

Education

- 2021 - present **PhD, Pure Mathematics (Quantum Information)**, *University of Waterloo*
2019 - 2021 **PhD, Mathematics**, *Texas A&M University*
(transferred to University of Waterloo in September 2021)
2014 - 2018 **Bachelor of Arts, Mathematics**, *University of California, Berkeley*

Research Interests

Operator algebras, quantum graphs/metrics, quantum theory.

Papers

The Bullet Problem with Discrete Speeds. B. Dygert, M. Junge, C. Kinzel, A. Raymond, E. Slivken, J. Zhu. *Electronic Communications in Probability*, Volume 24, Issue 27 (2019), pp. 1 - 11. (Result of a REU during 2016.).

Talks

- Oct 21, 2025 **Limits of Quantum Graphs** San Juan, USA
Great Plains Operator Theory Symposium (GPOTS)
- Jan 11, 2025 **Inductive Limits of Quantum Graphs** Seattle, USA
Joint Mathematics Meeting (JMM)
- May 25, 2023 **Approximate Representations of Quantum Groups** London, Canada
Canadian Operator Symposium (COSy)
- Jan 25, 2023 **Approximate Representations** ASUERAU
 C^ Seminar*
- Dec 9, 2022 **Approximate Representations** KU Leuven
Operator Algebras Seminar
- Apr 20, 2022 **Quantum Self-Testing** ASUERAU
 C^ Seminar*
- Jun 25, 2021 **Mermin-Peres Magic Square Game** Texas A&M University
Texas A&M REU: Graduate Student Talks
- Oct 10, 2020 **What Can We See Through Our Hahn-Banach-ulars?** Texas A&M University
A Gathering in Graduate Expository Mathematics (GIG'EM) Conference

Awards

- Winter 2026 **Graduate Research Studentship** University of Waterloo
CAD\$3500; non-recurring
- Spring 2025 **Pure Math Doctoral Thesis Completion Award** University of Waterloo

	CAD\$4000; non-recurring	
Nov 2022	Elsevier Mathematical Sciences Scholarship US\$4000; Applied as an OAMN board member, awarded to the OAMN in 2023.	
Fall 2022	David Johnston International Experience Awards CAD\$2500; non-recurring	University of Waterloo
Winter 2022	Cotton Family Women in Mathematics Graduate Scholarship CAD\$1500; non-recurring	University of Waterloo
2021	Provost Doctoral Entrance Award for Women CAD\$2500; non-recurring	University of Waterloo
2019 - 2021	R.E. Basye Graduate Merit Fellowship USD\$32,000 stipend the first year with no duties, additional \$7800 per year for five years	Texas A&M University

Teaching

Winter 2026	Grader , Math 138: Calculus 1 for the Sciences	University of Waterloo
Fall 2025	Grader , Math 127: Calculus 1 for the Sciences Grader , Math 235: Linear Algebra 2 for Honours Mathematics	University of Waterloo
Winter 2025	Grader , PMath 451/651: Measure Theory Grader , Math 138: Calculus 1 for Honours Mathematics	University of Waterloo
Fall 2024	Instructor , Math 137: Calculus 1 for Honours Mathematics <ul style="list-style-type: none"> ○ Lectured 3x/week. ○ Created questions for assessments (quiz, midterm, final). 	University of Waterloo
Spring 2024	Instructor , Math 135 (online): Algebra for Honours Mathematics <ul style="list-style-type: none"> ○ Created weekly assignments, midterm, and final exam. ○ Answered questions via Piazza. 	University of Waterloo
Winter 2024	Grader , PMath 343: Mathematics of Quantum Information Grader , Math 138: Calculus 1 for Honours Mathematics	University of Waterloo
Fall 2023	Grader , PMath 453/653: Functional Analysis Grader , Math 685: Math and Peace	University of Waterloo
Spring 2023	Grader , PMath 450/650: Lebesgue Integration and Fourier Analysis	University of Waterloo
Winter 2023	Grader , PMath 351: Intro to Real Analysis Grader , Math 138: Calculus 1 for Honours Mathematics	University of Waterloo
Fall 2022	Grader , Math 674: Fractals Grader , Math 647: Foundations of Calculus 1 for Teachers	University of Waterloo

Winter 2022	Grader , PMath 451/651: Measure Theory	University of Waterloo
Fall 2021	Grader , Math 116: Calculus 1 for Engineering Grader , Math 117: Calculus 1 for Engineering	University of Waterloo
Spring 2021	Recitation Leader , Math 152: Engineering Mathematics II	Texas A&M University
	<ul style="list-style-type: none"> ○ Rating: 4.23/5. Rating based on fostering an effective learning environment, effectiveness of teaching methods, helpfulness of online materials. ○ Proctored and graded tests. ○ Created review material based on lecture notes. ○ Answered questions in class, by email, and via Piazza. 	
Fall 2020	Recitation Leader , Math 147: Calculus I for Biological Sciences	Texas A&M University
	<ul style="list-style-type: none"> ○ Rating: 3.96/5. Rating based on fostering an effective learning environment, effectiveness of teaching methods, helpfulness of online materials. ○ Proctored and graded tests. ○ Created review material based on lecture notes. ○ Answered questions in class, by email. 	

Service

Conferences/Workshops

Aug 27, 2021	Mentorship Training: Diversity, Equity, and Inclusion	OAMN
	<ul style="list-style-type: none"> ○ Workshop led by Dr. Chandra Erdman and Erin Brown highlighting how mentors can use their advantages to mitigate disadvantages mentees might face. 	
Fall 2020	Advocating for Students of Color Webinar	American Mathematical Society (AMS)
	<ul style="list-style-type: none"> ○ A four-part webinar for faculty and administrators who are actively engaged in promoting equity, diversity, and inclusion within the mathematical sciences focused on implementing pragmatic and meaningful changes. 	
Nov 2020	AMS paraDIGMS Fall Conference	Institute for Mathematical and Statistical Innovation (IMSI)
	<ul style="list-style-type: none"> ○ A conference highlighting the work of organizations that have built a diverse and equitable profession through graduate education 	

Leadership

May 31, 2025	Ontario Graduate Mathematics Conference (OGMC)	University of Waterloo
	<ul style="list-style-type: none"> ○ EDI Discussion Leader 	
Nov 23, 2023	Twinned Conference on C*-Algebras and Tensor Categories	Fields Institute
	<ul style="list-style-type: none"> ○ OAMN Lunch/Discussion Leader 	
Jan 2021 - Aug 2024	<u>Operator Algebras Mentor Network (OAMN)</u>	
	<ul style="list-style-type: none"> ○ Spring 2022 – Aug 2024: Member of the Board of Directors of OAMN. ○ Aug 2021 - Jan 2022; Sep 2023 - Aug 2024: (Co-)Treasurer. 	

- Winter 2022 **Institute of Quantum Computing (IQC) Community Committee** University of Waterloo
 ○ Member
- 2020-2021 **TAMU Math Graduate Student Diversity Committee** Texas A&M University
 ○ Spring 2021: Vice President
 ○ Fall 2020: Co-founder
- 2020-2021 **American Mathematical Society Graduate Student Chapter** Texas A&M University
 ○ Treasurer

Mentorship

- Spring 2022 **Directed Reading Program (DRP) Mentor and Co-Founder** University of Waterloo
 ○ Co-organized the first Directed Reading Program at University of Waterloo
 ○ Mentored two undergraduates in introductory game theory.
- Fall 2020 **Directed Reading Program (DRP) Mentor** Texas A&M University
 ○ Guided an undergraduate through applications of linear algebra to mathematical biology.

Membership

- Spring 2020 - present **Operator Algebras Mentor Network (OAMN)**
 ○ Spring 2020 - present: Mentee

Outreach

- Spring 2021 **Math/Stats Fair** Texas A&M University
 ○ Volunteer.

Workshops/Programs

- Winter 2025 **Fundamentals of University Teaching Program** University of Waterloo
 ○ Program offered by Centre of Teaching Excellence aimed towards developing grad students as teaching assistants and instructors.
 ○ Consists of 6 modules and 3 microteaching sessions (with feedback)
 ○ Skills developed: classroom delivery, lesson plan development, giving/receiving feedback
- Fall 2022 **Focus Semester on Quantum Information** Universität des Saarlandes
 ○ A series of lectures delivered by 16 experts in quantum information from the perspectives of mathematics, physics, and computer science.
- July 11-15, 2022 **Knottawa Summer School** Kansas State University
 ○ A series of mini-courses: Planar Algebras and Subfactors by Emily Peters, K-Theory by José Carrion, and Quantum Information Theory by Roy Araiza.

Jun 21 - Jul 30, **Math-to-Industry Boot Camp**

IMA, University of
Minnesota

- 2021
- Intense six-week program providing PhD students in mathematics necessary skills to work outside of academia.
 - Took short courses on Python, R, data analysis, machine learning, stochastic modeling, optimization.
 - Participated in team and leadership building exercises.
 - Worked in a team to predict energy generated by hydroelectric dams in Brazil using Github to share code and data.

Jun 29 - Jul 19, **Groundwork for Operator Algebras Lecture Series (GOALS)**

University of Michigan

- 2020
- Workshop consisting of lectures, problem sessions, and talks introducing graduate students to operator algebras.