

Academic background

- Feb. 2022 - **Postdoctoral Researcher**, Aalto University, Probabilistic Machine Learning team, Helsinki.
Supervised by Samuel Kaski, Markus Heinonen and Vikas Garg
- Oct. 2018 - **PhD in Computer Science**, *On learning mechanistic models from time series data with applications to personalised chronotherapies*, Inria Saclay, Institut Curie Saint-Cloud, École polytechnique.
Feb. 2022
Supervised by François Fages and Annabelle Ballesta
- Apr.-Sept. 2018 **Summer Intern**, *Learning mechanistic models from time series data*, Inria Saclay, Lifeware Team.
Supervised by François Fages
- 2017 – 2018 **Masters in Random Modelling, Finance and Data Science, M2MO**, *Data Science track*, Université de Paris.
- May-July 2017 **Summer Intern**, *Random matrix theory, Application to community detection within networks*, Laboratoire MAP5, Université de Paris.
Supervised by Manon Defosseux
- 2016 – 2017 **First year of Masters in Applied Mathematics**, Université de Paris.
ranked 1st
- 2012 – 2015 **BSc. Mathematics**, Université de Paris.

Publications

Publications

- 2022 **Accelerating metabolic models evaluation with statistical metamodels: application to Salmonella infection models**, Clémence Frioux, Sylvie Huet, Simon Labarthe, Julien Martinelli, Thibault Malou, David Sherman, Marie-Luce Taupin, Pablo Ugalde-Salas, *ESAIM Proceedings & Surveys*.
- 2021 **A mathematical model of the circadian clock and drug pharmacology to optimize irinotecan administration timing in colorectal cancer**, Janina Hesse, Julien Martinelli, Ouda Aboumanify, Annabelle Ballesta and Angela Relógio, *Computational and Structural Biotechnology*.
- 2021 **Model learning to identify systemic regulators of the peripheral circadian clock**, Julien Martinelli, Xiao-Mei Li, Sandrine Dulong, Sylvain Soliman, Francis Lévi, François Fages and Annabelle Ballesta, *Bioinformatics*.

Proceedings

- 2023 **Multi-Fidelity Bayesian Optimization with Unreliable Information Sources**, Petrus Mikkola, Julien Martinelli, Louis Filstroff and Samuel Kaski, Accepted for publication in *Proceedings of the International Conference on Artificial Intelligence and Statistics (AISTATS)*.
- 2019 **A statistical unsupervised learning algorithm for inferring reaction networks from time series data**, Julien Martinelli, Jeremy Grignard, Sylvain Soliman and François Fages, *ICML 2019-Workshop on Computational Biology*.

- 2019 **On Inferring Reactions from Data Time Series by a Statistical Greedy Heuristics**, *Julien Martinelli, Jeremy Grignard, Sylvain Soliman and François Fages*, *Proceedings of the Seventeenth International Conference on Computational Methods in Systems Biology*, 352-355.

Submitted

- 2023 **Cost-aware learning of relevant contextual variables within Bayesian optimization**, *Julien Martinelli, Ayush Bharti, S.T. John, Armi Tiihonen, Sabina Sloman, Louis Filstroff and Samuel Kaski*.
- 2022 **Reactmine: a search algorithm for inferring chemical reaction networks from time series data**, *Julien Martinelli, Jeremy Grignard, Sylvain Soliman, Annabelle Ballesta and François Fages*.

Oral Communications

Invited Talks

- February 2023 **Biostatistics Seminar**, *Bordeaux Population Health Center*.
- January 2023 **Public Seminar - CRiStAL team**, *Université de Lille*.
- November 2022 **AI Day**, *Helsinki*.
- July 2022 **Workshop on Hybrid models and methods in systems medicine**, *Institut Curie, Paris*.

Talks

- May 2023 **Machine Learning Coffee Seminar**, *Helsinki*.
- August 2022 **Finnish Center for Artificial Intelligence - Get together**, *Helsinki*.
- August 2021 **CEMRACS - Data Assimilation and Reduced Modeling for High Dimensional Problems**, *Luminy*.
- July 2021 **Twentieth European Conference on Computational Biology**, *Remote*.
- June 2021 **Tenth biennial of the Society of Applied and Industrial Mathematics (SMAI)**, *La Grande Motte*.
- May 2021 **Workshop Modelling Heterogeneous populations with applications in biology**, *Remote*.
- April 2021 **Monthly seminar BIOS-IA**, *Remote*.
- May 2019 **BIOS-IA Days**, *Laboratoire d'Informatique Fondamentale d'Orléans*.
- December 2018 **BIOS-IA Days**, *Pasteur Institute, Paris*.

Poster Sessions

- April 2023 **AISTATS 2023**, *València*.
- July 2021 **JOBIM 2021**, *Remote*.
- January 2021 **Winter school AI4Health**, *Remote*.
- June 2019 **Summer School Formal Modeling of Biological Regulatory Networks**, *Porquerolles*.

Teaching

- 2022 – 2023 **Teaching Assistant**, *MSc., Machine Learning: Advanced Probabilistic Methods*, Aalto University.
- 2019 – 2021 **Teaching Assistant**, *2nd year BSc., Analysis 4, Multivariate functions*, Université de Paris.
- 2018 – 2019 **Teaching Assistant**, *1st year BSc., Mathematics and Calculus 2*, Université de Paris.

Supervision

- June – August 2023 **Duong Le**, *Summer Intern*, 3rd year BSc. student, Benchmarking Human-In-The-Loop and active learning strategies for molecular generation.
Joint supervision with Yasmine Nahal
- June – August 2023 **Xinyu Zhang**, *Summer Intern*, 1st year MSc. student, Probabilistic Neural Additive Models for Interpretable Machine Learning.
Joint supervision with S.T. John
- June – August 2023 **Kaul Rajat**, *BSc Thesis supervision*, 3rd year BSc. student, Learning Biological ODE models from time series data.

Programming skills

Programming Python, R, Matlab, L^AT_EX, Shell
Tools GitHub, Vim

Languages

Native French, fluent English