

Simon Briend

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 🔗 <https://simon-briend.github.io>

Research interests

Statistics, probability theory, random trees, Random graphs, Network archaeology, Graph inference, Data analysis, Information propagation.

Education

PhD	Université Paris-Saclay and Universitat Pompeu Fabra , Mathematics Supervised by Gábor Lugosi and Christophe Giraud. <i>Inference of the past of random structures and other random problems.</i>	Sept 2021 – June 2024
MS	Université Paris-Saclay , Mathematics for Artificial Intelligence Master degree with a focus on statistical learning and high dimension statistics	Sept 2019 – July 2021
BS	Université Paris-Saclay , Pure Mathematics Generalist mathematics training, with a focus on Probability and Statistics	Sept 2018 – July 2019
BS	Lycée Thiers, Marseille , Classes préparatoires MP* Generalist scientific training with a strong focus on Mathematics and Physics	Sept 2016 – July 2018

Professional experience

Unidistance , Postdoctoral researcher in the Mathematics and Computer Science department, under the supervision of David Belius	Sept 2024 – Present Brig, CH
SL-Math (MSRI) , Postdoc Fellow in the Probability and Statistics of Discrete Structures program	Jan 2025 – May 2025 Berkeley, CA
Universitat Pompeu Fabra , Research assistant in the Economics department	Oct 2021 – Sept 2024 Barcelona, ES
Universitat Pompeu Fabra , Research internship, supervised by Gábor Lugosi	May 2021 – July 2021 Barcelona, ES

Publications

On all publications authors are listed in alphabetical order.

Published

Estimating the history of a random recursive tree.	2025
Simon Briend , Christophe Giraud, Gábor Lugosi, Déborah Sulem, Bernoulli. pdf ↗	
Broadcasting in random recursive dags.	2025
Simon Briend , Luc Devroye, Gábor Lugosi, ESAIM probability and statistics. pdf ↗	
Archaeology of random recursive dags and Cooper-Frieze random networks.	2023
Simon Briend , Francisco Calvillo, Gábor Lugosi, Combinatorics, Probability and Computing. pdf ↗	

Submitted

Leaf Stripping on Uniform Attachment Trees.	2024
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Louigi Addario-Berry, Anna Brandenberger, Simon Briend , Nicolas Broutin, Gábor Lugosi, arXiv:2410.06481. pdf	
Random Friend Trees. Louigi Addario-Berry, Simon Briend , Luc Devroye, Serte Donderwinkel, Céline Kerriou, Gábor Lugosi, arXiv:2403.20185. pdf	2024
On the quality of randomized approximations of Tukey's depth. Simon Briend , Roberto I. Oliveira, Gábor Lugosi, arXiv:2309.05657. pdf	2023

In preparation

Robust root finding in random graphs. Simon Briend , Roberto I. Oliveira, Umberto De Ambroggio.	2025+
Freezing random trees doesn't asymptotically shrink them. Hanna Abigail Cairns, Anna Brandenberger, Simon Briend , Robin Khanfir, Igor Korthchemski.	2025+

Talks and invitations

Invited talk at the Detection, Estimation, and Reconstruction in Networks workshop. SL-Math, Berkeley, US.	2025
PSDS seminar at SL-Math, Berkeley, US.	2025
Contributed talk at the PSYR seminar, Unidistance, Brig, CH.	2024
Invited talk at the ASCAI workshop, University of Potsdam, DE	2024
Invited talk at Biennal RSME, Pamplona, ES.	2024
Invited talk at the Sfs-PhD presentations at ETHZ, Zürich, CH.	2023
Invited talk at the APS conference, Nancy, FR.	2023
Invited participant. Bellairs workshop on Probability and Combinatorics, McGill Bellairs institute, Holetown, BB.	2023, 2024 & 2025
Two month long research visits at McGill university, working with Prof Louigi Addario-Berry, Prof Luc Devroye and Prof Serte Donderwinkel. Montréal, CA.	2022 & 2023
Two month long research visits at IMPA, working with Prof Roberto Imbuzeiro Oliveira. Rio de Janeiro, BR.	2022 & 2023
Invited talk at the LIMDA seminar in Universitat Politècnica de Catalunya, Barcelona, ES.	2022
Invited talk at the department of economics seminar, Universitat Pompeu Fabra, Barcelona, ES	2022
Contributed talk at the RandNET workshop on random graphs, Eindhoven, NL.	2022

Teaching

Mentoring role in the preparation of an undergraduate research seminar at Unidistance, Brig, CH.	2025
Teaching assistant for the undergraduate course Ordinary Differential Equations, Unidistance, Brig, CH.	2025
Teaching assistant for the undergraduate courses Mathematics II and Real Analysis, Universitat Pompeu Fabra, Barcelona, ES.	2024

Funding

Centre de Recherche Mathématiques travel grant, funding a research visit to McGill University.	2023
DimMathInnov PhD grant from Région Île de France.	2021-2024
Sophie Germain master's scholarship, from the Foundation Mathématiques Jacques Hadamard.	2019-2021

Organization role

Founder and organizer of the PSYR seminar at Unidistance, a research seminar geared towards the young researcher community.	2025
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Technical skills

- Python
- R
- Pytorch, Tensorflow

Languages

- French and English: C2
- Spanish: B1
- German: A2