

# Julien Martinelli

PhD graduate

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📄 <https://julienmartinelli.github.io/>

Born 05/26/1994

## Experience

- Feb. 2022 - **Postdoctoral Researcher**, Aalto University, Probabilistic Machine Learning team, Helsinki.  
Supervised by Samuel Kaski, Markus Heinonen and Vikas Garg

## Education

- 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.  
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 1<sup>st</sup>
- 2012 – 2015 **BSc Mathematics**, Université de Paris.

## Publications

### Publications

- 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

- 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

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.*

**In preparation**

2022 **Reactmine: an algorithm for inferring biochemical reactions from time series data**, *Julien Martinelli, Sylvain Soliman, Annabelle Ballesta and François Fages.*

## Oral Communications

### Talks

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

July 2021 **JOBIM 2021**, *Remote.*

January 2021 **Winter school AI4Health**, *Remote.*

June 2019 **Summer School Formal Modeling of Biological Regulatory Networks**, *Porquerolles.*

## Teaching

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.*

## Programming skills

Programming Python, R, Matlab, L<sup>A</sup>T<sub>E</sub>X, Shell  
Tools GitHub, Vim

## Languages

Native French, fluent English