Alexandre Prieur

(he/him) | Paris, France | alexandre.prieur@obspm.fr

research-alex.prieur.eu | orcid.org/0009-0004-9125-4678 | github.com/alseidon | linkedin.com/in/alexandre-prieur42

Education

École Normale Supérieure, Department of Informatics 2022 — 2023
ENS Diploma, informatics minor *Paris, France*
- Relevant courses: compilation, visual data analysis, computational topology, reactive programming

Observatoire de Paris 2021 — 2022
M2 of astronomy & astrophysics, magna cum laude *Paris, France*
- Specialisation: Dynamics of Gravitational Systems
- Relevant courses: hamiltonian systems, classical gravitation, statistical n-body dynamics, numerical simulations

École Normale Supérieure, Department of Physics 2019 — 2023
ENS Diploma, physics major *Paris, France*
- Relevant courses: quantum physics, general relativity, statistical physics, classical mechanics

Research experience

PhD Sep 2023 — Present
LTE, Observatoire de Paris *Paris, France*
- Under the supervision of Philippe Robutel & Jacques Fejoz
- "Theoretical and numerical study of recurring dynamics in dynamical systems and application to the N-body problem"

Research visit Feb 2023 — Jun 2023
Dynamical Systems Group, University of Barcelona *Barcelona, Spain*
- With Marcel Guardia & Àngel Jorba
- Work on homoclinic connections of L3 in the restricted three-body problem, and on numerical integration with the `taylor` software

M2 internship Feb 2022 — Jun 2022
IMCCE, Observatoire de Paris *Paris, France*
- Under the supervision of Jacques Fejoz & Gwenaël Boué
- "Numerical search for periodic orbits and application to the three-body problem"

M2 observational internship Feb 2022
Observatoire de Haute-Provence *Saint-Michel-l'Observatoire, France*
- Under the supervision of Lucie Maquet, with Dylan Kuhn
- "Astrometry of small bodies"

M1 internship Mar 2021 — Jul 2021
University of Geneva *Geneva, Switzerland*
- Under the supervision of Giulia Cusin
- "Detection of a stochastic gravitational wave background by multiple sensors"

L3 internship Jul 2020
LPENS, ENS *Paris, France*
- Under the supervision of Antoine Gusdorf
- "Reduction of observational data of Cepheus E by SOFIA/GREAT"

Papers

(accepted with minor revisions) Marchal's family of periodic orbits. I: Stability of inclined co-orbital planetary systems, Prieur & Robutel Feb 2026
- Celestial Mechanics and Dynamical Astronomy

Teaching

Introduction to calculus, L1 mathematics (24h) Sep 2026
- University Paris Dauphine-PSL

Talks

Marchal's family: inclined co-orbitals in the three-body problem
- LYSM Workshop on Hamiltonian Dynamical Systems and Celestial Mechanics (Jan 2026, Roma, Italy)
- Workshop in Celestial Mechanics in honor of Alain Albouy (Jul 2025, Paris, France)

Projects

Developper, TaylorInterface.jl (https://github.com/Alseidon/TaylorInterface.jl) 2023 — Present
- Interface in Julia to the `taylor` integrator of Jorba et al, with support for high-order derivatives

Community

Co-chair, JuliaCon Local Paris 2025 (https://juliacon.org/local/paris2025/) Sep 2025
- European conference on the Julia programming language

Treasurer, Elbereth conference (https://conference-elbereth.github.io/) 2025 — 2026
- Conference for PhD students in astronomy and astrophysics in the Paris region

Outreach

Science communicator, Cité des Sciences et de l'Industrie 2023 — 2026
- Scientific outreach for classes and general public at the museum
- Creation of new animations, and of a roleplaying game to introduce celestial mechanics and space travel

Podcast guest, Les Petits Reporters des Sciences Oct 2025
- Tour of the Observatoire for a team of primary school children
- Guest for a podcast they created (activity organized by local libraries)

Skills

- **Languages**: French (fluent), Greek (fluent), English (fluent), German (intermediate)
- **Programming Languages**: Julia (expert), C (advanced)
  - **Others**: Bash, Python, OCaml, Rust, HTML/CSS, C++