

Yier Lin

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Education

Ph.D. in mathematics, Columbia University

Sep 2016-Apr 2021

B.S. in mathematics, Tsinghua University

Sep 2012 -Jun 2016

Employments

William H. Kruskal Instructor University of Chicago, Department of Statistics

Jan 2022 -

Postdoctoral Researcher Mathematical Sciences Research Institute

Aug 2021-Dec 2021

Research Interest

Probability theory, Stochastic analysis/PDE, Random matrix/operator

Publications/To appear

1. Hydrodynamics of the t-PNG model via a colored t-PNG model (with Hindy Drillick), To appear in *Annales de l'Institut Henri Poincaré, Probabilités et Statistiques* (2023+), *arXiv:2204.11158*
2. KPZ equation with a small noise, deep upper tail and limit shape (with Pierre Yves Gaudreau Lamarre and Li-Cheng Tsai), *Probability Theory and Related Fields* (2023), Vol 185, 885–920
3. Lyapunov exponents of the SHE for general initial data (with Promit Ghosal), *Annales de l'Institut Henri Poincaré, Probabilités et Statistiques* (2023), Vol 59, no. 1, 476–502
4. Lyapunov exponents of the half-line SHE, *Journal of Statistical Physics* (2021) Vol 183, Article number: 37
5. Short time large deviations of the KPZ equation (with Li-Cheng Tsai), *Communications in Mathematical Physics* (2021), Vol 386, 359–393
6. The stochastic telegraph equation limit of the stochastic higher spin six vertex model. *Electronic Journal of Probability* (2020), Vol 25, no. 148, 1–30
7. KPZ equation limit of stochastic higher spin six vertex model. *Mathematical Physics, Analysis and Geometry* (2020), Vol 23, no. 1, 1–118
8. Markov duality for stochastic six vertex model. *Electronic Communications in Probability* (2019), Vol 24, no. 67, 1–17
9. Second order behavior of the block counting process of beta coalescents (with Bastien Mallein). *Electronic Communications in Probability* (2017), Vol 22, no. 61, 1–8

Preprints

1. Multi-point Lyapunov exponents of the Stochastic Heat Equation, 2023, *arXiv:2305.19966*
2. Spacetime limit shapes of the KPZ equation in the upper tails (with Li-Cheng Tsai), 2023, *arXiv:2304.14380*
3. Strong law of large numbers for the stochastic six vertex model (with Hindy Drillick), 2022, *arXiv:2212.09905*
4. A lower-tail limit in the weak noise theory (with Li-Cheng Tsai), 2022, *arXiv:2210.05629*
5. Long and short time laws of iterated logarithms for the KPZ fixed point (with Sayan Das and Promit Ghosal), 2022, *arXiv:2207.04162*
6. Classification of Stationary distributions for the stochastic vertex models, 2022, *arXiv:2205.10654*

Talks

UCSB CFMAR Seminar	Oct 2023
USC Probability and Statistics Seminar	Oct 2023
Northwestern University Probability Seminar	Oct 2023
Penn/Temple Probability Seminar	Sep 2023
UW-Madison Probability Seminar	Sep 2023
MIT Probability Seminar	Sep 2023
Workshop on Stochastic Analysis, Random Fields, and Applications (Michigan State University)	Aug 2023
Frontiers in Stochastic Analysis (University of Illinois Chicago)	Aug 2023
University of Chicago Probability and Statistical Physics Seminar	Mar 2023
University of Cincinnati Probability Seminar	Feb 2023
University of Illinois Chicago Analysis and Applied Mathematics Seminar	Feb 2023
Michigan State University Probability Seminar	Feb 2023
Columbia University Probability Seminar	Jan 2023
Workshop on Stochastic PDE and Related Topics (University of Maryland)	Nov 2022
KTH Random Matrix Theory seminar	Nov 2022
Oregon State University Analysis Seminar	Oct 2022
AMS Sectional Meeting (Purdue University)	Mar 2022
Utah Stochastics Seminar	Mar 2022
THU-PKU-BNU Probability Webinar	Mar 2022
5th Colloquium on Interacting Particle Systems (Instituto Superior Técnico)	Jan 2022
MSRI weekly seminar	Nov 2021
Minicourse at MSRI on Interacting particle systems and SPDEs	Sep 2021
Conference on Algebraic duality methods in probability (Texas A&M University)	Jun 2021
Probability and Statistics Seminar, University of Kansas	Mar 2021
19th Northeast Probability Seminar	Nov 2020
Utah & Arizona Stochastic Seminar	Nov 2020
Columbia SPDE seminar	Oct 2020
MIT integrable probability seminar	Oct 2020
Purdue probability seminar	Sep 2020
Bernoulli-IMS One World Symposium	Aug 2020
Junior integrable probability seminar	Aug 2020
Columbia University Integrable Probability Seminar	Oct 2019
Virginia Integrable Probability Summer School	May 2019

Teaching Experience

University of Chicago:

Instructor for Statistical Models and Methods	2022, 2023 Spring
Instructor for Topics course on Random Growth Model and the KPZ equation	2022, 2023 Winter

Columbia University:

Instructor for Calculus II	2021 Spring
Instructor for College Algebra-Analytic Geometry	2020 Spring

Miscellaneous

Visiting

École normale supérieure, visiting student

Jan 2016 - Jun 2016

UCLA, visiting student

Jul 2015 - Sep 2015

Academic service

Referee for *Annals of Probability*, *Annales de l'Institut Henri Poincaré*, *Communications in Mathematical Physics*, *Electronic Communication in Probability*, *Electronic Journal of Probability*, *Journal of Functional Analysis*, *Journal of Statistical Physics*, *Probability Theory and Related Fields*, *Transactions of the AMS*.