

Athénaïs Gautier, Ph.D.

About me

Soon to be PhD in statistics, and passionate about applying machine learning to solve real-world problems.

My skills in mathematics, statistics and programming will be an asset when faced with technical challenges. My experience in research and teaching allows me to communicate my results clearly and effectively. I look forward to working within a stimulating environment!

Contact information

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💻 <https://athenaisgautier.github.io/>

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Languages

🇫🇷 French - Native Language

🇬🇧 English - Fluent

Professional Skills

R

Python

Jupyter Notebooks

SQL

TeX

Soft Skills and Strengths

Creativity

Problem solving

Open minded

Team Working

Love Learning New Things

Good communication

Other Interests

- Aerial sports
- Baking, cooking
- Crafting
- Train travels

WORK EXPERIENCE

Nov. 2018 -
Today

Research and teaching assistant 📍 Bern, Switzerland
Institute of statistics, University of Bern
Until May 2020, the affiliation was shared with Idiap Research Institute (Martigny, Switzerland).

Research assistant with a strong focus on the Ph.D. topic. Active participation in scientific collaborations, proficiency in coding and creating reproducible examples using R language. Main research interests: Uncertainty Quantification, Gaussian Processes, Bayesian Optimization, Bayesian Statistics, Computer simulation models.

Senior consultant of the institute of statistics, University of Bern. Helping academics and companies planning and conducting statistical analysis (Jan. 2021 - Dec. 2023)

Teaching assistant at various levels:

✦ For the institute of statistics at University of Bern for several course at Bachelor and Master level. (Jan. 2019 - ongoing)

✦ In statistics, for the first the continuing education Master of AI in Switzerland; a collaboration between Idiap Research Institute and Unidistance (Jan. 2019 - May 2020).

✦ Co-supervisor (main supervisor: D. Ginsbourger) of the Master thesis "Gaussian process regression on molecules: some performance assessments and comparisons". (2021).

March. 2018
- Oct. 2018

Research Intern 📍 Martigny, Switzerland
Idiap Research Institute

Optimisation and sensitivity analysis within the "Statistical and machine learning approaches to optimization problems under uncertainty arising in energy planning" collaboration with CREM.

June 2017 -
Aug. 2017

Engineering intern 📍 Drancy, France
ELM Leblanc

Working on data integration within energetic systems: identifying exploitable data, possible applications and inherent risks.

EDUCATION

Nov. 2018 -
Ongoing

Ph.D. in Statistics 📍 Bern, Switzerland
University of Bern

Until May 2020, the affiliation was shared with Idiap Research Institute (Martigny, Switzerland).

Working on the topic: "Modelling and predicting distribution-valued fields with applications to inversion under uncertainty" under supervision of Pr. David Ginsbourger.

Expected graduation May 2023.

Sept. 2017 -
Oct. 2018

Master in Applied Mathematics 📍 Paris, France
University Paris Dauphine

Major in *statistical and financial engineering*, specialising in statistics.

Obtained with first grade honors and ranked top student of the year.

Sept. 2015 -
Sept. 2018

Master in Engineering 📍 Saint-Etienne, France
École des Mines de Saint-Etienne

School ranked 14th out of the 140 french engineering schools by the Times Higher Education World University Ranking

Majoring in statistics and data science.

Ranked in the top 10% of students in these specialities.

Sept. 2013 -
July 2015

Preparatory classes 📍 Paris, France
Lycée Henri IV

Intensive studies in mathematics and physics, major in mathematics and physics.

TECHNICAL SKILLS

Mathematics and statistics	Very strong skills acquired during studies and used to communicating and teaching to people of various levels of expertise.
Data analysis	Very strong theoretical and practical knowledge, advanced proficiency in R , basic in Python . Confident in the ability to progress and master other languages, currently learning Python .
Data visualization	Mastery and strong personal affinity with the subject, particularly with the <i>ggplot2</i> package in R . Confident in the ability to transfer knowledge to other contexts.
Results presentation	Accustomed to developing and presenting reproducible examples via reports written in LaTeX, RMarkdown or Jupyter Notebook.

PUBLICATIONS

Ph.D. thesis	Modelling and predicting distribution-valued fields with applications to inversion under uncertainty , <u>A.G.</u> ,
Journal	Continuous logistic Gaussian random measure fields for spatial distributional modelling , <u>A.G.</u> , D. Ginsbourger, <i>Submitted</i>
Proceedings	Goal-oriented adaptive sampling under random field modelling of response probability distributions , <u>A.G.</u> , D. Ginsbourger and G. Pirot, <i>Published in ESAIM: Proceedings and Surveys</i> .
Workshop	Probabilistic ABC with Spatial Logistic Gaussian Process , <u>A.G.</u> , D. Ginsbourger and G. Pirot, <i>In Third Workshop on Machine Learning and the Physical Sciences, NeurIPS 2020</i> .

★ AWARDS AND GRANTS

• Best student oral presentation: GdR MASCOT-NUM annual meeting.	2022
• Maximum grant: University of Bern, Fund for the Promotion of Young Researchers.	2022
• Student Travel Award: SIAM Conference on Uncertainty Quantification	2022
• Best student poster: GdR MASCOT-NUM annual meeting	2021
• Louis Neltner Excellence Scholarship awarded by the foundation of the Ecole des Mines de Saint-Etienne.	2016
• Excellence scholarship awarded by Fondation Odon Vallet on the basis of good academic results.	2014
• Merit scholarship awarded by the French State on the basis of excellent results in the Baccalauréat.	2013-2015

ACADEMIC SERVICES

Active member of the organization committees of the events:

• Lifting Inference with Kernel Embeddings 2023 (webmaster)	June 26-30 2023
• Current frontiers in Gaussian Processes (main organizer)	Aug. 24-26, 2022
• Lifting Inference with Kernel Embeddings 2022 (webmaster)	Jan. 10-14, 2022

Academic peer review for the following structures:

• Artificial Intelligence and Statistics (AISTATS)	in 2022 and 2023
• Workshop: Machine Learning and the Physical Sciences at NeurIPS	in 2021 and 2022
• Workshop: Synergy of Scientific and Machine Learning Modeling at ICML	in 2023