

Yichao HUANG

PhD, junior researcher in Mathematics

Personal Information

Birth April 3, 1991
Office Exactum C327, Kumpula Campus
Address P.O. Box 68 (Pietari Kalmin katu 5), University of Helsinki, Finland
Contact yichao.huang@helsinki.fi

Current Employment

Since 2018 | **Post-doctoral researcher at University of Helsinki, Finland.**
Supervisors : **Antti Kupiainen** and **Eero Saksman** under the ERC-grant QFPROBA.

Education

2014 – 17 | **PhD student at University Paris VI and DMA of École Normale Supérieure de Paris.**
Supervisors : **Rémi Rhodes** and **Vincent Vargas**.
PhD thesis in probability on *Gaussian Multiplicative Chaos* and *Liouville Quantum Gravity*.
Defended in Nov 2017 at DMA/ENS. Referees: Nathanaël Berestycki, Christophe Garban.
Jury : J. Barral, N. Curien, C. Garban, A. Kupiainen, R. Rhodes, E. Saksman, Z. Shi, V. Vargas.

2010 – 14 | **Élève normalien at École Normale Supérieure de Paris.**
FIMFA cursus of École Normale Supérieure de Paris. ENS Paris Diploma.
Master “Probabilités et modèles aléatoires” at University Paris VI, grade “Très Bien”.
Thesis on *critical Gaussian Multiplicative Chaos*. Supervisors: Rémi Rhodes, Vincent Vargas.

2008 – 10 | **Preparatory Classes MPSI–MP*, Lycée Janson de Sailly.**
Admitted to École Normale Supérieure de Paris through French national entrance exam.

Publications et preprints

- [3] **Path integral approach to analytic continuation of Liouville theory: the pencil region**
ArXiv preprint (arXiv:1809.08650)
- [2] **Two perspectives of the 2D unit area quantum sphere and their equivalence**
with Juhan Aru and Xin Sun, **Communications in Mathematical Physics**
- [1] **Liouville Quantum Gravity on the unit disk**
with Rémi Rhodes and Vincent Vargas, **Annales de l’Institut Henri Poincaré (B)**

Conference talks

2018 Stochastic Processes and their Applications (SPA), Invited Session, **Gothenburg, Sweden**
2017 Conference “Fractal geometry and dynamics”, **Institut Mittag-Leffler, Sweden**
2016 Conference “Les Probabilités de Demain”, **Institut des Hautes Études Scientifiques, France**
Colloquium “Jeunes Probabilistes et Statisticiens”, **École de Physique des Houches, France**
2013 Conference “Des probas de la rue d’Ulm”, **École Normale Supérieure de Paris, France**

Seminar talks

2017 Conference of Mathematical Physics group, **University of Helsinki, Finland**
2016 Conference of Probability/Statistics team, **École Normale Supérieure de Paris, France**
PhD/Postdoc seminar of ENS Paris, **École Normale Supérieure de Paris, France**
2015 PhD/Postdoc seminar of University Paris XII, **Université Paris-Est, France**

Research visits

- Sep 2017 – Dec 2017 **Institut Mittag-Leffler, Sweden**
IML postdoctoral fellowship grant
- Apr 2015 **Isaac Newton Institute, UK**
Cambridge-PSL French embassy fund

Other conference participations

- 2019 Probability and quantum field theory, **Porquerolles, France**
- 2018 Scaling limits, rough paths, quantum field theory, **Isaac Newton Institute, UK**
150 years of the Finnish mathematical society, **Helsinki, Finland**
- 2017 Mini-school on Random Maps and the Gaussian Free Field, **ENS Lyon, France**
- 2015 Disordered systems, random spatial processes and applications, **Institut Henri Poincaré, France**
Random geometry, **Isaac Newton Institute, UK**
- 2014 School and Workshop on Random Interacting Systems, **University of Bath, UK**
Probability Summer School in Saint-Flour, **Saint-Flour, France**

Teaching

- 2014 – 17 | **TA, undergraduate level (192 hours)**
Sequences, Integrals and Linear Algebra (Maths)
Analysis and Algebra for Scientific Studies (Maths)
Oscillatory Reactions (Chemistry)
Arithmetic and Cryptography (Computer Science)
- 2011 – 12 | **Oral examiner in Preparatory Classes (60 hours)**
Lycée Janson de Sailly, Paris

Administrative activities

- 2013 – 17 **Nominated member of the advisory committee of the laboratory, DMA, ENS Paris**
- 2016 **(Co)-Supervision of undergraduate thesis**

Scientific vulgarisation

- 2016 – 17 | **Jury member of TFJM² (Tournoi français des jeunes mathématiciennes et mathématiciens)**
TFJM²: team competition by high school students who work several months on open questions
- 2010 – 11 | **Tutor of six high school students, TalENS association**

Languages

- Chinese** Native
- English** Fluent
- French** Fluent
- Finnish** Beginner

Personal activities

- Piano** | Student of Éric Vidonne, Hector Berlioz conservatory (CMA10) in Paris (2013–2017).