

# Bastien Dubail

*Ph.D. student in Mathematics, INRIA Paris, ENS  
and Aix-Marseille Université*

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📄 <https://bdubail.github.io/>

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## Education

- 2020- **Ph.D. in Mathematics**, *INRIA Paris, ENS and Aix-Marseille Université*.  
Supervisors: Laurent Massoulié and Charles Bordenave
- 2018-2019 **Master in Mathematics**, *ENS Lyon*.
- 2016-2020 **Student at Ecole Normale Supérieure de Lyon**.

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## Publications

- [1] Charles Bordenave and Bastien Dubail. Markovian Linearization of Random Walks on Groups. *International Mathematics Research Notices*, 05 2022. doi:10.1093/imrn/rnac045.
- [2] Bastien Dubail and Laurent Massoulié. Accelerating Abelian Random Walks with Hyperbolic Dynamics. *Probability Theory and Related Fields*, 04 2022. doi:10.1007/s00440-022-01128-x.

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## Teaching

- Tutorials given at Université Paris-Cité (2020-2023)
- Fall 2022 Probability, Master's degree (1st year)
- Spring 2022 Analysis, Maths-Social Sciences bachelor's degree (1st year)
- Fall 2021 Analysis, CS-Maths bachelor's degree (2nd year)
- Spring 2021 Analysis, Maths-Social Sciences bachelor's degree (1st year)
- Supervision of math projects, Maths-Social Sciences bachelor's degree (1st year)
- Fall 2020 Tutoring for bachelor students

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## Talks, Seminars, Workshops

- 2021 **Workshop "The Cutoff phenomenon for Finite Markov Chains"**, *Oberwolfach*, Nov. 21-27.
- Workshop "On Future Synergies for Stochastic and Learning Algorithm"**, *CIRM*, Sep. 27 - Oct. 01.
- 2020 **Strukturtheorie Seminar**, *TU Graz (virtual)*, Dec. 17.
- Workshop "Spectra, Algorithms and Random Walks on Random Networks"**, *CIRM*, Jan. 13-17.

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## Research Experience

- Research internships
- 2020 **The linearization trick for random walks on finitely generated groups**, *Institut de Mathématiques de Marseille*, CMI Marseille, under the supervision of Charles Bordenave.
- 2019-2020 **Mixing times for graph dynamics**, *INRIA*, Paris, under the supervision of Laurent Massoulié.
- 2019 **The cutoff phenomenon and random walks on groups**, *Institut de Mathématiques de Marseille*, CMI Marseille, under the supervision of Charles Bordenave.

- 2018 **Invasion percolation**, *University of British Columbia*, Vancouver, BC, under the supervision of Omer Angel.
- 2017 **Weil's conjectures**, *Institut Elie Cartan de Lorraine*, Vandœuvre-lès-Nancy, under the supervision of Damien Mégy.

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## Promotion of Mathematics

- 2022 Participation to Fête de la Science (annual nationwide event for promotion of science)
- 2018 Participation to Maths à Lyon (activities organised in high schools and middle schools of Lyon to promote mathematics)

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## Language Skills

French Native  
English Fluent