

Floor van Donkelaar

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ORCID: [0000-0002-7235-9747](https://orcid.org/0000-0002-7235-9747)

Department of Astrophysics, University of Zurich

Main research interests: the formation and evolution of galactic structures in Milky Way analogues at high redshift and their interactions with stellar clusters through (cosmological) simulations.

Personal Information

Nationality Dutch

Date of Birth July 1 1998

Languages Dutch (Native), English (Fluent), German (Elementary), Swedish (Elementary)

Education

MSc in Astrophysics

Lund University, Sweden

Aug 2019 - May 2021

GPA: 3.83/4.00

Thesis: [The fate of stars born in gas-rich high redshift galaxies](#)

Supervisor: Prof. Dr. Oscar Agertz

BSc in sociotechnical engineering, minor in modern physics

University of Twente (ATLAS), The Netherlands

Sep 2016 - Jul 2019

GPA: 3.85/4.00

Thesis: The Star Formation Rate, Metallicity and Thermal Pressure in Galaxies at $z=0.4$ using MUSE

Supervisor: Dr. Kasper Borello Schmidt from Leibniz-Institut für Astrophysik Potsdam

Research Experience

University of Zurich

PhD student

Sep 2021 – Present

Supervisor: Prof. Dr. Lucio Mayer

- Research on the formation of disc galaxies investigating the gasue halos with the high resolution cosmological simulation, PHOEBOS, to be used in combination with observations of SKA.
- Research on the formation of galaxy structures with GIGAERIS, a cosmological, N-body hydrodynamical zoom-in simulation of the formation of a Milky Way-sized galaxy.

Oxford University

Research Internship

Jun 2020 – Nov 2020

Supervisor: Dr. Kearn Grisdale

Analyzing gas and stellar properties of Giant Molecular Clouds in Large Magellanic Cloud-size disc galaxy with the use of N-body hydrodynamical simulations.

Leibniz-Institut für Astrophysik Potsdam

Summer Project

Jul 2017

Supervisor: Dr. Kasper Borello Schmidt

Generating template spectra of MUSE-Wide emission lines sources.

References

Prof. Dr. Lucio Mayer, University of Zurich, lucio.mayer@uzh.ch

Prof. Dr. Oscar Agertz, Lund University, oscar.agertz@astro.lu.se

Teaching & Public Outreach

supervising Master student(s), University of Zurich

Aug 2024 - Present

Supervisor for the semester thesis of ETH student Daniel Swingler, on the topic of star forming gas cloud properties at high redshift.

Teaching Assistant, University of Zurich

AST 245: Computational Astrophysics

Fall 2024

AST 202: The Universe: Contents, Origin, Evolution and Future

Spring 2024

AST 245: Computational Astrophysics

Fall 2023

AST 295: Astrobiology proseminar

Fall 2023

AST 248: The Sun and Planets

Spring 2023

AST 295: Astrobiology proseminar

Fall 2022

AST 202: The Universe: Contents, Origin, Evolution and Future

Spring 2022

AST 201: Introduction to Astrobiology

Fall 2021

Chief Public Relations, Green Team Twente

Jun 2017 - Sep 2018

Student team working on one of the most efficient hydrogen city cars in world. As head of the public relations and graphic designer of the team, it was my main responsibility to decide about the appearance of the team and organ zine the main events.

Invited Talks

A full list of the talks I have given can be found on my [website](#).

- **'The Milky Way's nuclear star cluster'**
ISSI (Bern), 30 Aug 2023
- **'Stellar Systems at $z > 4$: The hybrid formation scenario for the nuclear star cluster'**
Lund University, 8 May 2023
- **'Stellar Systems at $z > 4$: Proto-Globular Cluster properties and the imposter amongst us'**
Lund University, 16 Nov 2022
- **'Disc formation and Globular Cluster analogs in the high resolution GigaEris simulation'**
ISSI (Bern), 31 Aug 2022

Publication overview

Number of (first-author) publications:

3 (3)

Number of (first-author) submissions:

2 (2)

Sum of times cited:

33

Skills

Programming

Python | MATLAB | SQL | C | C++

Other

LaTeX | Windows OS | Linux OS | Microsoft Office Package | Adobe Package

Active scientific member

Member of the HI Galaxy Science working group of **SKA** & part of **SKACH**.

Organizations

- **Public Relations Responsible** July 2023 - Present
of the [Grasshopper Club Zürich Rugby women's team](#)
- **PhD Representative** May 2022 - Sep 2024
At the Institute of Computational Sciences
- **UCT Alumni Association** Sep 2021 - Aug 2022
Chair & PR representative
- **Faculty Council EEMCS** Sep 2017 - Aug 2018
Elected member, University of Twente