



Erwan Hochart

PhD Candidate

Inquisitive, hard-working and determined, I am currently looking for a role in an environment that will challenge and motivate me to continue developing my analytical, numerical and computational skills while letting my curiosity flourish.

- 27th June, 1998. Clamart, France.
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- [LinkedIn Page](#)
- [GitHub Page](#)
- [Personal Site](#)

Languages

- | | |
|---------|-----------|
| English | Bilingual |
| French | Bilingual |
| Chinese | HSK3/4 |

Soft Skills

- Analytical
- Attention to detail
- Communication
- Curious
- Organisation
- Problem-solving

Programming Skills

- | | |
|----------------------|------------|
| Python | Fluent |
| C++ | Proficient |
| Bash | Proficient |
| Parallel Programming | Competent |
| HPC | Competent |
| Machine Learning | Familiar |

Education

- Sept. 2020 - **Master's of Physics** Leiden University, the Netherlands
Feb. 2023 Specialisation: Research in Physics, Cosmology
- Sept. 2017 - **Bachelor's in Astronomy** Rijksuniversiteit Groningen, the Netherlands
May 2020 Major: Astronomy
- Sept. 2016 - **Foundation Year of Physics** University of Manchester, England
May 2017
- Aug. 2002 - **Secondary Education** Western Academy of Beijing, China
May 2016 International Baccalaureate

Experience

- Sept. 2023 - **PhD: Computational Astronomy** Leiden University, the Netherlands
 - Programming languages: C++, Python, Bash.
 - High performance computing and parallelisation including use of University and National supercomputers.
 - Presentation of results (poster, talks, scientific papers).
 - Organise tutorial sessions and help teach Master Students in the course 'Simulation and Modeling in Astrophysics'.
 - Grade astronomy master students' final thesis presentation.
 - Supervise master students' thesis.
 - Additional Courses: Machine Learning I and II, Software Engineering, Software Development.
- Nov. 2019 - **Teaching Assistant** Rijksuniversiteit Groningen
Feb. 2020
 - Course: 'The Evolving Universe', for Bachelor students
 - Organise tutorial sessions.
 - Weekly presentations summarising previous class.

Projects

- Sept. 2022 - **Second Master's Thesis: Steady-State of Intermediate Mass Black Holes.** Leiden University
Feb. 2023
 - Computational research.
 - Python, C++, Slurm, Linux environment
 - Write an academic report.
 - Oral thesis defense.[Link to the project.](#)
- Aug. 2021 - **First Master's Thesis: Testing Modified Gravity Through Gravitational Waves** Leiden University
Feb. 2022
 - Theoretical research.
 - Python, Linux environment
 - Write an academic report.
 - Oral thesis defense.[Link to the project.](#)
- June 2021 - **Leiden/ESA Astrophysics Program** Leiden University, ESTEC and DLR
Aug. 2021
 - Literature analysis.
 - Write a report on the benefits of a Lunar radio telescope.[Link to the report.](#)

Sept. 2020 - **The Milky Way and its Exotic Millisecond Pulsar Population** Leiden University
Nov. 2020

- Collaborative computational research.
- Python, GitHub, Linux environment
- Write a report.
- Present findings orally.

[GitHub project link.](#)

Apr. 2020 - **Bachelor's Thesis: Cosmic Web Classification: NEXUS+ vs. DisPerSE** Rijksuniversiteit Groningen
June 2020

- Theoretical research.
- Python, Slurm, Linux environment
- Write an academic report.
- Oral thesis defense.

[Link to the project.](#)

Publications

July 2025 **Why Wide Jupiter-Mass Binary-Objects Cannot Form** Nature Astronomy

- Computational research.
- Python, Bash, Linux environment
- Write a scientific report.

[Link to the paper](#)

Mar. 2024 **The origin of wide Jupiter Mass Binary Objects** SciPost

- Computational research.
- Python, Bash, Linux environment
- Write a scientific report.

[Link to the paper](#) + [GitHub repository](#).

Feb. 2024 **The Steady State of Black Holes in Galactic Nuclei** Astronomy & Astrophysics

- Computational research.
- Python, Slurm, Linux environment
- Write a scientific report.

[Link to the paper](#) + [GitHub repository](#).

Conference Contributions

June 2025 **Oort Cloud Meeting** Stockholm, Sweden

Title: Exchanging Asteroids in Star Clusters
Format: Poster

[Link to the poster.](#)

June 2024 **Exoplanets5** Leiden, the Netherlands

Title: The origin of wide Jupiter Mass Binary Objects
Format: Poster

[Link to the poster.](#)

Oct. 2023 **Belgian-Dutch Gravitational Wave Meeting** Maastricht, the Netherlands

Title: The Steady State of Black Holes in Galactic Nuclei
Format: Presentation

[Link to the abstract + presentation.](#)

Hobbies

Football, Reading, Scuba Diving, Travelling, Bird Watching, Photography, Gardening