

## CURRICULUM VITAE

### Shangjie Yang

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### Positions

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|---------------------------------|--------------------------------------|
| • 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

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| • 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: Kaiman Xiang                   |
| • September 2009 — June 2013     | Sun Yat-sen University                  |
| Undergraduate student            |   |

### Research interest

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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

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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

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. Lacoïn 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. Lacoïn 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

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- in Fluminense Federal University
  - 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)

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- 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
- 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

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### Language

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

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### Programming

Mathematica                  MATLAB

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### 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

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### Award

Colman-Soref scholarship 2023, Israel

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### Miscellanies

2018 ICM Volunteer (Rio de Janeiro)