

# Armand Riera

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## Curriculum vitæ

### Studies

- 2018 – 2021 **PhD**, *under the supervision of Jean-François Le Gall*, University Paris-Sud.  
Brownian Geometry
- 2017 – 2018 **Research internship**, *under the supervision of Jean-François Le Gall*.  
Université Paris-Sud
- 2016 – 2017 **Master 2 in probabilities and statistics**, *University Paris-Sud*, Paris, with highest honors.  
Mémoire de M2: Permutation aléatoire et classes séparantes. *under the supervision of Jean-François Le Gall*.
- 2015 – 2016 **Master 1 in fundamental mathematics**, *Ens Ulm*, Paris, with highest honors.  
Mémoire de M1: Transport optimal sous contraintes de type martingale. With Tunan Zhu, *under the supervision of Bertrand Maury*.
- 2014 – 2015 **Bachelor of science in mathematics**, *Ens Ulm*, Paris, with highest honors.  
Competitive exam, section mathematics-physics
- 2012 – 2014 **Ecole préparatoire: MPSI-MP**, *Lycée Louis Le Grand*, Paris, with highest honors.

### Publications

- Isoperimetric inequalities in the Brownian plane**, submitted.
- Spine representations for non-compact models of random geometry**, *with Jean-François Le Gall*, published: Probability theory and related fields.
- Some explicit distributions for Brownian motion indexed by the Brownian tree**, *with Jean-François Le Gall*, published: Markov processes and Related fields.
- Growth-fragmentation processes in Brownian motion indexed by the Brownian tree**, *with Jean-François Le Gall*, published: Annals of Probability.

### Talks

- 2021 **Maps at CIRM**, *CIRM*, Marseille, France.  
The scaling limit of maps with large faces: 3h with Nicolas Curien and Grégory Miermont
- 2020 **Journée cartes**, *Université Paris Sud*, Paris, France.  
Markov property, distances to the boundary and isoperimetric inequalities in Brownian geometry
- 2020 **Plateau Saclay Combinatorics Seminar**, *Ecole Polytechnique*, Paris, France.  
Distributions explicites associées au mouvement brownien indexé par l'arbre brownien

- 2019 **ICJ/UMPA's probability seminar**, *Ens Lyon*, Lyon, France.  
Géométrie brownienne et processus de croissance-fragmentation
- 2019 **LAGA's probability seminar**, *Université Paris 13*, Paris, France.  
Géométrie brownienne et processus de croissance-fragmentation
- 2019 **TA for Curien's lecture "Peeling random planar maps" at Saint-Flour Probability Summer School**, Saint-Flour, France.  
The Boutier-Di Francesco-Guitter's bijection
- 2019 **Saint-Flour Probability Summer School**, Saint-Flour, France.  
Brownian geometry and growth-fragmentation processes
- 2019 **Seminar on Stochastic Processes**, *ETH*, Zurich, Suisse.  
Growth-fragmentation processes in Brownian motion indexed by the Brownian tree
- 2018 **Orsay's Phd student seminar**, *LMO*, Orsay, France.  
Arbres de Lévy

## Teaching

- 2020–2021 **Students' seminar of the Master 2: Mathématiques de l'Aléatoire**, *Université Paris-Sud*.  
Co-organizer with Nicolas Curien and Alice Contat
- 2019–2020 **Orsay's Phd student seminar**, *Université Paris-Sud*.  
Co-organizer with Pierre-Louis Blayac and Jean Douçot
- 2018–2020 **Students' seminar of the Master 2: Mathématiques de l'Aléatoire**, *Université Paris-Sud*.  
Co-organizer with Sylvain Arlot, Pierre Boutaud and Solène Thépaut
- 2018–2020 **TA-Math291: Statistics for biologists**, *L2*, Université Paris-Sud.
- 2018–2020 **TA-Math191: Mathematics of Modelling I**, *L1*, Université Paris-Sud.

## Summer schools

- 2021 **Maps at CIRM**, *CIRM*.
- 2019 **Saint-Flour Probability Summer School**, *Saint-Flour*.
- 2019 **Probability and quantum field theory: discrete models, CFT, SLE and constructive aspects**, *Porquerolles*.
- 2019 **Walking through the Brownian zoo: A conference in honor of Jean-François Le Gall's 60th birthday**, *Paris*.
- 2018 **Random Geometry**, *Newton Institut: Cambridge*.
- 2017 **Spectral Properties of large random objects**, *IHES*.

## Languages

- Spanish Mother tongue
- French Fluent
- English Fluent
- Catalan Fluent