

Chloé SERRE-COMBE

PHD STUDENT IN STATISTICS · EXTREME VALUE THEORY, GEOSTATISTICS

Montpellier, France

✉ chloe.serre-combe@umontpellier.fr | 📧 chloesrcb | 🌐 Website: chloesrcb.github.io

Education

Master in Statistics and Data Science, specialising in biostatistics

Montpellier, France

University of Montpellier

2020 - 2022

- **Courses:** Statistical theory and methods, optimization, linear models, extreme statistics, stochastic processes, time series

3rd year of engineering school, specialising in IT and management

Montpellier, France

Polytech

2019 - 2020

- **Courses:** Software engineering, databases, probability, statistics, graph theory, optimization, economy and management
- Programming: **python**, **C**, **Swift**, **Java**, **php**, **JavaScript**, **HTML/CSS**, assembly language

2nd year of bachelor in Pure and Applied Mathematics

Aix-en-Provence, France

University of Aix-Marseille

2018 - 2019

1st year of bachelor in Mathematics and Computer Science

Aix-en-Provence, France

University of Aix-Marseille

2017 - 2018

Work Experience

Ph.D Student

Montpellier, France

IMAG, University of Montpellier and Inria LEMON Team

2023 - 2025

- Stochastic generators of precipitation and risk assessment of urban flooding at high spatiotemporal resolution
- Spatio-temporal processes, geostatistics, extreme value theory, code in **R**
- **Supervisors:** Nicolas Meyer (IMAG, Inria), Thomas Opitz (INRAE, Avignon, France) and Gwladys Toulemonde (IMAG, CNRS, Inria)

Sandwich Student

Clapiers, France

KanopyMed

Sept 2021 - Aug 2022

- Master's Thesis: Quantification and modeling of mortality related to air pollution in the Montpellier agglomeration
- Spatial statistics, epidemiology, EQIS method, code in **python** and **JavaScript**
- **Supervisors:** Ulysse Rodts, Grégoire Mercier

Intern

Montpellier, France

IMAG, University of Montpellier

July 2020 - Aug 2021

- Extension of the **RKeOps** package, the **R** interface to **KeOps**, a software package for performing 2D array reduction computations on GPUs.
- **Supervisors:** Benjamin Charlier, Ghislain Durif

Intern

Aix-en-Provence, France

University of Aix-Marseille

June 2018 - July 2018

- Miller-Rabin primality test, comprehension, oral presentation and writing on the subject
- **Supervisor:** Julien Keller

Teachings

Modeling and Statistics

2022-2025

3rd year of engineering school, IT and Management specialisation, Polytech Montpellier, France

- Descriptive statistics, conditional probabilities, discrete and continuous random variables, random vectors and independence, **R** language
- Courses, exercises, **R** coding practice, exam writing and marking

Probability, Modeling and Statistics

2024

3rd year of engineering school, IT Development and Operations specialisation, Polytech Montpellier, France

- Conditional probabilities, discrete and continuous random variables
- Courses, exercises, exam writing and marking

Multidimensional Data Analysis

2023

4th year of engineering school, IT and Management speciality, Polytech Montpellier, France

- Statistics, linear regression, data visualization, **R** language, **ggplot** package, **Shiny** application
- Online courses on [github/chloesrcb/ig4-dataviz](https://github.com/chloesrcb/ig4-dataviz), applied exercises

Linear Algebra

2023

1st year of bachelor's degree, University of Montpellier, France

- Linear system, linear subspace, matrices, linear application, diagonalization, change of basis
- Exercises, exam marking

Private lessons

2021-2024

- Mathematics for 2 highschool students
- Mathematics for a *Classe préparatoire* student in B/L (pluridisciplinary) specialisation

Talks

INTERNATIONAL CONFERENCES

- July 2024** *Modeling moderate and extreme urban precipitation at high spatio-temporal resolution* at EVAN, Istituto Veneto di Scienze, Lettere ed Arti, Venezia, Italy
- June 2024** *Modeling moderate and extreme urban precipitation at high spatio-temporal resolution* at IMSC, Météo France, Toulouse, France
- June 2023** *Modeling moderate and extreme urban precipitation at high spatio-temporal resolution* at EVA, Univ. Bocconi, Milano, Italy

NATIONAL CONFERENCES

- May 2024** *Modeling moderate and extreme urban precipitation at high spatio-temporal resolution* at Journées des Statistiques (JDS), Univ. Bordeaux, France
- April 2024** *Modeling moderate and extreme urban precipitation at high spatio-temporal resolution* at Rencontres des Jeunes Statisticiens (RJS), Porquerolles, France
- Sept 2023** *Modeling urban precipitation at high spatio-temporal resolution* at MUFFINS Workshop, Aix-en-Provence, France
- July 2023** *Modeling urban precipitation at high spatio-temporal resolution* at Journées des Statistiques (JDS), Univ. Bruxelles, Belgium
- June 2023** *Towards statistical modeling of urban rainfall on a fine spatio-temporal scale* at RESSTE day, FRUMAM, Marseille, France

Involvement

- 2023-2024** Co-organizer of the Ph.D seminar at IMAG, University of Montpellier
- Feb 2024** Mediation for undergraduate women at *Maths C pour L*, CIRM, Marseille

Skills

- Programming** R, Python, C, HTML/CSS, JavaScript, Bash.
- Tools** Linux, \LaTeX , Git.
- Languages** **French** (native), **English** (fluent), **Italian** (conversational), **Spanish** (basic)