

# MARIA ROSS

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## RESEARCH INTERESTS

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Primarily algebraic and analytic number theory, group theory, Galois theory, and other areas of algebra together with combinatorics and some graph theory.

## EDUCATION

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### University of Glasgow

*September 2019 - September 2020*

Master of Science in Mathematics

### University of Puget Sound

*August 2015 - May 2019*

*Magna Cum Laude*

GPA: 3.85

Bachelor of Science in Mathematics

Recipient of Award for Outstanding Senior in the Department of Mathematics and Computer Science

Studied abroad through Budapest Semesters in Mathematics for 2017-2018 academic year

Relevant courses:

Abstract Algebra I

Complex Analysis

Abstract Algebra II

Advanced Calculus I

Advanced Abstract Algebra

Advanced Calculus II

Number Theory

Combinatorics

Introduction to Topology

Binomial Coefficients

Algebraic Topology

Mathematical Cryptography

Independent Study in Algebraic Graph Theory

Set Theory

Senior Thesis in Algebraic Graph Theory

Mathematical Optimization

## RESEARCH EXPERIENCE

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### Williams College

Summer 2018

*Undergraduate Research*

*Williamstown, Massachusetts*

Participated in small-group research in analytic number theory under the mentorship of Dr. Steven J. Miller. Used the  $L$ -functions ratios conjecture to generalize results relating to primes in the ring of Gaussian integers to the rings of integers of all imaginary quadratic fields with class number one.

### Texas A&M University

Summer 2017

*Undergraduate Research*

*College Station, Texas*

Participated in small-group research on modular forms and nonvanishing regions of  $L$ -functions associated to canonical Hecke characters under the direction of Dr. Riad Masri. Contributed to a density result involving the number of certain  $L$ -functions in imaginary quadratic fields satisfying certain local conditions. Co-authored a research paper which has been published in Mathematical Research Letters Volume 26.

**Kansas State University**  
*Undergraduate Research*

Summer 2016  
*Manhattan, Kansas*

Participated in small-group research involving various products of directed graphs and higher-rank graphs, under the direction of Dr. Danny Crytser. Studied  $C^*$ -algebras and examined properties of directed graphs connected to  $C^*$ -algebras.

## WORK EXPERIENCE

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**Mathematics Tutor and Grader** 2016-2017, 2018-2019

Graded homework assignments for Calculus I and Calculus II courses. Tutored students in Calculus I, II, III, and Linear Algebra courses.

## PUBLICATIONS

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*Nonvanishing of Hecke  $L$ -Functions and Bloch-Kato  $p$ -Selmer Groups*, with Arianna Iannuzzi, Byoung Du Kim, Riad Masri, Alexander Mathers, and Wei Lun Tsai. Published in Mathematical Research Letters, Volume 26.

## PRESENTATIONS

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*Distributions of Primes in Number Fields and the  $L$ -function Ratios Conjecture*, with Casimir Kothari. Young Mathematicians Conference, August 2018, at Ohio State University.

## HONORS & AWARDS

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John and Hazel Wiborg Scholarship	2016-2017
McGill Family Scholarship	2016-2018
Claire Brossoit Hoffner Scholarship	2016-2018
Thomas Malcolm and Hilda Enden Jack Scholarship	2018-2019
Award for Outstanding Senior in Department of Mathematics & Computer Science	2019
McGill Book Award	2019

## MEMBERSHIPS

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Pi Mu Epsilon Mathematical Honor Society	Phi Eta Sigma National Honor Society
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