LUCA GANASSALI

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Ph.D. student in Machine Learning and Statistics

EDUCATION

Ph.D. in Machine Learning and Statistics Oct. 2019-
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 and numerical simulations (MA1BY020)*, master's degree (1st year).

Tutoring, Ecole Polytechnique 2020
École Polytechnique *Palaiseau, France*

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

Oral examinator 2018-2019
Lycée Henri IV *Paris, France*

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

TALKS, SEMINARS AND WORKSHOPS

– 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

L. Ganassali, M. Lelarge, L. Massoulié. Correlation detection in trees for partial graph alignment, 2021, *accepted 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, *Advances in Applied Probability*.

SERVICE

2020-2022: Organizer of the team's Ph.D. 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).