

XINCHENG ZHANG

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EMPLOYMENT

California Institute of Technology 2025 - 2028
Olga Taussky and John Todd Postdoctoral Scholar Fellowship Trainee in Mathematics
Supervisor: Lingfu Zhang.

EDUCATION

University of Toronto 2019 - 2025
Ph.D in Mathematics
Supervisor: Jeremy Quastel, Professor.

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

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. 20th 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

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.