship Excellence Award** 2016
This award reflects the excellent contribution made by Teaching Assistants to the undergraduate program at the University of Waterloo.
- Graduate Research Studentship** 2013
This scholarship is awarded by the University of Waterloo to PhD students with a minimum GPA of 80%.
- Ontario Graduate Scholarship** 2010
This is merit-based scholarship for Ontario’s best graduate students in all disciplines of academic study. It requires a minimum GPA of 80% and a recommendation by the Department.

Excellence Scholarship

2010

This scholarship is awarded by the University of Ottawa to students who receive major external awards such OGS.

Admission Scholarship

2010

This scholarship is awarded by the University of Ottawa to students with a minimum GPA of 80%.

TEACHING EXPERIENCE

University of Connecticut

August 2021 to present

Lecturer, Civil and Environmental Engineering Department

- Delivered the Civil Engineering Materials course to upper-year students and modified the exciting course content to be delivered in both classroom and virtual setting
- Supervised the laboratory sessions as part of the Civil Engineering Material course, and provided pre-recorded instructional videos on how to conduct the required experiments
- Managed and supervised all laboratories facilities in the CEE department, and maintained machines and equipment in working condition
- Ensured the compliance of faculty and graduate research students with health and safety requirements set by the state and the school

Conestoga College

September 2018 to 2020

Sessional Professor, School of Engineering and Technology

- Taught a variety of courses for the Civil Engineering Technology and the ACET programs and worked for sixteen hour per week during my first assignment
- Developed different course curriculum for lower and upper-year courses and updated some existing course materials to reflect the current market needs
- Worked with a diverse group of students and managed large size classes efficiently

University of Waterloo

May 2014 to April 2018

Teaching Assistant, Department of Civil and Environmental Engineering

- Conducted extensive tutorials for several undergraduate courses averaging one hundred and twenty students per semester, covering the following topics: static and solid mechanics, structural analysis, advanced calculus and differential equations
- Developed quizzes, exams and homework assignments to meet the needs of learners
- Revised the syllabus to meet accreditation standards
- Conducted in-office consultation hours and private tutoring sessions efficiently

University of Ottawa

September 2010 to Aug 2012

Teaching Assistant, Department of Civil Engineering

- Prepared and presented several tutorials for first and second year students
- Marked assignments in a timely manner and provided constructive feedback
- Prepared midterm and final examination materials and solutions
- Conducted regular laboratory sessions to undergraduate students, marked technical reports and delivered educational sessions in large and small group settings

RESEARCH EXPERIENCE

University of Waterloo

September 2013 to April 2018

Graduate Student

- Completed doctoral research in the area of numerical simulation to investigate the deboning mechanism in CFRP-strengthened concrete structures
- Developed expertise in finite element method using ABAQUS package to analyze and simulate various structural elements and postprocessed the output data efficiently

University of Ottawa

September 2010 to August 2012

Graduate Student

- Conducted Master's research to experimentally examine the structural behaviour of SFRP-reinforced concrete members
- Tested several beam specimens and concrete mixtures to evaluate the effect of individual components and analyzed data using Response and Microsoft Excel packages

RESEARCH INTERESTS

Structural Engineering

- Finite Element Analysis
- Experimental testing of full scale structural members
- Bridge Design

Materials Engineering

- Fiber Reinforced Concrete
- Engineered materials
- Self-Consolidating Concrete

PROFESSIONAL EXPERIENCE

Bait Al Maqdis for Construction Contracting Est., Amman, Jordan

2006 to 2008

Civil Engineer

- Worked on the structural design plans in accordance with the required design codes and standards
- Prepared bills of quantities for the Amman Municipality Employees Social Club project and a Public Park Development Project
- Created technically accurate AutoCAD shop drawings for any change orders or design processes
- Checked project drawings and construction material quantities to ensure accuracy
- Supervised and monitored the site labor force and the work of sub-contractors
- Interacted effectively with co-workers, construction laborers, the site foreman and sub-contractors

PUBLICATIONS

Journal Publications

Cohen, M., Monteleone, A., and Potapenko, S., “Finite Element Analysis of Intermediate Crack Debonding in FRP Strengthened RC Beams”, Canadian Journal of Civil Engineering, vol. 45, No. 10, pp. 840-851

Aoude, H. and Cohen, M., “Shear Response of SFRC Beams Constructed with SCC and Steel Fibers”, Electronic Journal of Structural Engineering, vol. 14, 2014, pp. 71-83

Conference Papers

Cohen, M., “Analytical Study on Predicting the Shear Resistance of Steel Fiber Reinforced Concrete Beams”, Proceedings of the Canadian Society for Civil Engineering Conference, May 2021

Aoude, H., Cohen, M., Aghniaey, N., Alfarra, A., Burrell, R., and De Carufel, S., “Structural Use of SCC and Fibers in Beams and Columns”, Proceedings of the Fifth North American Conference on the Design and Use of Self-Consolidating Concrete, May, 2013

Cohen, M. and Aoude, H., “Shear Behaviour of SFCR and SCFRC Beams”, Proceedings of the Canadian Society for Civil Engineering Conference, January, 2012

PROFESSIONAL TRAINING

Fundamentals of University Teaching Program

University of Waterloo, 2016

This program provides hands-on professional development opportunities and introduces students to evidence-based strategies and ideas to implement in their teaching.

ExpectATIONS Teaching Assistance Workshop

University of Waterloo, 2013

ExpectATIONS is a two-day workshop that prepares Waterloo Engineering students to undertake a teaching assistantship.

PROFESSIONAL AFFILIATIONS

Association of Professional Engineers of Ontario: Engineer in Training “EIT”

Canadian Society of Civil Engineers (CSCE): member

PROFESSIONAL SERVICE

Peer-Reviewed Articles for:

- American Concrete Institute (ACI)

LANGUAGES

Fluent in English and Arabic

COMPUTER SKILLS

Engineering Applications: ABAQUS, AutoCAD, Response

Microsoft Office: Word, Excel, PowerPoint and Outlook

Internet and Email Applications