

Yier Lin

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🌐 <http://yierlin.me/>

Education

Ph.D. in mathematics, Columbia University; Advisor: Ivan Corwin 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. Lyapunov exponents of the SHE for general initial data (with Promit Ghosal), To appear in Annales de l'Institut Henri Poincaré, Probabilités et Statistiques (2022+), arXiv:2007.06505
2. Lyapunov exponents of the half-line SHE, *Journal of Statistical Physics* (2021) 183, Article number: 37
3. Short time large deviations of the KPZ equation (with Li-Cheng Tsai), *Communications in Mathematical Physics* (2021), no. 386, 359–393
4. The stochastic telegraph equation limit of the stochastic higher spin six vertex model. *Electronic Journal of Probability* (2020), Vol 25, no. 148, 1-30
5. KPZ equation limit of stochastic higher spin six vertex model. *Mathematical Physics, Analysis and Geometry* (2020), Vol 23, no. 1, 1-118
6. Markov duality for stochastic six vertex model. *Electronic Communications in Probability* (2019), Vol 24, no. 67, 1-17
7. 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. A lower-tail limit in the weak noise theory (with Li-Cheng Tsai), 2022, arXiv:2210.05629
2. Long and short time laws of iterated logarithms for the KPZ fixed point (with Sayan Das and Promit Ghosal), 2022, arXiv:2207.04162
3. Classification of Stationary distributions for the stochastic vertex models, 2022, arXiv:2205.10654
4. Hydrodynamics of the t-PNG model via a colored t-PNG model (with Hindy Drillick), 2022, arXiv:2204.11158
5. KPZ equation with a small noise, deep upper tail and limit shape (with Pierre Yves Gaudreau Lamarre and Li-Cheng Tsai), 2021, arXiv:2106.13313

Talks

Workshop on Stochastic PDE and Related Topics, Maryland Nov 2022
KTH Random Matrix Theory seminar Nov 2022
Oregon State University Analysis Seminar Oct 2022

AMS Sectional Meeting at Purdue University	Mar 2022
Utah Stochastics Seminar	Mar 2022
THU-PKU-BNU Probability Webinar	Mar 2022
5th Colloquium on Interacting Particle Systems	Jan 2022
MSRI weekly seminar	Nov 2021
Minicourse at MSRI on Interacting particle systems and SPDEs	Sep 2021
MSRI postdoc seminar	Jun 2021
Conference on Algebraic duality methods in probability	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 Spring
Instructor for Topics course on random growth model	2022 Winter

Columbia University:

Instructor for Calculus II	2021 Spring
Instructor for College Algebra-Analytic Geometry	2020 Spring
TA for Intro Modern Analysis I	2018, 2019 Fall
TA for Topics in Stochastic Analysis	2019 Spring
TA for Analysis and Optimization	2017 Fall, 2019 Spring
TA for Analysis Probability I	2018 Fall
TA for Probability Theory	2018 Spring
TA for Stochastic methods in Finance	2017 Fall

Miscellaneous

Awards

Postdoctoral Fellowship; Mathematical Sciences Research Institute	Aug 2021-Dec 2021
Summer Minerva research fellowship; Columbia University	Summer 2018-2020

Visiting

École normale supérieure, visiting student	Jan 2016 - Jun 2016
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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*.

Skills

Language: English (fluent), Mandarin (native)

Coding: Python, C++, Matlab, Mathematica.