# Jennifer Zhu

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## Education

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| 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 information 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

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| Dec 9, 2022 | **Approximate Representations** | KU Leuven |
| | *Operator Algebras 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

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| Fall 2022 | **David Johnston International Experience Awards** | University of Waterloo |
| | $2500; non-recurring | |
| Winter 2022 | **Cotton Family Women in Mathematics Graduate Scholarship** | University of Waterloo |
| | $1500; non-recurring | |
| 2021 | **Provost Doctoral Entrance Award for Women** | University of Waterloo |
| | $2500; non-recurring | |
| 2019 - 2021 | **R.E. Basye Graduate Merit Fellowship** | Texas A&M University |
| | $32,000 stipend the first year with no duties, additional $7800 per year for five years | |

## Teaching

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| Fall 2022 | **Grader**, Math 674: Fractals | University of Waterloo |
| | **Grader**, Math 647: Foundations of Calculus 1 for Teachers | |

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| Winter 2022 | **Teaching Assistant** for PMath 451/651: Measure Theory | University of Waterloo |

- Graded assignments.
- Answered questions via Piazza.

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| Fall 2021 | **Grader**, Math 116: Calculus 1 for Engineering<br>**Grader**, Math 117: Calculus 1 for Engineering | University of Waterloo |

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| Spring 2021 | **Recitations**, Math 152: Engineering Mathematics II | Texas A&M University |

- 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.

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| Fall 2020 | **Recitations**, Math 147: Calculus I for Biological Sciences | Texas A&M University |

- 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

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| Aug 27, 2021 | **Mentorship Training: Diversity, Equity, and Inclusion** | OAMN |

- Workshop led by Dr. Chandra Erdman and Erin Brown highlighting how mentors can use their advantages to mitigate disadvantages mentees might face.

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| Fall 2020 | **Advocating for Students of Color Webinar** | American Mathematical Society (AMS) |

- 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.

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| Nov 2020 | **AMS paraDIGMS Fall Conference** | Institute for Mathematical and Statistical Innovation (IMSI) |

- A conference highlighting the work of organizations that have built a diverse and equitable profession through graduate education

### Leadership

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| Winter 2021 - present | **Operator Algebras Mentor Network (OAMN)** | |

- Spring 2022 − present: Member of the Board of Directors of OAMN.
- Winter 2021: Co-Treasurer.

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| 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 Attended

| 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 Thoery by Roy Araiza.

| Jun 21 - Jul 30, 2021 | **Math-to-Industry Boot Camp** | IMA, University of Minnesota |

- 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, 2020 | **Groundwork for Operator Algebras Lecture Series (GOALS)** | University of Michigan |

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