

Orlane Rossini

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Current position

I am currently a PhD fellow in biostatistics at CNRS. I am also an assistant lecturer at the Faculty of Science for the Mathematics department, in Montpellier.

Education

PhD in Applied Mathematics with specialisation in Biostatistics <i>Institut Montpelliérain Alexander Grothendieck (IMAG)</i>	2022 - Expected October 2025 <i>Montpellier, France</i>
<ul style="list-style-type: none">• Thesis subject: Model-based reinforcement learning for the control of partially observable piecewise deterministic semi-Markov decision processes• Supervisors: Benoîte de Saporta, Alice Cleynen and Régis Sabbadin	
Master in Data Science & Statistical Modeling <i>University of South Brittany</i>	2020 - 2022 <i>Vannes, France</i>
Bachelor of Science in Computer Science & Mathematics (international course) <i>University of Bordeaux</i>	2017 - 2019 <i>Talence, France</i>
<ul style="list-style-type: none">• Erasmus experience: Warsaw University of Technology (9 months in Poland)	

Academic experience

University of Grenoble, INSERM, IAB <i>Student Intern - Research engineer</i>	Jan 2022 – Sep 2022 <i>Grenoble, France</i>
<ul style="list-style-type: none">• Subject: Accelerated epigenetic placental aging as a biomarker of pregnancy exposure to ambient air pollution• Supervisors: Johanna Lepeule, Aurélie Nakaruma, Lucile Broséus and François Septier	
Regional Health Observatory of French Guiana <i>Mentored project - Intern (remotely)</i>	Jan 2021 – May 2021 <i>Cayenne, France</i>
<ul style="list-style-type: none">• Subject: Analysis of patient flow in the emergency department and its associated factors in French Guiana between 2018 and 2020• Supervisors: Joseph Rwagitinywa and Evans Gouno• Extraction and exploitation of data from the French National Health Data System (SNDS).	

Publications

In Proceedings of Conferences	
<ul style="list-style-type: none">• <i>An example of medical treatment optimization under model uncertainty</i> in Journées des Statistiques de France by A. Cleynen, B. de Saporta, O. Rossini, R. Sabbadin. April 2023	

Grants

2022 Competition for the "Information, Structures and Systems" (I2S) Doctoral School <i>35,550€ over 3 years</i>	June 2022
Mobility grant from the French Ministry of Higher Education and Research <i>3,600€ over 9 months</i>	Nov 2019
<ul style="list-style-type: none">• Exchange with the University of Warsaw, Poland	

Teachings

Exercises - Scientific Reasoning

2023 - 2024

First-year bachelor's degree in biology

- Set theory, Random Variables with classical distributions, Conditional Probabilities
- Exam marking

Exercises - Probability & Statistics

2024

First-year bachelor's degree in computer sciences

- Descriptive statistics, Enumeration and laws of probability, Inferential statistics
- Help with exam writing and marking

Exercises - Linear Algebra

2023

First-year bachelor's degree in mathematics

- Complex number, Linear system, Linear subspace, Matrices, Linear application
- Exam writing and marking

Scientific mediation

- Workshop at the *Fête de la Science* "Mathematics with head and hands" (2022)
- Workshop at the *Girls, Math and Computer Science* event (2023)
- Workshop at the *Math is for Her* event (2024)

Talks

International conferences

- *An example of medical treatment optimization under model uncertainty*, 21st INFORMS Applied Probability Society Conference, June 2023
- *Maternal exposure to ambient air pollution and placental epigenetic aging: Developing a new clock and estimating associations*, Australian Mathematical Society, December 2022

National conferences

- *Stochastic dynamic control: an approach based on semi-Markov models, application to the optimization of a medical treatment*, 8èmes rencontres de Statistique of University of South Brittany, November 2023
- *An example of medical treatment optimization under model uncertainty*, Processus markoviens, semi-markoviens et leurs applications, June 2023
- *Maternal exposure to ambient air pollution and placental epigenetic aging: Developing a new clock and estimating associations*, IMAG PhD student days, February 2023
- *Model-based reinforcement learning for the control of partially observable, piecewise deterministic semi-Markovian decision processes*, INRAE-MIAT PhD student days, January 2023

Administratives

- Elected member of the IMAG laboratory council
- Member of the sustainable development group at the IMAG laboratory
- Member of the organising committee of the *Math in Jeans* conference