

LARISSA RICHARDS

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RESEARCH INTERESTS

Probability theory and stochastic processes such as Brownian motion, statistical physics, and Schramm-Loewner evolution (SLE).

EDUCATION

SEPT 2014 - PhD in Mathematics under the supervision of Ilia Binder
PRESENT *University of Toronto*

SEPT 2015 - Master class in planar statistical physics
JUNE 2016 *University of Geneva, Geneva, Switzerland.*

SEPT 2013 - MSc in Mathematics under the supervision of Ilia Binder
AUG 2014 *University of Toronto*

SEPT 2008 - BSc in Mathematics, honours
APRIL 2013 *University of Regina*

SEPT 2008 - BSc in Statistics
APRIL 2013 *University of Regina*

PAPERS

- 2020 Ilia Binder and Larissa Richards. *Convergence Rates of Random Discrete Model Curves Approaching SLE in the Scaling Limit*. Preprint available on request.
- 2020 Ilia Binder and Larissa Richards. *Polynomial Convergence Rates for Harmonic Explorer and Ising Model on Isoradial Graphs*. Preprint available on request.
- 2013 Michael J. Kozdron, Larissa M. Richards, and Daniel W. Stroock. *Determinants, Their Applications to Markov Processes, and a Random Walk Proof of Kirchhoff's Matrix Tree Theorem*. Preprint available on ArXiv: 1306.2059.

SELECTED TALKS AND PRESENTATIONS

- 2019 Rate of Convergence of Lattice Models to SLE, *Summer Canadian Mathematical Society Meeting, University of Regina.*
- 2018 An Introduction to SLE. Connections Between Complex, Harmonic, and Stochastic Analysis, *Fields Institute, Toronto.*
- 2014 Conformal Welding and Koebe's Theorem. Summer School in SLE, Conformal Welding, and Random Planar Maps, *UCLA, Lake Arrowhead, CA.*
- 2013 A Random Walk Proof of Kirchoff's Matrix Tree Theorem, *Canadian Undergraduate Mathematics Conference. Universite de Montreal.*

SCHOOLS, WORKSHOPS AND CONFERENCES PARTICIPATED

- 2019 Canadian Mathematical Society Summer Meeting, *Regina, Saskatchewan.*
- 2018 EMS-IAMP Summer School in Mathematical Physics, *Ischia, Italy.*
- 2018 Topics in Geometric Function Theory, *Les Diablerets, Switzerland.*
- 2016 Schramm-Loewner Evolution and Gaussian Free Field, *ETH Institute, Zurich Switzerland.*
- 2014 Summer school in SLE, conformal welding, and random planar maps, *UCLA, Lake Arrowhead, CA.*
- 2012 Women in math summer school, *University of Waterloo.*

TEACHING AND COORDINATING

- 2017-
PRESENT **Course Coordinator at University of Toronto.**
- MAT237: Multivariate Calculus
Prepared syllabus, coordinated instructors and teaching assistants, lectured one section of large class.
- MAT334: Complex Variables
Prepared syllabus, coordinated teaching assistants, lectured one section of a large class.
- MAT334: Complex Variables
Co-prepared syllabus, co-coordinated teaching assistants, lectured one section of a large class.

- 2018 - **Course Instructor at University of Toronto**
PRESENT
MAT136 Calculus 1(B)
MAT135 Calculus 1(A)
- 2013 - **Teaching Assistant at University of Toronto**
PRESENT
Calculus: Calculus 1(A) and (B), Advanced Calculus
Complex Variables
Linear Algebra: Linear Algebra I, II, and Linear Algebra for Engineers
Introduction to Nonlinear Dynamics and Chaos
- 2012 - **Teaching Assistant at University of Regina**
2013
Numerical Analysis I

SELECTED AWARDS

- 2018 Delury TA Award (Department of Mathematics)
- 2015- 2018 NSERC Alexander Graham Bell Canada Graduate Scholarship (doctoral)
- 2013- 2014 NSERC Alexander Graham Bell Canada Graduate Scholarship (master)
- 2013-2018 University of Toronto Graduate Fellowship

OUTREACH AND COMMITTEE WORK

- 2020 - **Mentor for Incoming Women Graduate Students in Mathematics**
PRESENT
This is a mentorship program where you are paired with an incoming female graduate students to provide assistance, support, and encouragement throughout the program and academia.
- 2019 **Organizer of the Canadian Math Kangaroo Contest across Toronto**
Math Kangaroo is an international annual mathematical competition. The Canadian Math Kangaroo Contest (CMKC) is a volunteer-run, not-for-profit organization which aims to spread the joy of mathematics. The contest takes place every year in March, in several places throughout Canada and all students from grades 1 to 12 participate.
- 2018 - **Organizer of Women In Math Lunch Meetings, Department of Mathematics**
2019
The Department of Mathematics holds monthly lunches for Women in Mathematics, for grad students, post-docs, and faculty. These have a very informal agenda, like a discussion topic related to women in math or a short guest speaker (local).
- 2017 **Graduate Chair Search Committee**
The task of the graduate chair search committee is to choose a chair to lead a three-campus Graduate Department at the University of Toronto.
- 2016 - **Treasurer, Mathematics Graduate Student Association, University of Toronto**
2018

REFERENCES

- Ilia Binder, University of Toronto, ilia@math.toronto.edu
- Dmitry Chelkak, l'École Normale Supérieure (Paris), dmitry.chelkak@ens.fr
- Fredrik Johansson Viklund, KTH Royal Institute of Technology, frejo@kth.se
- Sarah Mayes-Tang, University of Toronto, smt@math.toronto.edu (Teaching Reference)