



Florian ROBERT

Agrégé of mathematics and PhD student.

Experiences

Research

Since October 2022 **PhD student in Artificial Intelligence**, *MONC and MIRCADE teams*, Bordeaux
PhD under the co-direction of Baudouin Denis-de-Senneville (DR2, CNRS, MONC, INRIA) and Christophe Grosset (DR2, MIRCADE, INSERM 1312). The objective is to better understand the 3D organization of tumor tissues using volumetric imaging technology (SBF-SEM), applied mathematics and Artificial Intelligence.

June to September 2022 **Master 2 internship**, *Team SISTM, INSERM U1219*, Bordeaux
Internship in the SISTM team under the supervision of Mélanie Prague. Estimation of parameters of mechanistic models via variational studies with Monolix and Kalman filters.

Teaching

September 2020 to August 2022 **Mathematics teacher**, *National Education*
Year of internship in the general high school of Andernos-Les-Bains then permanent position in Aulnay-Sous-Bois.

- 1st year : two classes of second grade.
- 2nd year : second and first grade with mathematics speciality, SNT, science education in the final year of high school.

March to May 2021 **Lecturer in Data Processing**, *Campus Diderot*, Bordeaux
Teaching at the 1st year BTS Gestion and Protection of Nature and Bachelor Naturalist Gestion and Valorisation.

Main achievements: preparation of courses, TD, partials and corrections.

May et June 2019 **Substitute teacher**, *High school François Mitterrand*, Créon
Replacement for a full-time math teacher.

2017–2019 **Tutor of mathematics**, *Bordeaux University*
Helping students from Licence 1 to Licence 3 from different disciplines (mathematics, physics, biology) in small groups.

Main achievements :

- teaching et explications;
- making appointments and organizing the schedule.

Various

Summer seasons 2018 to 2021 **Lifeguard**, *Soustons Town Hall*, Soustons Beach
Organization and supervision of swimming, prevention, rescue and first aid of victims.

Formation

- 2021–2022 **Master 2 : "Probability and random models"**, *Sorbonne university*, Paris
With honors. Content : Markov processes in discrete and continuous time, stochastic computation (and application to molecular biology), statistics, machine learning for medical data.
- 2020–2021 **Master 2 : "Métiers de l'Enseignement, de l'Education et de la Formation"**, *Bordeaux University*
Training to provide the tools and methods of teaching.
- June 2020 **Agrégation and CAPES competitive exams**
Accepted at the Agrégation 256th and at the CAPES 55th.
- 2018–2020 **Master : "Fundamental mathematics"**, *Bordeaux University*
With honors (2nd/16) and participation to the preparation for the Agrégation (with option probability / statistics) during the master 2.
- 2015–2018 **Licence : "Fundamental mathematics"**, *Bordeaux University*
With honors, 2nd/86
- 09/2015–12/2015 **First Common Year of Health and Paramedical Studies**, *Bordeaux University*
Participation in first semester and competitive exams (class in 1600) then re-orientation in math.
- 2015 **Scientific Baccalaureate**, *High school Victor Duruy*, Mont-de-Marsan
Baccalaureate mention quite well.

Presentations

- June 2023 **Assises juridiques de la santé et des biotechnologies**, *Invited by the Lexposia agency*, Paris
- May 2023 **MARGAUx PhD Days**, *Université de Poitiers*

Master Thesis

- 2022 **Master 2 "Probability and random models**, *Estimation of mechanistic models using a variational and sequential approach. Application to SARS-COV-2.*, supervised by Mélanie PRAGUE
- 2020 **Master 2 "Preparation for the Agrégation"**, *Arithmetic equations*, supervised by Laurent HERR
- 2019 **Master 1 "Fundamental mathematics"**, *Induction and restriction of representations, Forbenius reciprocity and applications in the case of symmetric groups*, supervised by Christine BACHOC

Language

English B1

Spanish basics

Computer skills

- programming language : Python (SimpleITK, Numpy, Pandas, ScikitLearn), R, Matlab
- Operating systems : Windows, Mac OS, Linux
- Text processing : Latex, Pages, Word, Powerpoint, Excel

Character

Thanks to my different professional experiences, I knew how to be punctual, ambitious, rigorous and to question myself. Moreover, I am responsible and autonomous. I enjoy working in a team and I am able to think critically.