

# Calder Morton-Ferguson

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Department of Mathematics  
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## Education

### University of Toronto

B.Sc., Mathematics. GPA: 4.0  
Mathematics Specialist, Computer Science Minor  
Anticipated graduation: Spring 2019.

### John F. Ross, CVI

Ontario Secondary School Diploma, 2015.  
Provincial French Immersion Certificate.

## Research

### NSERC Undergraduate Student Research Award, 2018

Topology of quiver flag varieties, supervised by Professor Joel Kamnitzer

### NSERC Undergraduate Student Research Award, 2017

3-manifold topology, supervised by Professor Dror Bar-Natan

### Undergraduate Research Project in Combinatorics, 2016

The combinatorics of nested recursions, supervised by Professor Steve Tanny

## Conference Presentations

### Canadian Undergraduate Math Conference, 2018

“Quivers, Flags, and Varieties: Investigating a Conjecture by Counting”  
July 11-15, 2018. University of Saskatchewan, Saskatoon, SK.

### Canadian Undergraduate Math Conference, 2017

“Visualizing the Prime Decomposition of 3-Manifolds” July 19-23, 2017.  
University of Quebec at Montreal, Montreal, QC.

### Canada Math Camp, 2017

“Conway’s Sequences and Nested Recursions” July 31-August 4, 2017.  
University of Toronto, Toronto, ON.

### Crime and Punishment at 150, 2016

“The Changing Role of Urban Environments Since *Crime and Punishment*.” October 20-22, 2016. University of British Columbia, Vancouver, BC.

### Canadian Undergraduate Math Conference, 2016

“Why Some Sequences Are More Special Than Others.” July 13-17, 2016.  
University of Victoria, Victoria, BC.

## In Preparation

(with Anne Dranowski) Appendix to *The MV basis for the ring of functions on the unipotent subgroup* by Baumann, P., Kamnitzer, J., and Knutson, A.

## Workshops & Seminars

### **Thematic Program in Geometric Representation Theory**

June 11-15, 2018. Notre Dame University, IN.

### **2018-2019 Geometric Representation Theory Seminar**

September 2018-June 2019. Fields Institute, Toronto, ON.

### **University of Toronto Perverse Sheaves Seminar**

September 2018-April 2018. University of Toronto.

### **Alexander Grothendieck Memorial Day**

December 10, 2015. Fields Institute, Toronto, ON.

## Teaching

### **Teaching Assistant**, University of Toronto

MAT257Y1 (Analysis II) 2018-2019

MAT137Y1 (Calculus) 2017-2018

MAT136H1 (Calculus 1B) Spring 2017

MAT135H1 (Calculus 1A) Fall 2016

## Awards

Norman Stuart Robertson Scholarship in Mathematics, 2018

Samuel Beatty In-Course Scholarship, 2018

Margaret Taylor and Thomas Taylor Scholarships in Mathematics, 2017

University of Toronto Scholar, 2016-2018

University of Toronto President's Entrance Scholarship, 2015

John F. Ross English Department Award of Excellence, 2015

John F. Ross Mathematics Faculty Award, 2015

Ontario Scholar, 2015

Euclid Mathematics Contest Regional Winner, 2015

## Experience

### **University of Toronto Mathematics Union**

President, 2017-2018. Vice-President Communications, 2016-2017.

### **Research Assistant**, Summer 2016

TorchLight Canada

### **Tutor and Student Transition Mentor**, 2013-2015

John F. Ross CVI, Guelph

### **Pianist and Volunteer**, 2013-2015

The Royal On Gordon Retirement Home, Guelph

### **Legislative Page**, Fall 2010

Legislative Assembly of Ontario

## Languages & Skills

Fluent in English, French, Java, and Python.

Piano, accordion, and trombone performance.

Classical and jazz composition.

National Novel Writing Month Winner, 2012.