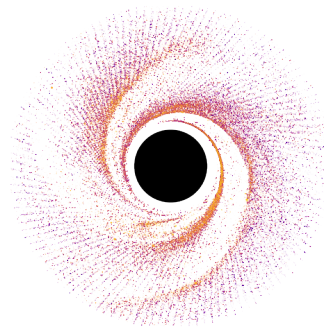


Curriculum Vitae — Maarten Wijdeveld



🌐 <https://maartenwijdeveld.github.io/personal-website/>

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References

Dr. M. A. Mościbrodzka

Associate professor, Radboud University
m.moscibrodzka@astro.ru.nl

Dr. O. R. Pols

Associate professor, Radboud University
o.pols@astro.ru.nl

ABOUT ME

As a student, I have consistently pursued research through large-scale astrophysical modelling, from early work simulating binary mass transfer to recent research involving radiative transfer in GRMHD accretion flows. I am deeply fascinated by dynamical processes such as accretion and now hope to continue my enthusiasm for astronomy in a PhD.

EDUCATION

MSc in Particle and Astrophysics - (completed but diploma will be awarded 04/2026) 09/2023 - 07/2025
Radboud University, Nijmegen, the Netherlands

- Final grade: 8.7/10, distinction *cum laude* (top ~5-10%)
- Relevant coursework: e.g. BH accretion, GW astronomy, foundations of GR and astroparticle physics

BSc in Physics and Astronomy 09/2019 - 07/2023
Radboud University, Nijmegen, the Netherlands

- Specialisation: Astrophysics
- Erasmus+ Exchange at the Norwegian University of Science and Technology, Trondheim, Norway (01/2023 – 07/2023)

RESEARCH EXPERIENCE

COLABS research programme 09/2025 - present
Tohoku University, Sendai, Japan

- Receiving a JASSO scholarship to do extracurricular research on protoplanetary disks through non-ideal MHD simulations using Athena++ (C++), supervised by Dr. Kengo Tomida

Master's Thesis Research (60 ECs) 09/2023 - 07/2025
Radboud University, Nijmegen, the Netherlands

- Grade: 9.0/10
- Worked on relativistic radiative transfer simulations to study the emission from magnetically arrested disk GRMHD simulations of Sagittarius A*, supervised by Dr. Monika Mościbrodzka
- I learned how to work with extensive C-codes and set-up a large numerical study on the departments cluster. Moreover, I wrote dozens of Python scripts to efficiently post-process and visualise my simulation data.

Bachelor's Thesis Research

09/2022 - 05/2023

Radboud University, Nijmegen, the Netherlands

- Grade: 9.0/10 (top 10% of that years submissions)
- Conducted binary evolution simulations in MESA to model type-B subdwarf progenitors that undergo mass transfer through stable Roche-lobe overflow, supervised by Dr. Onno Pols
- First learned how to work with a large-scale computing cluster and gained experience efficiently analysing data in Python

PUBLICATIONS AND PRESENTATIONS

Co-author

09/2025

- Moltzer, C. A. S., Pols, O. R., Van Winckel, H., Temmink, K. D., and Wijdeveld, M. W. (2025). *Understanding post-RGB binaries through stable mass transfer*. A&A (accepted). [arXiv:2509.15580](#)
I contributed stellar evolution models that I initially built as an extension to my bachelor's thesis.

Conference Research Poster

05/2025

- Presented part of my MSc research as a poster at the 80th Netherlands Astronomy Conference, Berg en Dal, the Netherlands

TEACHING, LEADERSHIP AND OTHER EXPERIENCE

Teaching Assistant

09/2024 - 12/2024

- TA for Programming 1 (Python) for first-year Physics and Mathematics undergraduates
- TA for Extreme Astrophysics, a 3rd-year bachelor course, covering high-energy astrophysics

Astronomy Outreach

10/2023 - 07/2025

- Led tours of Radboud University's telescope domes and gave gravity well demonstrations

Movie Night Committee

09/2023 - 07/2025

- Led the yearly student movie night promo-subcommittee at the Faculty of Science (350+ attendees), completely overhauling, rebranding and coordinating all promotional material from scratch

Radboud Radio Lab

02/2024 - 07/2024

- Part of a small student team that manually tested 1500+ digitizers for the recent radio antenna upgrade at the Pierre Auger Observatory in Argentina

Student Mentor

2020 - 2021

- Guided a group of 15 new bachelor students and organised bi-weekly meetings to help them transition to university life

COMPUTATIONAL EXPERIENCE

- **Python:** Extensive experience in scientific data analysis, visualisation and (lightweight) modelling
- **C, Fortran (GNU/Linux):** Experienced with operating, altering and bash-pipelining large-scale codes on a computing cluster, such as OpenFOAM, MESA, ebhlight and grmonty
- **LaTeX:** Proficient in typesetting research documents and reports

LANGUAGES

- **Dutch:** Native speaker
- **English:** Full bilingual proficiency, Cambridge C2 proficiency (awarded 01/2019)
- **Bokmål Norwegian:** Basic proficiency (A1/A2)
- **Mandarin Chinese:** HSK 1 certificate (A1)

HOBBIES AND INTERESTS

- Long-distance solo mountain trekking (hiking + camping, 100+ km) for five years. This has taught me independence, planning, adaptability and resilience.
- I am a member of a student climbing association, enjoy sketching, and have a soft spot for cats.