

XINCHENG ZHANG

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EDUCATION

University of Toronto Ph.D in Mathematics Supervisor: Jeremy Quastel	2019 - 2025 (expected)
University of Toronto, Scarborough BSc in Mathematics and Statistics	2014 - 2019

RESEARCH INTERESTS

Probability; Partial Differential Equations; Integrable systems. In particular, those related to the KPZ universality class, random growth models and random matrices.

PUBLICATION

1. $t^{1/3}$ fluctuation around the shock of TASEP with random initial condition, 2024, arXiv:2409.16989.
2. TASEP in half-space, 2024, arXiv:2409.09974.
3. The logarithmic anti-derivative of the Baik-Rains distribution satisfies the KP equation, 2022, *Electron. Commun. Probab.*

TALKS, SEMINARS AND SUMMER SCHOOLS

1. Toronto Probability Seminar, 2024.
Title: TASEP in half-space.
2. Toronto Probability Seminar, 2023.
Title: The totally asymmetric exclusion process and the fluctuations around its shock.
3. 20th Northeast Probability Seminar, 2022.
Title: The Baik-Rains distribution and the KP equation.
4. Virginia Integrable Probability Summer School, 2024. Role: TA.
5. Summer School on Probability, 2022, PIMS-CRM, Vancouver.

TEACHING

Course Instructor	
MATA33: Calculus I for Management	2020
MAT137: Calculus I with proofs	2023, 2024
Teaching Assistant	2017 - 2022
TA for various mathematics courses, including calculus, linear algebra, probability, topology, and graduate probability.	