

# 顾陈琳

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24/02/1992

## 工作经历

09/2022– 助理教授，清华大学丘成桐数学科学中心。  
09/2021–08/2022 博士后，上海纽约大学，导师：吴炜。

## 教育经历

09/2018–08/2021 博士，巴黎高等师范学院，导师：Jean-Christophe Mourrat。  
论文：Quantitative homogenization on percolation clusters and interacting particle systems,  
2021年4月1日答辩  
09/2017–08/2018 硕士，巴黎萨克雷大学，专业：概率统计。  
09/2014–08/2017 工程师，巴黎综合理工学院。  
09/2010–07/2014 学士，复旦大学，专业：数学与应用数学。

## 研究方向

随机均匀化，随机环境下的随机游动，无穷维交互粒子系统，随机图，统计物理。

## 科研论著

### 正式发表

- ◇ **Forbidden transactions and black markets**, with Qingyun Wu and Alvin E. Roth, *Mathematics of Operations Research*, 47(4), 3084–3109 (November 2022).
- ◇ **Quantitative homogenization of interacting particle systems**, with Arianna Giunti and Jean-Christophe Mourrat, *Annals of Probability*, 50(5), 1885–1946 (September 2022).
- ◇ **An efficient algorithm for solving elliptic problems on percolation clusters**, *Annals of Applied Probability*, 32(4), 2755–2810 (August 2022).
- ◇ **Quantitative homogenization of the parabolic and elliptic Green's functions on percolation clusters**, with Paul Dario, *Annals of Probability*, 49 (2), 556–636 (March 2021).
- ◇ **Uniform estimate of an iterative method for elliptic problems with rapidly oscillating coefficients**, *Stochastics and Partial Differential Equations: Analysis and Computations*, 8 (4), 787–818 (December 2020).

### 已接收/在线发表

- ◇ **A growth-fragmentation-isolation process on random recursive trees**, with Vincent Bansaye and Linglong Yuan, *Annals of Applied Probability*.
- ◇ **Smoothness of the diffusion coefficients for particle systems in continuous space**, with Arianna Giunti, Jean-Christophe Mourrat, and Maximilian Nitzschner, *Communications in Contemporary Mathematics*.
- ◇ **Mathematical recommendations to fight against COVID-19**, with Wei Jiang, Tianyuan Zhao, Ban Zheng, *SSRN 3551006*. 2020 Mar 9.

### 预印本

- ◇ **Power law decay at criticality for the  $q$ -state antiferromagnetic Potts model on regular trees**, with Wei Wu and Kuan Yang, *arXiv:2112.00573*.

- ◇ **Decay of semigroup for an infinite interacting particle system on continuum configuration spaces**, *arXiv:2007.04058*.

## 科研项目

- 01/2022–12/2026 **临界指数、尺度极限、普适性：来自统计物理的挑战**.  
国家重点研发计划“数学和应用研究”重点专项，2021YFA1002700（参与）

## 荣誉奖励

- 07/2022 **第六届ICCM毕业论文奖**, 博士论文金奖.  
09/2021 **第三届阿里巴巴数学竞赛**, 优胜奖（方向：概率与组合，应用数学）.  
03/2019 **首届阿里巴巴数学竞赛**, 优胜奖（方向：分析与方程）.  
06/2018 **巴黎综合理工学院博士奖学金**.  
11/2017 **巴黎综合理工学院科研实习优秀论文**.  
05/2017 **Sophie Germain 硕士奖学金**.  
07/2013 **第四届丘成桐大学生数学竞赛**, 优胜奖（方向：分析与微分方程，应用与计算数学）.  
11/2011 **第三届全国大学生数学竞赛**, 上海赛区一等奖.  
10/2009 **全国高中数学联赛**, 一等奖.

## 访问交流

- 06–07/2021 **复旦大学**.  
01–06/2020 **纽约大学柯朗数学研究所**.  
09–12/2012 **香港中文大学**.

## 学术报告

- 04/01/2023 **Smoothness of the diffusion coefficients for particle systems in continuous space**.  
概率、随机分析及相关主题研讨会, 清华三亚国际数学论坛  
28/12/2022 **Quantitative homogenization of interacting particle systems**.  
数学科学前沿大会  
19/09/2022 **Quantitative homogenization of interacting particle systems**.  
北京大学  
29/08/2022 **Heat kernel on the infinite percolation cluster**.  
第七届全国概率年会  
19/08/2022 **Random recursive trees and contact tracing**.  
第八届分枝过程及相关课题研讨会（线上）  
28/06/2022 **Random recursive trees and contact tracing**.  
The 42nd Conference on Stochastic Processes and their Applications, 武汉  
02/06/2021 **Heat kernel on the infinite percolation cluster**.  
兰州大学（线上）  
04/01/2021 **Heat kernel on the infinite percolation cluster**.  
上海交通大学（线上）  
10/12/2021 **Heat kernel on the infinite percolation cluster**.  
华东师范大学  
24/11/2021 **A growth-fragmentation-isolation process on random recursive trees**.  
复旦大学  
18/11/2021 **An iterative algorithm for Dirichlet problem with random conductance**.  
上海财经大学

- 21/10/2021 **A growth-fragmentation-isolation process on random recursive trees.**  
清北师概率论坛 (线上)
- 18/10/2021 **A growth-fragmentation-isolation process on random recursive trees.**  
北京大学 (线上)
- 14/09/2021 **A growth-fragmentation-isolation process on random recursive trees.**  
McGill University (线上)
- 28/07/2021 **An iterative algorithm for Dirichlet problem with random conductance.**  
中国科学技术大学
- 20/07/2021 **An iterative algorithm for Dirichlet problem with random conductance.**  
北京大学
- 15/06/2021 **An iterative algorithm for Dirichlet problem with random conductance.**  
浙江大学
- 21/05/2021 **Heat kernel on the infinite percolation cluster.**  
马赛大学 (线上)
- 06/05/2021 **Heat kernel on the infinite percolation cluster.**  
斯特拉斯堡大学 (线上)
- 27/04/2021 **Heat kernel on the infinite percolation cluster.**  
复旦大学 (线上)
- 23/03/2021 **Heat kernel on the infinite percolation cluster.**  
纽约大学 (线上)
- 28/12/2020 **An iterative algorithm for Dirichlet problem with random conductance.**  
华中科技大学东湖论坛 (线上)
- 24/08/2020 **Decay of semigroup for an infinite interacting particle system on continuum configuration spaces.**  
Bernoulli-IMS One World Symposium 2020 (线上)
- 30/07/2020 **Decay of semigroup for an infinite interacting particle system on continuum configuration spaces.**  
中国科学院数学与系统科学研究院 (线上)
- 15/05/2020 **Introduction on Wigner's semicircle law.**  
巴黎萨克雷大学 (线上)
- 11/05/2020 **An efficient algorithm for solving elliptic problems on percolation clusters.**  
Les probabilités de demain 2020 (线上)
- 13/12/2019 **Heat kernel on the infinite percolation cluster.**  
Wrocław University of Technology, Wrocław, 波兰
- 04/11/2019 **Heat kernel on the infinite percolation cluster.**  
巴黎六大
- 28/08/2019 **An introduction of Calderón-Zygmund decomposition on percolation clusters.**  
Workshop of harmonic analysis 2019, Saint-Nazaire, 法国
- 13/07/2019 **A stochastic neural network approximates Derrida-Retaux model.**  
第49届Saint-Flour概率暑期学校
- 25/06/2019 **An iterative algorithm for Dirichlet problem with random conductance.**  
Journées de Probabilités 2019, Dourdan, 法国
- 13/05/2019 **A mathematical model on black market.**  
巴黎六大
- 01/04/2019 **An iterative algorithm for Dirichlet problem with random conductance.**  
复旦大学
- 20/07/2018 **Uniform bound of an iterative algorithm for homogenization.**  
第48届Saint-Flour概率暑期学校
- 15/10/2017 **How to draw imaginary geometry ?.**  
MFO,Oberwolfach, 德国

17/11/2015 **Expander Graph.**  
巴黎综合理工学院

## 参加会议

- 03/01/2023- 概率、随机分析及相关主题研讨会, 清华三亚国际数学论坛, 三亚.  
07/01/2023
- 22/12/2022- 数学科学前沿大会, 清华三亚国际数学论坛, 三亚.  
29/22/2022
- 27/08/2022- 第七届全国概率年会, 威海.  
31/08/2022
- 31/07/2022- 第九届华人数学家大会, 南京.  
05/08/2022
- 27/06/2022- **The 42nd Conference on Stochastic Processes and their Applications**, Wuhan, (Online).  
01/07/2022
- 30/05/2022- **100 Years of the Ising Model**, *IHES*, Paris, (Online).  
03/06/2022
- 16/05/2022- **Unifying Concepts in PDEs with Randomness**, *CRM*, Montreal, (Online).  
27/05/2022
- 14/03/2022- **Interacting Particle Systems and Hydrodynamic Limits**, *CRM*, Montreal, (Online).  
25/03/2022
- 13/01/2020- **Spectra, Algorithms and Random Walks on Random Networks**, *CIRM*, Marseille.  
17/01/2020
- 02/12/2019- **Particle Systems and PDE's VIII**, *University of Lisbon*, Lisbon.  
06/12/2019
- 03/06/2019- **Workshop of harmonic analysis 2019**, *Université Nantes*, Saint-Nazaire.  
07/06/2019
- 03/06/2019- **Walking through the Brownian zoo**, *IMO*, Orsay.  
07/06/2019 A conference in honor of Jean-François Le Gall's 60th birthday
- 20/05/2019- **Spectral Theory and probability in Mathematical physics**, *IRMA*, Strasbourg.  
22/05/2019
- 11/04/2018 **Journées Cartes**, *IMO*, Orsay.
- 10/12/2018- **États de la recherche SMF: mécanique statistique**, *IHP*, Paris.  
14/12/2018
- 11/04/2018 **Journées Cartes**, *IMO*, Orsay.
- 15/10/2017- **Oberwolfach Seminar: Scaling Limits of Random Planar Maps and Liouville Quantum Gravity**, *MFO*, Oberwolfach.  
21/10/2017
- 17/07/2017- **Spectral properties of large random objects**, *IHES*, Bures-sur-Yvette.  
28/07/2017
- 15/05/2017- **Trimester ProbabLyon**, *ENS Lyon & Université de Lyon*, Lyons.  
09/06/2017
  - Mini-school on Random Maps and the Gaussian Free Field
  - Conference on Statistical Mechanics, random planar geometry and interacting random walks
- 11/05/2017 **Les probabilités de demain 2017**, *IHES*, Bures-sur-Yvette.
- 24/01/2017 **Systèmes Aléatoires Inhomogènes 2017**, *IHP*, Paris.  
Sujet de 2017: Random geometry
- 16/01/2017- **Combinatorics and Interactions**, *IHP*, Paris.  
20/01/2017 Workshop on Large Random Structures in Two Dimensions
- 13/10/2016 **6ème Séminaire Itzykson**, *IHES*, Bures-sur-Yvette.  
Physique statistique hors équilibre
- 07/09/2016 **Rentrée Masters IHES 2016**, *IHES*, Bures-sur-Yvette.

- 17/05/2016 **Les probabilités de demain 2016**, *IHES*, Bures-sur-Yvette.  
09/05/2016– **Journées mathématiques X-UPS 2016**, *Ecole Polytechnique*, Palaiseau.  
10/05/2016 Sujet de 2016: Arbres et marches aléatoires  
26/01/2016 **Systèmes Aléatoires Inhomogènes 2016**, *IHP*, Paris.  
Sujet de 2016: Phase transitions in percolation-type models

## 指导学生

- 05–09/2022 **Eugène Ferragu**, 硕士, 巴黎高等师范学院.  
课题: A generalization for the growth-fragmentation-isolation model (与袁玲龙合作指导)  
06/2021–05/2022 **董谨豪**, 硕士, 复旦大学.  
课题: 电阻网络方法、平面图的圆堆画法与图的局部收敛 (与谢践生合作指导)  
09–12/2021 **刘殷仅泓, 周彦昕**, 本科, 上海纽约大学.  
课题: 随机森林算法 (与吴炜合作指导)

## 教学课程

- 09–12/2022 随机游动与均匀化理论, 主讲, 48小时, 清华大学.  
09–12/2021 概率论 (荣誉课程), 助教, 4小时/周, 复旦大学.  
09–12/2021 概率极限理论, 常微分方程, 助教, 12小时/周, 上海纽约大学.  
2019–2021 **ParisMaths**, 主讲, 巴黎高中生数学课外俱乐部, 12小时.  
09/2020–05/2021 微积分, 线性代数, 线上助教, 12小时/周, 上海纽约大学.  
01–05/2020 多元微积分, 主讲, 42小时, 纽约大学.  
2018–2019 概率论, 数值分析, 助教, 60小时, 巴黎六大.  
2013–2014 实分析, 泛函分析, 助教, 40小时, 复旦大学.

## 计算机技能

- Java, Matlab, Scilab, C, C++, Python

## 语言

- 中文, 英语, 法语

## 兴趣爱好

- 篮球, 跑步