

CURRICULUM VITÆ

Shangjie Yang

Universidade Federal Fluminense
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Positions

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|---|---|
| • May 2025 — Present
Assistant professor | Universidade Federal Fluminense |
| • March 2024 — April 2025
Postdoc | Universidade de São Paulo
Host: Leonardo Rolla |
| • March 2022 — February 2024
Postdoc | Bar-Ilan University
Host: Gideon Amir and Naomi Feldheim |
| • November 2021 — February 2022
Postdoc (online) | Universidade Federal de Bahia
Host: Tertuliano Franco |
| • July 2021 — October 2021
Postdoc (online) | Bar-Ilan University
Host: Gideon Amir |

Education

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|--|---|
| • March 2017 — April 2021
Ph.D. student | Instituto de Matemática Pura e Aplicada
Adviser: Hubert Lacoin |
| • March 2015 — February 2017
Master student | Instituto de Matemática Pura e Aplicada
Adviser: Vladas Sidoravicius |
| • September 2013 — December 2014
Master student (dropout) | Nankai University
Adviser: Kainan Xiang |
| • September 2009 — June 2013
Undergraduate student | Sun Yat-sen University |

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 Accepted by Annales de l'Institut Henri Poincaré, Probabilités et Statistiques
7. **S. Yang**, The spectral gap and principle eigenfunction of the random conductance model in a line segment Arxiv:2408.07139

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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
Aixiv:2205.14238 **Groups, Geometry, and Dynamics.** 20, 341–370 (2026).
 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
Aixiv: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 Fluminense Federal University
 - Regular course: Cálculo 2 (09/03/2026 – 10/07/2025)
 - Regular course: Cálculo 2 (09/03/2026 – 10/07/2026)
 - Summer course: Análise na reta (05/01/2026 – 27/02/2026)
 - Regular course: Cálculo 1 (18/08/2025 – 18/12/2025)
 - Regular course: Cálculo 1 (11/05/2025 – 30/07/2025)
 - 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
 - Markov chains and mixing times (01/2020 – 02/2020)
 - Stochastic process (the second half) (10/2019 – 11/2019)
 - Probability 1 (03/2018 – 06/2018)

Talks (Online and in presence)

- IV Dias Probabilísticos no Fundão (UFRJ) *Oct 2025*
Talk: Spectral gap and cutoff of the simple exclusion process with IID conductances
 - 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

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- Universidade Federal da Bahia
Talk: Metastability for expanding bubbles on a sticky substrate June 2024
- Universidade de São Paulo
Talk: Mixing Time of ASEP in a random environment April 2024
- Conference: Probability and Statistical Physics
Talk: Mixing Time of ASEP in a random environment January 2024
- Beijing Normal University
Talk: Metastability for expanding bubbles on a sticky substrate January 2024
- Harbin Institute of Technology
Talk: Metastability for expanding bubbles on a sticky substrate December 2023
- Southern University of Science and Technology (SUSTech)
Talk: Metastability for expanding bubbles on a sticky substrate November 2023
- Sichuan University
Talk: Cutoff for polymer pinning dynamics in the repulsive phase November 2023
- Academy of mathematics and system science
Talk: Cutoff for polymer pinning dynamics in the repulsive phase November 2023
- Nankai University
Talk: Cutoff for polymer pinning dynamics in the repulsive phase November 2023
- Tsinghua University
Talk: Cutoff for polymer pinning dynamics in the repulsive phase November 2023
- Harbin Institute of Technology
Talk: Cutoff for polymer pinning dynamics in the repulsive phase October 2023
- Weizmann: Students Probability Day IX
Short talk: Typical height of the (2+1)-D Solid-on-Solid surface with pinning above a wall in the delocalized phase May 2023
- Bar-Ilan University
Talk: Typical height of the (2+1)-D Solid-on-Solid surface with pinning above a wall in the delocalized phase March 2023
- Technion
Talk: Typical height of the (2+1)-D Solid-on-Solid surface with pinning above a wall in the delocalized phase March 2023
- Bar-Ilan University
Talk: The branching number of intermediate growth trees December 2022
- Tsinghua U.-Peking U.-BKU Webminar
Talk: Mixing time of ASEP in a random environment September 2022
- Sichuan University
Talk: mixing time for interface models and particle system May 2022
- Xiangtan University
Talk: mixing time for interface models and particle system May 2022
- Bar-Ilan University
Talk: mixing time for interface models and particle system March 2022
- Oberwolfach workshop
Short talk: mixing time for ASEP in random environment November 2021
- Ningbo University
Talk: metastability for expanding bubbles on a sticky substrate March 2021
- Xiangtan University
Talk: metastability for expanding bubbles on a sticky substrate November 2020

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- 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

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

Award

Colman-Soref scholarship 2023, Israel

Miscellanies

- Universidade Federal Fluminense *Janeiro 2026*
Na banca do processo selectivo para professir substituto (No. 342/2025)
- Universidade Federal Fluminense *Outubro 2025*
SEMEAR: Uma pequena introdução de probabilidade
- Rio de Janeiro *Agosto 2018*
ICM Volunteer