

# LUCA GANASSALI

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**Ph.D. student in Machine Learning and Statistics**

## EDUCATION

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<b>Ph.D. in Machine Learning and Statistics</b> <i>Inria, DI/ENS, PSL Research University</i>	Oct. 2019- <i>Paris, France</i>
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Advisors: Pr. Laurent Massoulié, Pr. Marc Lelarge. Funded by Prairie Institute.

<b>MsC Probability and Statistics</b> <i>Université Paris-Sud</i>	2018-2019 <i>Orsay, France</i>
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Inference on graphs, random walks and graphs, stochastic calculus and brownian motion, concentration of measure. Mention 'Très Bien' (summa cum laude).

<b>École Polytechnique</b> <i>Engineer degree</i>	2015-2019 <i>Palaiseau, France</i>
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Applied mathematics (probability, statistics), computer science, physics, economics. Overall GPA: 3.92/4.

<b>Preparatory classes, MPSI/MP*</b> <i>Lycée Henri IV</i>	2013-2015 <i>Paris, France</i>
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Admitted to École Polytechnique after nationwide exam.

## RESEARCH EXPERIENCE

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<b>Research Intern</b> <i>Inria</i>	Apr. - Aug. 2019 <i>Paris, France</i>
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Spectral alignment of correlated Gaussian matrices. Advisors: Pr. Laurent Massoulié, Pr. Marc Lelarge.

<b>Research Intern</b> <i>CMAP, École Polytechnique</i>	Apr. - Aug. 2018 <i>Palaiseau, France</i>
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Mathematical modelling of leucopoiesis, study of mutations and application to myeloid leukemia. Advisors: Pr. Sylvie Méléard, Pr. Amandine Véber.

<b>Machine Learning research project</b> <i>École Polytechnique</i>	2016-2017 <i>Palaiseau, France</i>
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Predicting artist and pictorial style from art using Deep Learning. Advisors: Pr. Erwan Scornet (CMAP).

## TEACHING

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<b>TA, Statistics and Probability</b> <i>Université de Paris</i>	2021- <i>Paris, France</i>
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- 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).

<b>Tutoring, Ecole Polytechnique</b> <i>École Polytechnique</i>	2020 <i>Palaiseau, France</i>
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Tutoring for the probability course (MAP361) at Ecole Polytechnique.

**Oral examiner***Lycée Henri IV*

2018-2019

*Paris, France*

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

**Tutoring, Ecole Polytechnique***École Polytechnique*

2017

*Palaiseau, France*

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

**TALKS, SEMINARS AND WORKSHOPS**

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- 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**

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- L. Ganassali, M. Lelarge, L. Massoulié. Correlation detection in trees for partial graph alignment, 2021, *submitted*.
- 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, *Journal of Applied Probability*.

**REVIEWING**


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**Conferences:** IEEE International Symposium on Information Theory (ISIT), 2021.

**Journals:** Journal of Machine Learning Research (JMLR).

**AWARDS**


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

**LANGUAGES**


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