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.

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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 - Feb. 2023 — **Master's of Physics** — Leiden University, the Netherlands
Specialisation: Research in Physics, Cosmology

Sept. 2017 - May 2020 — **Bachelor's in Astronomy** — Rijksuniversiteit Groningen, the Netherlands
Major: Astronomy

Sept. 2016 - May 2017 — **Foundation Year of Physics** — University of Manchester, England

Aug. 2002 - May 2016 — **Secondary Education** — Western Academy of Beijing, China
International Baccalaureate

Experience

Sept. 2023 – — **PhD: Computational Astronomy** — Leiden University, the Netherlands

- Programming languages: C++, Python, Bash, Slurm.
- 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 Msc students' final thesis presentation.
- Additional Courses: Machine Learning I and II, Software Engineering, Software Development.

Nov. 2019 - Feb. 2020 — **Teaching Assistant** — Rijksuniversiteit Groningen

- Course: 'The Evolving Universe', for Bachelor students
- Organise tutorial sessions.
- Weekly presentations summarising previous class.

Projects

Sept. 2022 - Feb. 2023 — **Second Master's Thesis: Steady-State of Intermediate Mass Black Holes.** — Leiden University

- Computational research.
- Python, C++, Slurm, Linux environment
- Write an academic report.
- Oral thesis defense.

Link to the project.

Aug. 2021 - Feb. 2022 — **First Master's Thesis: Testing Modified Gravity Through Gravitational Waves** — Leiden University

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

Link to the project.

June 2021 - Aug. 2021 — **Leiden/ESA Astrophysics Program** — Leiden University, ESTEC and DLR

- Literature analysis.
- Write a report on the benefits of a Lunar radio telescope.

Link to the report.

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

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

Link to the project.

Publications: See Google Scholar

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

September 2025	**EPSC-DPS**	Helsinki, Finland

Nemesis: An Algorithm for Simulating Planetary Systems in Clusters
Link to abstract.

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

Exchanging Asteroids in Star Clusters
Link to the poster.

June 2024	**Exoplanets5**	Leiden, the Netherlands

The origin of wide Jupiter Mass Binary Objects
Link to the poster.

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

The Steady State of Black Holes in Galactic Nuclei
Link to the abstract + presentation.

Supervision Experience

Feb. 2025 – Nov. 2025	**Planet-moon ejections in close stellar encounters**	Leiden University, the Netherlands

Msc student Yannick Badoux.

Feb. 2025 – Nov. 2025	**Slingshotting Black Holes**	Leiden University, the Netherlands

Msc student Benson Rugers.

Hobbies

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