# Todd Schmid

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## EDUCATION

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| 04/2022 to present | **Research Assistant** <br> at CORNELL UNIVERSITY, USA <br> Partially funded by ERC grant Autoprobe |
| 09/2021 to 02/2022 | **Guest Researcher** <br> at RADBOUD UNIVERSITY, The Netherlands |
| 09/2019 to present | **University College London** <br> Graduate Program: Doctor of Philosophy in Computer Science (4 year program) |
| 09/2018 to 05/2019 | **University of Toronto** <br> Master of Science in Mathematics |
| 09/2013 to 06/2018 | **University of Victoria** <br> Honours Bachelor of Science in Mathematics |

## TEACHING EXPERIENCE

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| 08/2022 to 11/2022 | **Co-Instructor** at XIDIAN UNIVERSITY, Xi'an, China <br> Course title: THEORY OF COMPUTATION: AUTOMATA AND COINDUCTION <br> I led online problem sessions, designed homework assignments, and marked solutions. |
| 02/2022 to 10/2022 | **Co-Instructor** at GEC ACADEMY, Beijing, China <br> Course Title: THEORY OF COMPUTATION: AUTOMATA AND COINDUCTION <br> I led online problem sessions, designed homework assignments, marked solutions, and mentored students engaged in active research. |
| 01/2020 to 12/2021 | **Teaching Assistant** at the UNIVERSITY COLLEGE LONDON, London, UK <br> Course Titles: DISCRETE MATHS FOR COMPUTER SCIENCE (COMP0147), COMPUTABILITY AND COMPLEXITY THEORY (COMP0017) <br> I led problem sessions every week for students. |
| 09/2018 to 05/2019 | **Teaching Assistant** at the UNIVERSITY OF TORONTO, Toronto, Canada <br> Course Title: CALCULUS (MAT 137) <br> I led two interactive tutorials, graded problem sets, and invigilated exams. |
| 09/2015 to 05/2018 | **Teaching Assistant** at the UNIVERSITY OF VICTORIA, Victoria, Canada <br> Course Titles: LOGIC AND FOUNDATIONS (MATH 122), CALCULUS I (MATH 100), PRECALCULUS (MATH 120), CALCULUS II (MATH 101), CALCULUS III (MATH 200) <br> I led interactive tutorials, graded problem sets, and invigilated quizzes. |
| 09/2016 to 05/2018 | **Assistance Centre Tutor** at the UNIVERSITY OF VICTORIA, Victoria, Canada <br> I was an official tutor for the math and stats assistance center. |

## PUBLICATIONS

2022 | *Processes Parametrised by an Equational Theory*
Authors: **Todd Schmid**, Wojciech Rozowski, Alexandra Silva, Jurriaan Rot
In: 49TH INTERNATIONAL COLLOQUIUM ON AUTOMATA, LANGUAGES, AND PROGRAMMING (ICALP) in Paris, France
(*acceptance rate*: $24/83 \approx 29\%$)

2021 | *How to Write a Coequation*
Authors: Fredrik Dahlqvist, **Todd Schmid**
Appeared at the 9TH INTERNATIONAL CONFERENCE ON ALGEBRA AND COALGEBRA IN COMPUTER SCIENCE (CALCO) in Salzburg, Austria

*On Star Expressions and Coalgebraic Completeness theorems*
Authors: **Todd Schmid**, Alexandra Silva, Jurriaan Rot
Appeared at the 37TH CONFERENCE ON MATHEMATICAL FOUNDATIONS OF PROGRAMMING SEMANTICS (MFPS) in Salzburg, Austria

*Guarded Kleene Algebra with Tests: Coequations, Coinduction, and Completeness*
Authors: **Todd Schmid**, Tobias Kappé, Alexandra Silva, and Dexter Kozen
Appeared at the 48TH INTERNATIONAL COLLOQUIUM ON AUTOMATA, LANGUAGES, AND PROGRAMMING (ICALP) in Glasgow, Scotland
(*acceptance rate*: $29/101 \approx 29\%$)

2019 | *Concrete barriers to quantifier elimination in finite dimensional C\*-algebras*
Appeared in MATHEMATICAL LOGIC QUARTERLY (Vol. 65, Issue 4)
Authors: Christopher Eagle, **Todd Schmid**
Supported by a Jamie Cassels Undergraduate Research Award at the University of Victoria.

## PREPRINTS

2022 | *A (Co)algebraic Framework for Ordered Processes*
URL: https://arxiv.org/abs/2209.00634

*Presenting with Quantitative Inequational Theories*
Presented at BLAST 2022.
URL: https://arxiv.org/abs/2207.11629

## TALKS

08/2022 | **BLAST 2022**
hosted by CHAPMAN UNIVERSITY, Orange, CA, USA
Title: *Presenting Quantitative Inequational Theories*

07/2022 | **49th International Colloquium on Automata, Languages, and Programming**
hosted by UNIVERSITÉ PARIS CITÉ, Paris, France
Title: *Processes Parametrised by an Algebraic Theory*

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| 07/2021 | **37th Conference on Mathematical Foundations of Programming Semantics** |
| | hosted by the UNIVERSITY OF SALZBURG |
| | Title: *On Star Expressions and Completeness theorems* |
| 07/2021 | **48th International Colloquium on Automata, Languages, and Programming** |
| | hosted by the SCHOOL OF COMPUTING SCIENCE, UNIVERSITY OF GLASGOW |
| | Title: *Guarded Kleene Algebra with Tests: Coequations, Coinduction, and Completeness* |
| 03/2020 | **Programming Principles, Logic, and Verification Group Seminar** |
| | hosted by UNIVERSITY COLLEGE LONDON |
| | Title: *Guarded Kleene Algebra with Tests: Coequations, Coinduction, and Completeness* |
| 09/2019 | **SUMS Student Seminar** |
| | hosted by the UNIVERSITY OF VICTORIA |
| | Title: *Sheaves, or How to Glue Stuff Together* |
| 08/2019 | **Toronto Set Theory Seminar** |
| | hosted by the FIELDS INSTITUTE |
| | Title: *Topos Theory and the Independence of the Continuum Hypothesis* |
| 11/2018 | **University of Toronto Graduate Student Seminar** |
| | hosted by the UNIVERSITY OF TORONTO, ST. GEORGE CAMPUS |
| | Title: *Why Heyting Algebras are Interesting* |
| 07/2017 | **Canadian Undergraduate Mathematics Conference** |
| | hosted by UQÁM, CONCORDIA, and the UNIVERSITÉ DE MONTRÉAL |
| | Title: *A Tale of Two Models* |
| 01/2017 | **Séminaires universitaires en mathématiques à Montréal** |
| | hosted by McGILL, and the UNIVERSITÉ DE MONTRÉAL |
| | Title: *A Fixed-Point Theorem from Modal Logic* |

## SERVICE AND OUTREACH

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| 09/2020 to 08/2021 | **London Maths Outreach** <br> DIRECTOR |
| 05/2017 to 04/2018 | **Undergraduate Math and Stats Course Union (SUMS)** <br> CO-PRESIDENT |
| 07/2014 to 09/2014 | **2016 Canadian Undergraduate Mathematics Conference** <br> ORGANIZER |
| 06/2010 to 08/2017 | **Byte Camp** <br> INSTRUCTOR |