

Andrew W. Fisher

Civil Engineering EIT — MASc Candidate

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Summary of Qualifications

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

Well-versed in engineering software including Response-2000, 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 as demonstrated in by balancing 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 - 2015 **Candidate for Master of Applied Science**, Civil Engineering, University of Toronto

Dissertation: Concrete Cover Spalling due to High Shear Reinforcement Ratios and its effect on the Ultimate Shear Capacity of Reinforced Concrete Coupling Beams

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

*Certificate in Structural Engineering, Department of Civil & Environmental Engineering
Certificate of Accomplishment, Student Leadership Program, Organizational & Human Development*

Professional Experience

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

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 and 6.65 out of 7 in 2013 and 2014 consecutively

May - Aug 2013 & Jan - Apr 2012 **Technical Project Coordinator**, Rowan Williams Davies & Irwin (RWDI), Guelph, ON

Planned and 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

Submitted technical reports to the Project Manager, summarizing cladding and structural wind loads for client use in the final design

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

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

Participated in 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

Technical Projects

- Sep 2013 - present** **Concrete Cover Spalling due to High Shear Reinforcement Ratios and its effect on the Ultimate Shear Capacity of Reinforced Concrete Coupling Beams**, MSc Dissertation, University of Toronto
- Designed, constructed, and tested to failure four full scale, high strength concrete coupling beam wall assemblies in order to investigate the reduction in shear capacity due to concrete cover spalling
 - Verified code based designs using sectional analysis program Response-2000 and finite element software VecTor2
- Jan - Apr 2013** **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
 - Verified the seismic design with a response spectrum analysis 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 the RWDI Project Director and Loads and Effects Group

Leadership Experience

- Sep 2013 - present** **Vice-President**, Civil Engineering Graduate Student Association, University of Toronto
- Collaborate with six other executive to enhance the educational and social opportunities for over 300 graduate students by organizing bi-weekly socials and monthly academic presentations
- 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