

Andrew W. Fisher

MASc in Civil Engineering, EIT

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Summary of Qualifications

Experienced in the design of reinforced concrete and steel structures, gained through MASc dissertation and course projects

Well-versed in engineering software including finite element program VecTor2, sectional analysis program Response-2012, SAP2000, MATLAB, Excel Macros, and AutoCAD

Effective technical communication skills, including report writing and presenting, refined during roles as a Project Coordinator and Teaching Assistant

Confident in managing multiple projects; demonstrated by involvement in extra-curricular leadership roles while maintaining academic excellence

Authentic personality with a keen interest in contributing to the social environment of the office

Education

2013 - 2016 **Master of Applied Science**, Civil Engineering, University of Toronto

Dissertation: Shear Performance of Heavily Reinforced High-Strength Concrete Coupling Beams

Supervisors: Professor Michael P. Collins and Professor Evan C. Bentz

Certificate of Accomplishment in the Graduate Professional Skills Program

2008 - 2013 **Bachelor of Applied Science**, Honours Civil Engineering (Co-op) with Distinction, Management Science Option, University of Waterloo

Certificate in Structural Engineering from the Department of Civil & Environmental Engineering

Certificate of Accomplishment in the Waterloo Student Leadership Program

Professional Experience

Sep 2013 - Dec 2015 **Teaching Assistant**, Structures and Materials, Department of Civil Engineering, University of Toronto

Lead weekly tutorials and laboratories with the goal of helping students make informed engineering based decisions that apply academic theory to practical design problems

Average student evaluation was 6.47, 6.65, and 6.36 out of 7 from 2013 to 2015 consecutively

May - Aug 2013 & Jan - Apr 2012 **Technical Project Coordinator**, RWDI Consulting Engineers, Guelph, ON

Conducted over 45 cladding wind load and wind-induced structural load studies for buildings around the globe

Coordinated project deliverables with wind tunnel technicians and graphics modelers to meet deadlines provided by the Project Manager

Drafted technical reports for the Project Manager and client that summarized wind loads for use in the structural design

Sep - Dec 2012 **Bridge Research Assistant**, Ministry of Transportation (MTO) Bridge Office, St. Catharines, ON

Modelled highway bridges using S-FRAME and MIDAS software programs in order to analyze bridge responses under traffic loading

Prepared standardized load tests at bridge sites to gather real world data to verify computer models

- May - Aug 2011** **Municipal Engineering Assistant**, SCS Consulting Group Ltd., Markham, ON
- Drafted road cross-section details, traffic management plans, and stormwater management layouts using AutoCAD Land Desktop
 - Reviewed architectural design of housing plot plans to ensure compliance with municipal standards
- Sep - Dec 2010** **Engineering Project Assistant**, Con Cast Pipe, Guelph, ON
- Designed and configured 14,000 tonnes of precast concrete pipeline products—15% of department output—as per land development drawing specifications and CSA Design Standards

Technical Projects

- Sep 2013 - Feb 2016** **Shear Performance of Heavily Reinforced High-Strength Concrete Coupling Beams**, MASc Dissertation, University of Toronto
- Designed, constructed, and tested to failure four full scale, high-strength concrete coupling beams in order to investigate how load-induced cover spalling influences shear capacity
 - Evaluated the accuracy of the CSA and ACI code design provisions to predict the ultimate shear capacity of the coupling beams
- Jan - Apr 2014** **Seismic Design Proposal for a Four-Storey Steel Frame Building**, Earthquake Engineering, University of Toronto
- Collaborated with four teammates to complete the detailed seismic design of concentrically braced and moment resisting frames using principles of capacity design specified in the NBCC-2010 standard
 - Verified the seismic design with a response spectrum and nonlinear time history analysis using SAP2000
- May - Aug 2013** **The Influence of Tube Transfer Functions on Wind Tunnel Test Data**, RWDI, Guelph, ON
- Analyzed 18 cladding wind load studies to determine the impact of using post-processing transfer functions on raw wind tunnel test data
 - Presented research findings and recommendation to modify use of these functions to the RWDI Project Director and Loads and Effects Group

Leadership Experience

- Sep 2013 - Sep 2015** **Vice-President**, Civil Engineering Graduate Student Association, University of Toronto
- Collaborated with six other executives to enhance the graduate student community by organizing socials, charity events, and research forums
- Jan - Apr 2013** **Editor-in-Chief**, The Iron Warrior Engineering Newspaper, University of Waterloo
- Recruited and managed an Editorial Board of 20 volunteers to produce five issues of the paper
 - Fostered an environment geared toward succession planning by pairing new and experienced volunteers, and creating a detailed transition document
- Feb 2011 - Feb 2013** **Finance & Sponsorship Captain**, CSCE Concrete Toboggan Competition, University of Waterloo
- Created a \$30,000 budget by recruiting \$20,000 in corporate sponsorship—the largest in team history—that achieved the goal of sending all team members to the competition at no personal cost
- May 2011 - Aug 2012** **Vice-President Internal**, Engineering Society, University of Waterloo
- Recruited over 100 Event Directors and actively mentored their planning and advertising of 60 different events