

Todd Schmid (he/him/they/them)
tws5@stmarys-ca.edu +1 225 256 9237

EMPLOYMENT

07/2023
to present

Assistant Professor at SAINT MARY'S COLLEGE OF CALIFORNIA
Department of Mathematics and Computer Science
Moraga, CA, USA

SHORT-TERM POSITIONS

04/2022
to 07/2023

Research Assistant at CORNELL UNIVERSITY
Department of Computer Science
Ithaca, NY, USA

09/2021
to 02/2022

Guest Researcher at RADBOUD UNIVERSITY
Department of Computer Science
Nijmegen, The Netherlands

EDUCATION

09/2019
to 06/2023 (defended)
to 01/2024 (conferred)

UNIVERSITY COLLEGE LONDON
Graduate Program: **PhD Computer Science** (4 year program)
London, UK

09/2018
to 08/2019

UNIVERSITY OF TORONTO
Graduate Program: **MSc Mathematics** (1 year program)
Toronto, ON, Canada

09/2013
to 05/2018

UNIVERSITY OF VICTORIA
Undergraduate Program: **Honours BSc Mathematics**
Victoria, BC, Canada

TEACHING

02/2024
to present

Instructor at SAINT MARY'S COLLEGE OF CALIFORNIA, Moraga, CA, USA
- CS485: Introduction to Automata and the Theory of Computation
- CS121: Programming I

09/2023
to 12/2023

Instructor at SAINT MARY'S COLLEGE OF CALIFORNIA, Moraga, CA, USA
- CS374: Analysis of Algorithms
- CS121: Programming I

08/2022
to 11/2022

Co-Instructor at XIDIAN UNIVERSITY, Xi'an, China
Theory of Computation: Automata and Induction

02/2022
to 10/2022

Co-Instructor at GEC ACADEMY, Beijing, China
Theory of Computation: Automata and Coinduction

01/2020
to 12/2021

Teaching Assistant at UNIVERSITY COLLEGE LONDON, London, UK
- COMP0147: Discrete Mathematics for Computer Science
- COMP0017: Computability and Complexity Theory

09/2018
to 05/2019

Teaching Assistant at UNIVERSITY OF TORONTO, Toronto, ON, Canada
MAT137: Calculus!

09/2015
to 05/2018

Teaching Assistant at UNIVERSITY OF VICTORIA, Victoria, BC, Canada
- MATH122: Logic and Foundations
- MATH100: Calculus I
- MATH120: Precalculus
- MATH200: Calculus III

09/2016
to 05/2018

Assistance Centre Tutor at UNIVERSITY OF VICTORIA, Victoria, BC, Canada

PUBLICATIONS

2023

Fractals from Regular Behaviours

Authors: **Todd Schmid**, Victoria Noquez, and Lawrence Moss

10TH CONFERENCE ON ALGEBRA AND COALGEBRA IN COMPUTER SCIENCE (CALCO)

Best Paper Award

A Complete Inference System for Skip-free Guarded Kleene Algebra with Tests

Authors: Tobias Kappé, **Todd Schmid**, and Alexandra Silva

32ND EUROPEAN SYMPOSIUM ON PROGRAMMING (ESOP)

Probabilistic Guarded KAT Modulo Bisimilarity: Completeness and Complexity

Authors: Wojciech Rozowski, Tobias Kappé, Dexter Kozen, **Todd Schmid**, and Alexandra Silva

50TH INTERNATIONAL COLLOQUIUM ON AUTOMATA, LANGUAGES, AND PROGRAMMING (ICALP)

2022

Processes Parametrised by an Algebraic Theory

Authors: **Todd Schmid**, Wojciech Rozowski, Jurriaan Rot, and Alexandra Silva

49TH INTERNATIONAL COLLOQUIUM ON AUTOMATA, LANGUAGES, AND PROGRAMMING (ICALP)

2021

How to Write a Coequation ((Co)algebraic pearls)

Authors: Fredrik Dahlqvist and **Todd Schmid**

9TH CONFERENCE ON ALGEBRA AND COALGEBRA IN COMPUTER SCIENCE (CALCO)

	<p><i>On Star Expressions and Coalgebraic Completeness Theorems</i> Authors: Todd Schmid, Jurriaan Rot, and Alexandra Silva 37TH CONFERENCE ON MATHEMATICAL FOUNDATIONS OF PROGRAMMING SEMANTICS (MFPS)</p>
	<p><i>Guarded Kleene Algebra with Tests: Coequations, Coinduction, and Completeness</i> Authors: Todd Schmid, Tobias Kappé, Dexter Kozen, and Alexandra Silva 48TH INTERNATIONAL COLLOQUIUM ON AUTOMATA, LANGUAGES, AND PROGRAMMING (ICALP)</p>
2019	<p><i>Concrete barriers to quantifier elimination in finite dimensional C^*-algebras</i> Authors: Christopher Eagle and Todd Schmid MATHEMATICAL LOGIC QUARTERLY, vol. 65</p>

PREPRINTS

2022	<p>A (Co)algebraic Framework for Ordered Processes URL: https://arxiv.org/abs/2209.00634</p>
2022	<p>Presenting with Quantitative Inequational Theories Presented at BLAST 2022, at CHAPMAN UNIVERSITY, Orange, CA, USA URL: https://arxiv.org/abs/2207.11629</p>

TALKS

10/2023	<p><i>How to Write a Coequation</i> Venue: Boston Computation Club, Boston, MA, USA</p>
09/2023	<p><i>Generating Melodies and Fractals with Transition Systems</i> Venue: Saint Mary's College of California Math Colloquium Hosted by: SAINT MARY'S COLLEGE OF CALIFORNIA, Moraga, CA, USA</p>
08/2022	<p><i>Presenting Quantitative Inequational Theories</i> Venue: BLAST 2022 Hosted by: CHAPMAN UNIVERSITY, Orange, CA, USA</p>
07/2022	<p><i>Presenting Quantitative Inequational Theories</i> Venue: ICALP 2022 Hosted by: UNIVERSITÉ PARIS CITÉ, Paris, France</p>
08/2021	<p><i>On Star Expressions and Completeness Theorems</i> Venue: MFPS 2021 Hosted by: UNIVERCITY OF SALZBURG, Salzburg, Germany</p>

07/2021	<i>Guarded Kleene Algebra with Tests: Coequations, Coinduction, and Completeness</i> Venue: ICALP 2021 Hosted by: UNIVERSITY OF GLASGOW, Glasgow, Scotland, UK
03/2020	<i>Guarded Kleene Algebra with Tests: Coequations, Coinduction, and Completeness</i> Venue: Programming Principles, Logic, and Verification Group Seminar Hosted by: UNIVERSITY COLLEGE LONDON, London, UK
09/2019	<i>Sheaves, or How to Glue Stuff Together</i> Venue: SUMS Student Seminar Hosted by: UNIVERSITY OF VICTORIA, Victoria, BC, Canada
08/2019	<i>Topos Theory and the Independence of the Continuum Hypothesis</i> Venue: Toronto Set Theory Seminar Hosted by: FIELDS INSTITUTE, Toronto, ON, Canada
11/2018	<i>Why Heyting Algebras are Interesting</i> Venue: University of Toronto Graduate Student Seminar Hosted by: UNIVERSITY OF TORONTO, Toronto, ON, Canada
07/2017	<i>A Tale of Two Models</i> Venue: Canadian Undergraduate Mathematics Conference Hosted by: UQAM, CONCORDIA, and UNIVERSITÉ DE MONTRÉAL, Montréal, QC, Canada
01/2017	<i>A Fixed-Point Theorem from Modal Logic</i> Venue: Séminaires universitaires en mathématiques à Montréal Hosted by: UQAM, CONCORDIA, and UNIVERSITÉ DE MONTRÉAL, Montréal, QC, Canada

SERVICE AND OUTREACH

09/2020 to 08/2021	London Maths Outreach Director
05/2017 to 04/2018	Undergraduate Math and Stats Course Union (SUMS) Co-president
07/2014 to 09/2014	Canadian Undergraduate Mathematics Conference Organizer
06/2010 to 08/2017	Byte Camp Instructor