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Education

- ▷ PhD Mathematics, University of Western Ontario (UWO) Sept 2014 - Aug 2019
Supervisor: [Graham Denham](#)
- ▷ MSc Mathematics, University of Western Ontario (UWO) 2013-2014
- ▷ BS Mathematics, Lahore University of Management Sciences (LUMS) 2008-2012

Employment history

- ▷ *Assistant Professor*, University of Toronto, Mississauga 09/2022-Current.
- ▷ *BOF Postdoctoral Fellow*, Ghent University 02/2022-08/2022.
- ▷ *Postdoctoral Fellow*, Abdus Salam School of Mathematical Sciences 03/2021-09/2021.
- ▷ *Assistant Professor*, Department of Integrated Sciences and Mathematics,
Habib University 01/2021-12/2021.
- ▷ *Lecturer*, Department of Computer Science, University of Western Ontario 09/2020-12/2020.
- ▷ *Assistant Professor*, Department of Mathematics, University of Western Ontario 09/2019-12/2019.
- ▷ *Course Instructor*, Department of Mathematics, University of Western Ontario 2017.
- ▷ *Teaching Assistant*, Department of Mathematics, University of Western Ontario 2013-2018.

Publications

- ▷ *Matroid Chern-Schwartz-MacPherson cycles and Tutte activities* with Spencer Backman, Proceeding of the American Mathematical Society ([to appear](#)).
- ▷ *Eulerian polynomials for subarrangements of Weyl arrangements* with T.N.Tran and M.Yoshinaga, 2020 (Advances in Applied Mathematics [ScienceDirect](#)).

Submission/Preprints

- ▷ *Another approach to volume of matroid base polytopes*, 2020, submitted [arXiv link](#).
- ▷ *Character polynomials for two rows and hook partitions*, 2018, preprint [arXiv link](#).

Academic Honors and Awards

- ▷ [Mitacs Globalink Research Award](#) for Japan, [Mitacs Canada](#), May-Aug, 2019.
- ▷ Society of Graduate Students Travel Award, Western University, Winter 2015, Winter 2019.
- ▷ Best paper award for *Stirling numbers of first and second kind and their relationship with Bernoulli numbers*, Undergraduate Conference in Mathematics, [Abdus-Salam School of Mathematical Sciences](#), November 19, 2009.
- ▷ 3rd in intra-LUMS Coding Guru 2010 and placed in top 500 teams in IEEE Xtreme Programming competition 4.0, 2010.

Programming Skills

- ▷ Python ▷ Sage ▷ Matlab ▷ LaTeX ▷ Polymake ▷ Macaulay2

Services

- ▷ Organizer for the Fields Institute Matroids Seminar 2022-23. The Fields Institute, Toronto, Canada.
- ▷ Organizer of the Math Graduate Seminar, University of Western Ontario, 2015-2016.

Research Visits

- ▷ Universidad Andres Bello, Santiago, Chile hosted by [Professor José Prieto](#), January 2020.
- ▷ Hokkaido University, Sapporo, Hokkaido, Japan hosted by [Professor Masahiko Yoshinaga](#), May-July 2019.

Invited Talks

- ▷ Matroid CSM classes and Tutte activities, [International Workshop P-positivity in Matroid Theory and Related Topics](#), RIMS, Kyoto, Online Conference, October 4-8, 2021.
- ▷ Eulerian polynomials for subarrangements, [Arrangements at Home](#), Online Conference, May 5-6, 2020.
- ▷ Cyclic flat approach to matroid base polytope volume, [Discrete Math Seminar](#), UMass, March 28, 2019.
- ▷ Cyclic flat approach to matroid base polytopes, [Graphs and Matroids seminar](#), February 27, 2019.

Contributed talks and seminars

- ▷ Tutte coefficients and tropical intersection numbers, [Combinatorial Algebraic Geometry](#), ICERM, Virtual, March 12, 2021.
- ▷ Tutte coefficients as tropical intersection numbers, [Combinatorial Algebra meets Algebraic Combinatorics](#), Dalhousie University, Halifax, Canada, January 24-26, 2020.
- ▷ Cyclic flat approach to matroid polytopes volume, [Recent advances in matroids and Tutte polynomials](#), Hokkaido Summer Institute, Hokkaido University, Japan, July 22-26, 2019.
- ▷ Alternative approach to volume of matroid polytopes, [Applied Algebra Seminar](#), York University, April 1, 2019.
- ▷ Tiling character polynomials, [CombinaTexas 2019](#), Texas A&M University, March 23-24, 2019.
- ▷ [Combinatorial Characters of Symmetric Group](#), [Mathematical Congress of Americas \(MCA\)](#), Montreal, July 24-28, 2017 (poster).
- ▷ Combinatorial Characters, [Graduate Student Combinatorics Conference \(GSCC\)](#), University of Kansas, April 7-9, 2017.
- ▷ Homological Sylow Theorem, Graduate Seminar, Department of Mathematics, University of Western Ontario, March 26, 2015.

Summer Schools and Workshops participated in

- ▷ [Ehrhart polynomials: inequalities and extremal constructions](#), AIM, San Jose, California, May 9-13, 2022.
- ▷ [Combinatorial Algebraic Geometry](#), ICERM, Virtual, Feb 01 - May 07, 2021. (*contributed talk*)
- ▷ [Warwick M2 Virtual Workshop](#), Zoom, June 01-05, 2020 (*contributed to Tropical in M2*).
- ▷ [ATOM Summer School lecture series](#), Zoom, June 08-July 27, 2020 (*contributed to learning seminar*).
- ▷ [Configuration spaces of graphs](#), AIMS, San Jose, California, USA, February 03-07, 2020.
- ▷ [Introductory Workshop: Geometric and Topological Combinatorics](#), MSRI, Berkeley, USA, September 05-08, 2017.
- ▷ [Positivity Questions In Geometric Combinatorics](#), MSRI, Berkeley, USA, July 10-21, 2017.

- ▷ [Perspectives on Arrangements and Configuration spaces](#), Centro Di Giorgi, Pisa, Italy, September 9-10, 2016
- ▷ [Pisa-Hokkaido Summer School in Mathematics and Its Applications](#), Centro De Giorgi, Pisa, Italy, August 30- September 8, 2016.
- ▷ [Introductory Workshop for the Thematic Program on Combinatorial Algebraic Geometry](#), Fields Institute, Toronto, August 15-19, 2016.
- ▷ [Graduate Summer School for the Thematic Program on Combinatorial Algebraic Geometry](#), Fields Institute, Toronto, July 18-22, 2016.
- ▷ [Sage Days 78](#), University of British Columbia, Vancouver, British Columbia, June 29- July 1, 2016.
- ▷ [5th Encuentro Colombiano de Combinatoria CIMPA Research School: Algebraic, Enumerative and Geometric Combinatorics \(ECCO'16\)](#), Universidad de Antioquia and Universidad Nacional sede Medellín, Medellín, Colombia, June 13-24, 2016.
- ▷ [Positivity in Combinatorial Algebraic Geometry](#), University of Oregon, Eugene, Oregon, August 10-14, 2015.

Conferences attended

- ▷ [28th International Conference on Formal Power Series and Algebraic Combinatorics \(FPSAC'16\)](#), Vancouver, British Columbia, July 4-8, 2016.
- ▷ [Computationally Assisted Mathematical Discovery and Experimental Mathematics \(ACMES 2\)](#), Western University, London, Ontario, May 12-15, 2016.
- ▷ [Combinatorial Algebra meets Algebraic Combinatorics \(CAAC'16\)](#), Western University, London, Ontario, January 22-24, 2016.
- ▷ [Combinatorial Constructions in Topology](#), University of Regina, Regina, Saskatchewan, August 17-21, 2015.
- ▷ [Combinatorial Algebra meets Algebraic Combinatorics \(CAAC'15\)](#), Queen's University, Kingston, Ontario, January 23-25, 2015.

Teaching Workshops and Certificates

- ▷ [Western Certificate in University Teaching and Learning](#), Centre for Teaching and Learning, University of Western Ontario, 2020.
- ▷ [Course on Teaching at the University Level](#), Centre for Teaching and Learning, University of Western Ontario, 2017.
- ▷ [Western Certificate in Academic and Professional Communication](#), Centre for Teaching and Learning, University of Western Ontario, 2014.
- ▷ [The Teaching Assistant Training Program \(TATP\)](#), Centre for Teaching and Learning, University of Western Ontario, 2014.

Courses taught as instructor

- ▷ Theory of Computation ▷ Commutative Algebra ▷ [Calculus I](#) ▷ Applied Logic
- ▷ Linear Algebra ▷ Engineering Mathematics

Teaching Assistantship

- ▷ [Game Theory](#) ▷ [Fundamental Concepts in Mathematics](#) ▷ [Linear Algebra](#)
- ▷ Methods of Matrix Algebra ▷ [Discrete Mathematics](#) ▷ Precalculus
- ▷ Abstract Algebra I ▷ Abstract Algebra II ▷ Calculus I
- ▷ Calculus II ▷ Mathematical Methods

Other Teaching Experiences

- ▷ Organized Putnam competition training sessions, along with [Béatrice I.Chetard](#) and Martin Pinsonnault at University of Western Ontario, 2016-2017.
- ▷ Instructor of Mathematics for Undergraduate Admission test preparation, [Smart Prep](#), 2011-12
- ▷ Organized Problem Solving sessions in Maths Club at Lahore University of Management Sciences (LUMS).

Project Management Workshops and Certificates

- ▷ [Foundations of Project Management II, Mitacs Canada](#), November 7-8, 2018.
- ▷ [Foundations of Project Management I, Mitacs Canada](#), June 9-10, 2015.