

LUCA GANASSALI

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Ph.D. student in Machine Learning and Statistics, Inria, ENS, Paris

EDUCATION

Ph.D. in Machine Learning and Statistics 2019 - 2022
Inria, DI/ENS, PSL Research University Paris, France

Advisors: Pr. Laurent Massoulié, Pr. Marc Lelarge. Funded by Prairie Institute.

MsC Probability and Statistics 2018-2019
Université Paris-Sud Orsay, France

Inference on graphs, random walks and graphs, stochastic calculus and brownian motion, concentration of measure. Mention 'Très Bien' (summa cum laude).

École Polytechnique 2015-2019
Engineer degree Palaiseau, France

Applied mathematics (probability, statistics), computer science, physics, economics. Overall GPA: 3.92/4.

Preparatory classes, MPSI/MP* 2013-2015
Lycée Henri IV Paris, France

Admitted to École Polytechnique after nationwide exam.

RESEARCH EXPERIENCE

Research Intern Apr. - Aug. 2019
Inria Paris, France

Spectral alignment of correlated Gaussian matrices. Advisors: Pr. Laurent Massoulié, Pr. Marc Lelarge.

Research Intern Apr. - Aug. 2018
CMAP, École Polytechnique Palaiseau, France

Mathematical modelling of leucopoiesis, study of mutations and application to myeloid leukemia. Advisors: Pr. Sylvie Méléard, Pr. Amandine Véber.

Machine Learning research project 2016-2017
École Polytechnique Palaiseau, France

Predicting artist and pictorial style from art using Deep Learning. Advisors: Pr. Erwan Scornet (CMAP).

TEACHING

TA, Statistics and Probability 2021-
Université de Paris Paris, France

- Fall 2021: *Probability (MT15Y030)*, bachelor's degree (3rd year).
- Spring 2021: *Statistics and numerical simulations (MA16Y020)*, bachelor's degree (3rd year).
- Spring 2021: *Statistics (MA1BY020)*, master's degree (1st year).

Tutoring, Ecole Polytechnique 2020
École Polytechnique Palaiseau, France

Tutoring for the probability course (MAP361) at Ecole Polytechnique.

Oral examiner in mathematics, preparatory school for the French "Grandes Écoles".

TALKS, SEMINARS AND WORKSHOPS

- Dec. 9, 2021. *Stochastics Seminar*, Georgia Tech, virtual (talk).
- Nov. 10, 2021: *Prairie Workshop*, Paris, France (poster).
- Oct. 25 – 29, 2021: *Colloquium "Jeunes Probabilistes et Statisticiens"*, St-Pierre d'Oléron, France (talk).
- Sept. 27 – Oct. 1, 2021: *CIRM workshop "On Future Synergies for Stochastic and Learning Algorithms"*, Marseille, France (poster).
- Sept. 6 – 10, 2021: *Junior conference "Random networks and interacting particle systems"*, virtual (talk).
- Aug. 16 – 19, 2021: *Mathematical and Scientific Machine Learning (MSML)*, virtual (talk).
- Aug. 15 – 19, 2021: *Conference on Learning Theory (COLT)*, virtual (talk + poster).
- July 9 – 12, 2020: *Conference on Learning Theory (COLT)*, virtual (talk).
- June 25, 2020: *Dyogene team seminar*, Inria, Paris, France (talk).
- January 13-17, 2020: *CIRM workshop "Spectra, Algorithms and Random Walks on Random Networks"*, Marseille, France.
- Oct. 23, 2019: *Networking days*, Orsay, France (talk).

PUBLICATIONS

- E. Daoud, L. Ganassali, M. Lelarge, F. Rey. SiMCA: Sinkhorn Matrix Factorization with Capacity Constraints, 2021, *submitted*.
- L. Ganassali, M. Lelarge, L. Massoulié. Correlation detection in trees for partial graph alignment, 2021, *accepted for publication at ITCS*.
- L. Ganassali, M. Lelarge, L. Massoulié. Impossibility of Partial Recovery in the Graph Alignment Problem, 2021, in *Proceedings of Thirty Fourth Conference on Learning Theory (COLT 2021)*.
- L. Ganassali. Sharp threshold for alignment of graph databases with Gaussian weights, 2020, *Mathematical and Scientific Machine Learning (MSML21)*.
- M. Akian, L. Ganassali, S. Gaubert, L. Massoulié. Probabilistic and mean-field model of COVID-19 epidemics with user mobility and contact tracing, 2020, *preprint*.
- L. Ganassali, L. Massoulié. From tree matching to sparse graph alignment, 2020, in *Proceedings of Thirty Third Conference on Learning Theory (COLT 2020)*.
- L. Ganassali, M. Lelarge, L. Massoulié. Spectral alignment of correlated Gaussian random matrices, 2019, in *Advances in Applied Probability*.

SERVICE

2020-2022: Organizer of the team's seminar.

Reviewing: IEEE International Symposium on Information Theory (ISIT, 2021), Journal of Machine Learning Research (JMLR).

AWARDS

Prix de la chaire Modélisation et Biodiversité, 2018: Research Internship award from the chair 'Mathematical modelling and Biodiversity' (Ecole Polytechnique).

LANGUAGES

French (native), **English** (fluent, TOEIC : 990/990), **Italian** (fluent).