

Curriculum Vitae

Athénaïs GAUTIER



Affiliation : Institute of Mathematical Statistics and Actuarial Science, University of Bern, SWITZERLAND

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Date of birth : July 9th of 1996

Nationality : French

Research Interests : Gaussian processes, kernel methods, stochastic inverse problems, density estimation, Uncertainty Quantification, non-parametric Bayesian methods, likelihood-free inference.

EXPERIENCE

Research and teaching assistant

Nov. 2018 - Ongoing

Institute of statistics, University of Bern (Bern, Switzerland).

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.
- ◇ Teaching assistant for the institute of statistics at University of Bern.

Linear models (Fall term 2022); *Introduction to language R* (Fall term 2022); *Spatial statistics* (Spring term 2022); *Statistics for climate sciences I/II* (Fall term 2019, spring term 2020, Fall term 2020); *Optimization methods* (Spring term 2019).

- ◇ Co-supervisor (main supervisor : D. Ginsbourger) a Master thesis titled “*Gaussian process regression on molecules : some performance assessments and comparisons*”. (2021)
- ◇ Teaching assistant in the continuing education program Master AI at Idiap Research Institute and Unidistance : *Foundations in statistics for AI* (Spring terms 2019 and 2020).
- ◇ Statistical consultant at the institute of statistics, University of Bern. (Jan. 2021 - Dec. 2023)

Research Intern

March. 2018 - Oct. 2018

Idiap Research Institute (Martigny, Switzerland)

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

EDUCATION

Ph.D. in Statistics

Nov. 2018 - Ongoing

University of Bern (Bern, Switzerland).

Topic : “*Modelling and predicting distribution-valued fields with applications to inversion under uncertainty*” under supervision of Pr. David Ginsbourger. Expected graduation May 2023.

Master 2 in Applied Mathematics

Sept. 2017 - Oct. 2018

University Paris Dauphine (Paris, France).

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

Master in Engineering and Applied Mathematics

Sept. 2015 - Sept. 2018

Ecole des Mines de Saint-Etienne (Saint-Etienne, France).

Majoring in statistics and data sciences.

Preparatory classes

Sept. 2013 - July 2015

Lycée Henri IV (Paris, France).

PUBLICATIONS

A.G., D. Ginsbourger : *Continuous logistic Gaussian random measure fields for spatial distributional modelling*. Submitted, Arxiv preprint.

A.G., D. Ginsbourger and G. Pirot : *Goal-oriented adaptive sampling under random field modelling of response probability distributions*. Published in ESAIM: Proceedings and Surveys: August 2021, Vol. 71, p. 89-100.

A.G., D. Ginsbourger and G. Pirot : *Probabilistic ABC with Spatial Logistic Gaussian Process* In Third Workshop on Machine Learning and the Physical Sciences, NeurIPS 2020.

SELECTED TALKS

Conferences :

- ◇ SIAM conference : Uncertainty Quantification ; Atlanta, United States *Apr. 12-15 2022*
Session : "Statistical Surrogate Modelling and Optimization for Stochastic Simulation".
- ◇ 19th French-German-Swiss conference on Optimization ; Nice, France *Sept. 17-20 2019*
Minisymposium : "Kernel Methods in Bayesian Optimisation and Integration".
- ◇ Applied Inverse Problems ; Grenoble, France *July 8-12, 2019*
Minisymposium : "Statistical machine learning for inversion and optimization under data and model heterogeneities".

Workshops

- ◇ Workshop on Accelerated statistical inference for the sciences (Online) *April 28, 2021*
- ◇ Workshop on Stochastic simulators, GdR MASCOT-NUM (Online) *Mar.11 2021*
- ◇ Uncertainty Propagation in Probabilistic Models ; Siemens AG, Munich *Oct. 10-11 2019*

Invited seminars :

- ◇ Center of Applied Mathematics, Cornell University ; Ithaca, United States *Apr. 20, 2022*
 - ◇ Statistics in Data-Centric Engineering, The Alan Turing Institute (Online) *Feb. 09, 2022*
 - ◇ Department of Mathematical Sciences ; NTNU, Trondheim, Norway *Oct. 25, 2021*
 - ◇ Institut de Mathématiques de Toulouse ; France *Oct. 05, 2021*
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DISTINCTIONS AND GRANTS

Best student oral presentation : GdR MASCOT-NUM 2022 annual meeting.

Awarded the maximum grant of CHF 5000 from the University of Bern's Fund for the Promotion of Young Researchers.

Student Travel Award for the SIAM Conference on Uncertainty Quantification 2022.

Best student poster award : GdR MASCOT-NUM 2021 annual meeting.

ACADEMIC SERVICE AND MEMBERSHIPS

In organizing committee : Lifting Inference with Kernel Embeddings 2023 *June 26-30, 2023*

Main organizer of the workshop : Current frontiers in Gaussian Processes *Aug. 24-26, 2022*

In organizing committee : Lifting Inference with Kernel Embeddings 2022 *Jan. 10-14, 2022*

Reviewer for Artificial Intelligence and Statistics (AISTATS) 2022, 2023 and for the workshop : Machine Learning and the Physical Sciences at NeurIPS 2021, 2022.

Member of the Swiss Mathematical Society, of the Society for Industrial and Applied Mathematics. Also closely following and participating in GdR MASCOT-NUM.