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 at RJC Engineers and through MASc dissertation

Well-versed in engineering software including SAFE, SAP2000, S-Concrete, SP-Column, Response, VecTor2, 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

Jun 2016 - present **Structural Engineering Intern (EIT)**, RJC Engineers, Toronto, ON

- Responsible for the detailed design of two 29-storey reinforced concrete towers and two structural steel amenity buildings, including structural strengthening of the surrounding existing development
- Leading the development of an internal post-tensioning design guideline as a member of the Structural Technical Group

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

- Mentored over 30 students on how to make informed engineering based decisions that apply academic theory to practical design problems, resulting in the highest final exam average out of the other seven student sections
- 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
- Consistently met deadlines set by the Project Manager by effectively coordinating project deliverables with wind tunnel technicians and graphics modelers that focused on eliminating workload bottlenecks
- Strengthened technical writing skills by drafting reports for the Project Manager and client that summarized wind loads for use in the structural design

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

- Modelled a damaged Highway 402 bridge using S-FRAME and MIDAS software programs in order to analyze the bridge response under traffic loading
- Verified the accuracy of the model by performing on-site load tests that measured the bridge behaviour

May - Aug 2011 **Municipal Engineering Assistant**, SCS Consulting Group Ltd., Markham, ON

- Developed a strong foundation of AutoCAD experience by drafting road cross-section details, traffic management plans, and stormwater management layouts

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 which verified the occurrence of load-induced side cover spalling and its effect on the ultimate shear capacity
- Evaluated the CSA and ACI code design provisions and showed that the limits imposed by the ACI code result in an over-conservative prediction of the coupling beams' shear strengths

Jan - Apr 2014 **Seismic Design Proposal for a 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 wind studies and determined 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

- Driving force behind revitalizing the association through governance and financial reform; receiving the Gordon Cressy Student Leadership Award as recognition for these contributions

Jan - Apr 2013 **Editor-in-Chief**, The Iron Warrior Engineering Newspaper, University of Waterloo

- Successfully recruited and managed an Editorial Board of 20 volunteers in order prevent the organization from dissolving due to lack of interest
- 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