

Maxime Renard

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🏠 20/01/2001



Curriculum Vitæ

Education

- 2024-... **PhD Thesis, Applied Mathematics**, *Laboratoire Jean Kuntzmann & Université Grenoble Alpes*, Grenoble, France.
Numerical methods for viscoelastic models and application to biology.
Under the direction of Pierre Saramito (CNRS), Hélène Delanoë-Ayari (co-director, iLM) and Ibrahim Cheddadi (supervisor, TIMC).
- 2022-2024 **M.Sc.A., Applied Mathematics for Science and Industry**, *Université Grenoble Alpes & ENSIMAG*, Grenoble, France.
With highest honors.
Year 1 - Partial Differential & Numerical Methods, Variational Methods applied to modeling, Computing Science for Big Data and HPC, Object Oriented & Software design, Signal & Image processing, Numerical Optimization, Operations Research, Geometric modeling, Applied Probability & Statistics, Internship, Modeling project, English.
Year 2 - Fluid Mechanics, Wavelets Analysis & Differential Calculus, Quantum Information & Dynamics, Geophysical Imaging, Shape Optimization, Modeling Seminar, Internship.
- 2019-2022 **B.Sc. Mathematics**, *Université Grenoble Alpes*, Grenoble, France.
With highest honors.
Year 1 - Computer methods & Programming techniques, Elementary Analysis & Introduction to Scientific Computing, Mathematics Language & Elementary Geometry and Algebra, Elementary Mechanics for point masses I & II, Functional Programming, Discovering Applied Mathematics, Introduction to Linear Algebra, Advanced Analysis, DC electrical systems.
Year 2 - Algorithmic & Imperative Programming, Arithmetic & Advanced Linear and Bilinear Algebra, Series & Integration, Fourier Sequences & Series, Introduction to Topology & Differential Calculus, Electromagnetism, Statistics & Probabilities, English.
Year 3 - Research Project, Normed vector Spaces Topology, Advanced Algebra, Integral Calculus & Probabilities, Advanced Differential Calculus, Introduction to Numerical Modeling, Scientific English.
- 2019 **High-School Diploma**, *Lycée de la Matheysine*, La Mure, France.
With high honors. Scientific track, specialization in Mathematics.

Professional Experience

- 07/2024-09/2024 **Drive order picker**, *Hyper U*, Le Pont-de-Beauvoisin, France.

Professional Experience (continued)


- 02/2024-07/2024 **Internship**, *Laboratoire Jean Kuntzmann*, Grenoble, France.
Laboratory - LJK, Partial Differential Equations Team.
Direction - Pierre Saramito (*CNRS*), Ibrahim Cheddadi (*TIMC*), H el ene Delano e-Ayari (*iLM*) and Fran ois Graner (*CNRS*).
Topic - Finite Element resolution of viscoelastic models for living tissues.
Achievements - Extension of Oldroyd-B model to FENE-P (finite extension) model. Computation of an analytical solution for Poiseuille flow. Implementation in a parallelized C++ program based on the Rheolef library. Simulations under contraction geometry. Comparison to biological data experiment.
Productions - Report, C++ and Python code, defense in front of the Master Director.
- 06/2023-09/2023 **Internship**, *Commissariat   l' nergie Atomique*, Cadarache, France.
Laboratory - LMAG, Severe Accident Modeling Laboratory.
Topic - Development of numerical staggered finite difference schemes for shocks capture in 1D Euler's equations.
Achievements - Theoretical development of entropy-conservative finite difference schemes. Implementation in a C++ code with Python post-processing. Redaction of the code documentation and user guide. Regular meetings and ideas exchanges with tutors and other researchers.
Productions - Report, C++ program, defense in front of the team.
- 06/2022-07/2022 **Self-service employee**, *Hyper U*, Le Pont-de-Beauvoisin, France.
- 06/2021-08/2021 **Pizza maker**, *Huttopia Campings*, Aiguebelette, France.
- 06/2020-08/2020 **Maintainer & Barman**, *Huttopia Campings*, Aiguebelette, France.
- 06/2019-08/2019 **Barman**, *Huttopia Campings*, Aiguebelette, France.

Skills






- Languages **Good reading, writing and speaking competencies for English.** French is my mother-tongue. Some notions of German.
- Coding **Python, C++, L aTeX, bash, HTML, CSS, MySQL, R, Scilab, OCaml.**
- Soft skills **Effectively conveying complex ideas through written and verbal means. Evaluating information objectively, making informed decisions in academic pursuits. Persevering through setbacks and challenges. Contributing actively to group projects, fostering a positive team environment.**

Miscellaneous Experience

Mathematics

2019 - 2023  Homework assistance for Highschool and first and second year of Bachelor's Degree students.

Community Involvement

- 2024  **Grenoble Fiertés volunteer**, LGBTQ+ Pride March organizing association in Grenoble.
- 2020 - 2024  **Pontch'éthon volunteer**, fund-raising association for financing medical research. Association linked to *Téléthon*, TV fund-raising event in France.
- 2022 - 2023  **Divert'city member**, LGBTQ+ event organizing association.
- 2019 - 2022  **AIDES volunteer**, screening and doing prevention inside LGBTQ+ events and communities.
- 2012 - 2016  **Bouchons d'Amour 74 volunteer**, collecting bottle caps to be sold for financing medical equipment for disabled people.

Other

This Curriculum Vitæ has last been updated on October 2, 2024.