XINCHENG ZHANG

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EDUCATION

University of Toronto
Ph.D in Mathematics
Supervisor: Jeremy Quastel
$\hfill$ 2019 - 2025 (expected)

University of Toronto, Scarborough
BSc in Mathematics and Statistics
$\hfill$ 2014 - 2019

RESEARCH INTERESTS

Probability; Partial Differential Equations; Integrable systems. In particular, those related to the models in 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. Kansas Probability Seminar, Oct, 2024.
   Title: TASEP in half-space.

2. Utah Probability Seminar, Oct, 2024.
   Title: TASEP in half-space.

3. Toronto Probability Seminar, Sep, 2024.
   Title: TASEP in half-space.

4. Toronto Probability Seminar, May, 2023.
   Title: The totally asymmetric exclusion process and the fluctuations around its shock.

5. 20$^{\text{th}}$ Northeast Probability Seminar, Nov, 2021.
   Title: The Baik-Rains distribution and the KP equation.

6. Virginia Integrable Probability Summer School, 2024. Role: TA.

7. Summer School on Probability, 2022, PIMS-CRM, Vancouver.

TEACHING

Course Instructor
MATA33: Calculus I for Management $\hfill$ 2020
MAT137: Calculus I with proofs $\hfill$ 2023, 2024

Teaching Assistant $\hfill$ 2017 - 2022
TA for various mathematics courses, including calculus, linear algebra, probability, topology, and graduate probability.