

**Todd Schmid** (he/him/they/them)  
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## EMPLOYMENT

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07/2024  
to present

**Assistant Professor** at BUCKNELL UNIVERSITY  
Department of Computer Science  
Lewisburg, PA, USA

07/2023  
to 06/2024

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

## SHORT-TERM POSITIONS

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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

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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

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09/2024  
12/2024

**Instructor** at BUCKNELL UNIVERSITY, Lewisburg, PA, USA  
- CSCI 204: Algorithms & Data Structures

09/2024  
12/2024

**Lab Instructor** at BUCKNELL UNIVERSITY, Lewisburg, PA, USA  
- CSCI 204: Algorithms & Data Structures  
- CSCI 203: Introduction to Computer Science

02/2024 to 05/2024	<b>Instructor</b> 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	<b>Instructor</b> at SAINT MARY'S COLLEGE OF CALIFORNIA, Moraga, CA, USA - CS374: Analysis of Algorithms - CS121: Programming I
08/2022 to 11/2022	<b>Co-Instructor</b> at XIDIAN UNIVERSITY, Xi'an, China Theory of Computation: Automata and Coinduction
02/2022 to 10/2022	<b>Co-Instructor</b> at GEC ACADEMY, Beijing, China Theory of Computation: Automata and Coinduction
01/2020 to 12/2021	<b>Teaching Assistant</b> at UNIVERSITY COLLEGE LONDON, London, UK - COMP0147: Discrete Mathematics for Computer Science - COMP0017: Computability and Complexity Theory
09/2018 to 05/2019	<b>Teaching Assistant</b> at UNIVERSITY OF TORONTO, Toronto, ON, Canada MAT137: Calculus!
09/2015 to 05/2018	<b>Teaching Assistant</b> at UNIVERSITY OF VICTORIA, Victoria, BC, Canada - MATH122: Logic and Foundations - MATH100: Calculus I - MATH120: Precalculus - MATH200: Calculus III
09/2016 to 05/2018	<b>Assistance Centre Tutor</b> at UNIVERSITY OF VICTORIA, Victoria, BC, Canada

## PUBLICATIONS

2023	<i>Fractals from Regular Behaviours</i> Authors: <b>Todd Schmid</b> , Victoria Noquez, and Lawrence Moss Venue: 10th Conference on Algebra and Coalgebra in Computer Science (CALCO'23) <b>Best Paper Award</b>
	<i>A Complete Inference System for Skip-free Guarded Kleene Algebra with Tests</i> Authors: Tobias Kappé, <b>Todd Schmid</b> , and Alexandra Silva Venue: 32nd European Symposium on Programming (ESOP'23)
	<i>Probabilistic Guarded KAT Modulo Bisimilarity: Completeness and Complexity</i> Authors: Wojciech Rozowski, Tobias Kappé, Dexter Kozen, <b>Todd Schmid</b> , and Alexandra Silva Venue: 50th International Colloquium on Automata, Languages, and Programming (ICALP'23)

- 2022 *Processes Parametrised by an Algebraic Theory*  
Authors: **Todd Schmid**, Wojciech Rozowski, Jurriaan Rot, and Alexandra Silva  
Venue: 49th International Colloquium on Automata, Languages, and Programming (ICALP'22)
- 2021 *How to Write a Coequation ((Co)algebraic pearls)*  
Authors: Fredrik Dahlqvist and **Todd Schmid**  
Venue: 9th Conference on Algebra and Coalgebra in Computer Science (CALCO'22)
- On Star Expressions and Coalgebraic Completeness Theorems*  
Authors: **Todd Schmid**, Jurriaan Rot, and Alexandra Silva  
Venue: 37th Conference on Mathematical Foundations of Programming Semantics (MFPS'22)
- Guarded Kleene Algebra with Tests: Coequations, Coinduction, and Completeness*  
Authors: **Todd Schmid**, Tobias Kappé, Dexter Kozen, and Alexandra Silva  
Venue: 48th International Colloquium on Automata, Languages, and Programming (ICALP'22)
- 2019 *Concrete barriers to quantifier elimination in finite dimensional  $C^*$ -algebras*  
Authors: Christopher Eagle and **Todd Schmid**  
Venue: Mathematical Logic Quarterly, vol. 65

## PREPRINTS

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- 2022 A (Co)algebraic Framework for Ordered Processes  
URL: <https://arxiv.org/abs/2209.00634>
- 2022 Presenting with Quantitative Inequational Theories  
Presented at **BLAST 20222**, at CHAPMAN UNIVERSITY, Orange, CA, USA  
URL: <https://arxiv.org/abs/2207.11629>

## TALKS

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- 10/2023 *How to Write a Coequation*  
Venue: Boston Computation Club, Boston, MA, USA
- 09/2023 *Generating Melodies and Fractals with Transition Systems*  
Venue: Saint Mary's College of California Math Colloquium  
Hosted by: SAINT MARY'S COLLEGE OF CALIFORNIA, Moraga, CA, USA
- 11/2022 *A Recipe for Process Calculi*  
Venue: Indiana University Bloomington Logic Seminar  
Hosted by: INDIANA UNIVERSITY BLOOMINGTON, Bloomington, IN, USA

08/2022	<p><i>Presenting Quantitative Inequational Theories</i>  Venue: BLAST 2022  Hosted by: CHAPMAN UNIVERSITY, Orange, CA, USA</p>
07/2022	<p><i>Processes Parametrized by an Algebraic Theory</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	<p><i>Guarded Kleene Algebra with Tests: Coequations, Coinduction, and Completeness</i>  Venue: ICALP 2021  Hosted by: UNIVERSITY OF GLASGOW, Glasgow, Scotland, UK</p>
03/2020	<p><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</p>
09/2019	<p><i>Sheaves, or How to Glue Stuff Together</i>  Venue: SUMS Student Seminar  Hosted by: UNIVERSITY OF VICTORIA, Victoria, BC, Canada</p>
08/2019	<p><i>Topos Theory and the Independence of the Continuum Hypothesis</i>  Venue: Toronto Set Theory Seminar  Hosted by: FIELDS INSTITUTE, Toronto, ON, Canada</p>
11/2018	<p><i>Why Heyting Algebras are Interesting</i>  Venue: University of Toronto Graduate Student Seminar  Hosted by: UNIVERSITY OF TORONTO, Toronto, ON, Canada</p>
07/2017	<p><i>A Tale of Two Models</i>  Venue: Canadian Undergraduate Mathematics Conference  Hosted by: UQAM, CONCORDIA, and UNIVERSITÉ DE MONTRÉAL, Montréal, QC, Canada</p>
01/2017	<p><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</p>

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## AWARDS AND RESIDENCIES

07/2024	<p><i>2024 Summer Research in Mathematics program</i>  Simons Laufer Mathematical Sciences Institute</p>
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## SERVICE AND OUTREACH

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2024	<b>External Reviewer</b> - International Colloquium on Automata, Languages and Programming
2023	<b>External Reviewer</b> - Workshop on Logic, Language, Information and Computation - International Conference of Foundations of Software Science and Computation Structures
2022	<b>External Reviewer</b> - Annual ACM/IEEE Symposium on Logic in Computer Science - Workshop on Logic, Language, Information and Computation
09/2020 to 08/2021	<b>Director</b> London Maths Outreach
05/2017 to 04/2018	<b>Co-president</b> Undergraduate Math and Stats Course Union (SUMS)
07/2014 to 09/2014	<b>Organizer</b> Canadian Undergraduate Mathematics Conference