CURRICULUM VITAE

Shangjie Yang

Universidade Federal Fluminense
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Positions

- May 2025–Present   Universidade Federal Fluminense
  Assistant professor

- March 2024— April 2025   Universidade de São Paulo
  Postdoc   Host: Leonardo Rolla

- March 2022 — February 2024   Bar-Ilan University
  Postdoc   Host: Gideon Amir and Naomi Feldheim

- November 2021 — February 2022   Universidade Federal de Bahia
  Postdoc (online)   Host: Tertuliano Franco

- July 2021 — October 2021   Bar-Ilan University
  Postdoc (online)   Host: Gideon Amir

Education

- March 2017 — April 2021   Instituto de Matemática Pura e Aplicada
  Ph.D. student   Adviser: Hubert Lacoin

- March 2015 — February 2017   Instituto de Matemática Pura e Aplicada
  Master student   Adviser: Vladas Sidoravicius

- September 2013 — December 2014   Nankai University
  Master student (dropout)   Adviser: Kainan Xiang

- September 2009 — June 2013   Sun Yat-sen University
  Undergraduate student

Research interest

My research focuses on the intersection between probability theory and statistical mechanics: Markov chains and mixing times, random polymer models, interacting particle systems, random walks in random environments, Gaussian random functions, etc.

Publications and preprints

8. **S. Yang,** Cutoff of the simple exclusion process with inhomogeneous conductances
   Arxiv:2409.16337

7. **S. Yang,** The spectral gap and principle eigenfunction of the random conductance model in a line segment   Arxiv:2408.07139

6. **Y. Wang, K. Xiang, S. Yang, and L. Zou** The high-order corrections of discrete harmonic measures and their correction constants
   Journal of Statistical Physics. Volume 191, article number 81, (2024)

5. **N. Feldheim and S. Yang,** Typical height of the (2+1)-D Solid-on-Solid surface with pinning above a wall in the delocalized phase   Arxiv:2301.09197
   Stochastic Processes and their Applications. 165 (2023), Pages 168-182.

4. **G. Amir and S.Yang,** The branching number of intermediate growth trees
   Arxiv:2205.14238   **Groups, Geometry, and Dynamics**. 2024.

3. **H. Lacoin and S.Yang,** Mixing time of the asymmetric simple exclusion process in a random environment   Arxiv:2102.02606
   Annals of Applied Probability. 34(1A): 388-427 (February 2024).

2. **H. Lacoin and S.Yang,** Metastability for expanding bubbles on a sticky substrate
   Arxiv:2007.07832
   Annals of Applied Probability. 32(5): 3408-3449 (October 2022).

1. **S. Yang,** Cutoff for polymer pinning dynamics in the repulsive phase   Arxiv:1909.04635
   Annales de l'Institut Henri Poincaré, Probabilités et Statistiques. 57(3): 1306-1335 (2021).

Teaching

- in São Paulo University
  - Summer course: Análise Combinatória, Probabilidades e Aplicações (01/2025— 02/2025)
- in Universidade Federal da Bahia
  - Minicourse: mixing time for interface models and particle system (11/2021 — 01/2022)
- (Teaching assistants) in Instituto de Matemática Pura e Aplicada
  - Probability 1 (03/2018 — 06/2018)
  - Stochastic process (the second half) (10/2019 — 11/2019)
  - Markov chains and mixing times (01/2020 — 02/2020)

Talks (Online and in presence)

- Universidade Federal Fluminense   *July 2025*
  Talk: Spectral gap and cutoff of the simple exclusion process with IID conductances
- Indian Institute of Technology Madras   *October 2024*
  Talk: Spectral gap and cutoff of the simple exclusion process with IID conductances
- Universidade de São Paulo   *September 2024*
  Talk: Spectral gap and cutoff of the simple exclusion process with IID conductances
- Beijing Normal University   *September 2024*
  Talk: Spectral gap and cutoff of the simple exclusion process with IID conductances
- Universidade Federal da Bahia   *June 2024*
  Talk: Metastability for expanding bubbles on a sticky substrate
- Universidade de São Paulo   *April 2024*
  Talk: Mixing Time of ASEP in a random environment
- Conference: Probability and Statistical Physics   *January 2024*
  Talk: Mixing Time of ASEP in a random environment
- Beijing Normal University   *January 2024*
  Talk: Metastability for expanding bubbles on a sticky substrate

- Harbin Institute of Technology   *December 2023*
  Talk: Metastability for expanding bubbles on a sticky substrate
- Southern University of Science and Technology (SUSTech)   *November 2023*
  Talk: Metastability for expanding bubbles on a sticky substrate
- Sichuan University   *November 2023*
  Talk: Cutoff for polymer pinning dynamics in the repulsive phase
- Academy of mathematics and system science   *November 2023*
  Talk: Cutoff for polymer pinning dynamics in the repulsive phase
- Nankai University   *November 2023*
  Talk: Cutoff for polymer pinning dynamics in the repulsive phase
- Tsinghua University   *November 2023*
  Talk: Cutoff for polymer pinning dynamics in the repulsive phase
- Harbin Institute of Technology   *October 2023*
  Talk: Cutoff for polymer pinning dynamics in the repulsive phase
- Weizmann: Students Probability Day IX   *May 2023*
  Short talk: Typical height of the (2+1)-D Solid-on-Solid surface with pinning above a wall in the delocalized phase
- Bar-Ilan University   *March 2023*
  Talk: Typical height of the (2+1)-D Solid-on-Solid surface with pinning above a wall in the delocalized phase
- Technion   *March 2023*
  Talk: Typical height of the (2+1)-D Solid-on-Solid surface with pinning above a wall in the delocalized phase
- Bar-Ilan University   *December 2022*
  Talk: The branching number of intermediate growth trees
- Tsinghua U.-Peking U.-BKU Webminar   *September 2022*
  Talk: Mixing time of ASEP in a random environment
- Sichuan University   *May 2022*
  Talk: mixing time for interface models and particle system
- Xiangtan University   *May 2022*
  Talk: mixing time for interface models and particle system
- Bar-Ilan University   *March 2022*
  Talk: mixing time for interface models and particle system
- Oberwolfach workshop   *November 2021*
  Short talk: mixing time for ASEP in random environment
- Ningbo University   *March 2021*
  Talk: metastability for expanding bubbles on a sticky substrate
- Xiangtan University   *November 2020*
  Talk: metastability for expanding bubbles on a sticky substrate
- Bernoulli-IMS One World Symposium   *August 2020*
  short talk: metastability for expanding bubbles on a sticky substrate
- XXIII Brazilian School of Probability   *July 2019*
  poster: Cutoff for polymer pinning dynamics in the repulsive phase
- Probability Summer School Saint-Flour (France),   *July 2019*
  short talk: Cutoff for polymer pinning dynamics in the repulsive phase

Language

Mandarin (native) Cantonese (native) English (fluent) Portuguese (advance) French (basic)

Programming

Mathematica   MATLAB

Referee for journals

Annales de l'Institut Henri Poincaré, Probabilités et Statistiques
Annals of Applied Probability
Annals of Probability
Communications in Mathematical Physics
Electronic Journal of Probability

Award

Colman-Soref scholarship   2023, Israel

Miscellanies

2018 ICM Volunteer (Rio de Janeiro)