Ludovic Stephan

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▬▬▬ Education

2018–2021 **Applied Mathematics and Computer Science Thesis**, *PhD*, Inria Paris – DYOGENE Team, DI ENS, Sorbonne Université, Paris, France.
Topic : Inference in random graphs and the stochastic block model.
PhD advisor : Laurent Massoulié. Expected completion period: June 2021.

2017–2018 **Master's Degree in Probability and Statistics**, *M2*, Paris-Saclay University, Orsay, France.
Specialized in Statistics and Machine Learning. First class honors.

2015–2016 **Mathematics Research *master***, *M1*, École Normale Supérieure, Paris, France.
Honors.

2014–2015 **Bachelor's Degree in Mathematics**, *L3*, École Normale Supérieure, Paris, France.

2014–2015 **Bachelor's Degree in Computer Science**, *L3*, École Normale Supérieure, Paris, France.
Honors.

▬▬▬ Research Experience

2021 **SPOC seminar**, EPFL, Switzerland.

2020 **DYOGENE working group on random graphs**.

2020 **Spectra, Algorithms and Random Walks on Random Networks**, CIRM, Marseille, France.

2019 **Networking Days**, Paris-Saclay University, Paris, France.

2019 **Conference on Learning Theory (COLT)**, Phoenix, AZ., United States.
Two articles presented, jointly with L. Massoulié

2019 **DYOGENE seminar**.

2019 **ALEA Days 2019**, CIRM, Marseille, France.

2018 **Networking Days**, Paris-Saclay University, Paris, France.

2018 **4-month research internship**, Inria Paris – DYOGENE Team, Paris, France.
Topic : Robustness of spectral methods in community detection.
Supervised by Laurent Massoulié.

2017 **Combinatorics seminar**, IMPA, Rio de Janeiro, Brazil.

2016–2017	**9-month research internship**, IMPA, Rio de Janeiro, Brazil. Supervised by Rob Morris
2016	**Master's thesis**, *M1*, École Normale Supérieure, Paris, France. *Topic : Jacobian of random graphs* Joint work with E. Narmanli, supervised by Omid Amini.
2015	**2-month research internship**, Inria Rennes, Rennes, France. *Topic : Fast Fourier Transform in graph signal processing* Supervised by Rémi Gribonval and Nancy Bertin.

Teaching Experience

2018–2021	**Teaching assistant on « Network Models and Algorithms » course**, École Normale Supérieure, Paris, France. Master's degree course, 28h total. Course taught by Ana Busic.
2014–2019	**Association TALENS**, École Normale Supérieure, Paris, France. Taught mathematics courses for high school students from underprivileged areas.

Publications

[1] **Non-backtracking spectra of weighted inhomogeneous random graphs**, *With L. Massoulié*, https://arxiv.org/abs/2004.07408, Submitted.

[2] **Planting trees in graphs, and finding them back**, *With L. Massoulié and D. Towsley*, https://arxiv.org/abs/1811.01800, COLT 2019.

[3] **Robustness of spectral methods for community detection**, *With L. Massoulié*, https://arxiv.org/abs/1811.05808, COLT 2019.

[4] **A simpler spectral approach for clustering in directed networks**, *With S. Coste*, https://arxiv.org/abs/2102.03188, Submitted to Neurips 2021.

Other skills

Languages	French (Native), English (Fluent), Portuguese (Intermediate)
IT	C/C++, Python, LaTeX, Web programming