Caroline Lemieux

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Education

University of California, Berkeley *2016–Present*
Ph.D. in Computer Science

University of British Columbia *2012-2016*
B.Sc. in Combined Honours Computer Science and Mathematics
Graduated with highest standing in Faculty of Science (Governor General's Silver Medal)

Publications

[1] pdf Caroline Lemieux, Dennis Park, Ivan Beschastnikh. *General LTL Specification Mining*. In Proceedings of the 30th International Conference on Automated Software Engineering (ASE), November 2015. (Main Technical Track)

[2] pdf Caroline Lemieux, Ivan Beschastnikh. *Investigating Program Behavior Using the Texada LTL Specifications Miner.* In Proceedings of the 30th International Conference on Automated Software Engineering (ASE), November 2015. (Tool Demonstration Track)

[3] pdf Caroline Lemieux. *Mining Temporal Properties of Data Invariants.* In Proceedings of the 37th International Conference on Software Engineering (ICSE), May 2015. (ACM SRC Research Abstract; **won 1st place in Undergraduate Category**)

Experience

Graduate Student Researcher *2017*
Working with Koushik Sen at UC Berkeley, primarily on projects related to automated program testing.

Micorosft Research Intern *2017*
Worked in the CloudBuild team on automated detection of build error anomalies.

Research Assistant (Volunteer, USRA) *2014, 2015*
Worked with Ivan Beschastnikh at UBC. Developed the general Linear Temporal Logic (LTL) specification mining tool Texada and the data-temporal property mining tool Quarry. Contributed significantly to the writing of the main techincal track paper on Texada [1] and wrote nearly all the of the tool demo paper [2], as well as all the SRC abstract on Quarry [3].

Undergraduate Academic Assistant *2013-2014*
With Gregor Kiczales at UBC – video lecture editor and online teaching assistant for Coursera offerings of *Introduction to Systematic Program Design*.

Undergraduate Teaching Assistant *2013*
In-class TA for CPSC 110 (UBC's introductory CS course) taught by Meghan Allen.

Awards and Scholarships

International

Finalist, CRA Outstanding Undergraduate Researcher Award **2016**
1st Place Undergraduate, ACM Student Research Competition at ICSE 2015 **2015**
Honorable Mention, CRA Outstanding Undergraduate Researcher Award **2015**

National

NSERC CGS D (declined) **2016**
NSERC Undergraduate Student Research Award (supervisor: Ivan Beschastnikh) **2014, 2015**

Institutional - UCB

Berkeley Fellowship for Graduate Study **2016**
EECS Excellence Award **2016**

Institutional - UBC

Governor General's Silver Medal (best in the graduating class for the B.Sc. degree) **2016**
Markus Meister Memorial Prize in Computer Science **2016**
G C Webber Memorial Prize **2016**
Computer Science Scholarship **2015**
Shirley Snelgrove and John Yule Scholarship **2015**
Trek Excellence Scholarship for Continuing Studies **2013, 2014, 2015**
Reginald Palliser-Wilson Scholarship **2014, 2015**
Daniel Buchanan Scholarship in Mathematics (highest standing in Honours Math) **2015**
Maureta Evelyn McDonald Memorial Scholarship **2014**
Charles and Jane Banks Scholarship **2013**
Janus J Klawe Memorial Science One Scholarship **2012**
Chancellor's Scholar Award **2012**

Software

FairFuzz

Extension of AFL that targers rare branches in the program.
Code: https://github.com/carolemieux/afl-rb

Texada

Tool for inferring LTL program specifications from traces of system behavior.
Code: https://bitbucket.org/bestchai/texada/

Natural Languages

French (Fluent), English (Fluent), Spanish (Basic)