

NILS-MARTIN ROBELING

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Guneschgasse 3/15, 1190 ✧ Vienna, Austria

EDUCATION

University of Vienna

October 2024 - Ongoing

PhD in Theoretical Astrophysics

- Research on atmospheric modelling for gas giants
- Development of radiative transfer models in Julia

Chalmers University of Technology

September 2017 - January 2023

Master's in Physics (Astrophysics and Machine learning), M.Sc, GPA: 3.7/4.0

Bachelor's in Physics and Software Engineering, B.Sc

- 60 ECTS Research thesis in AGN formation (Compact obscured nuclei)
- Took on extra course load (50%) to allow for more astronomy courses
- Invited speaker to international conference, presenting research on galaxy interaction simulation

Leiden University

August 2021- January 2022

Master's in Astrophysics, GPA: 3.5/4.0

- Exchange doing research oriented courses in astronomy

EXPERIENCE

Research Scientist - SAAB AB

March 2023 - October 2024

- Development and research of signal processing algorithms
- Teaching and lecturing in fourier theory and signal processing
- Radar system design, scientific programming
- High-level maths and software engineering
- Reinforcement learning applications for radar systems

Project Researcher - Chalmers University of Technology

February 2023 - April 2023

- Assistance on ALMA proposal writing
- Solo observation proposal writing for Onsala 20m - study on abiogenesis in hot cores and first observational evidence of 33 GHz Methanimine maser in the ISM (Awarded 54 hours)

Astronomy Outreach - Onsala Space Observatory

January 2021- January 2023

- Guided tours of the local observatory for physics BSc students as well as lectures and Q&As
- Taught and examined high school AP astrophysics module

Software Engineer - Centiro AB

June 2020 - August 2022

- Back-end engineering of logistical systems
- Machine learning (ANN) and Data science/statistics

PUBLICATIONS

Jupiter as an exoplanet

Summer 2026

The Nature of Compact Obscured Nuclei and Outflows in ARP 299

In Progress

Formation of compact obscured nuclei (CON) (MSc publication)

Spring 2023

TALKS & AWARDS

"Self-consistent Modelling of Gas Giants" Contr. talk ÖGAA conference, Salzburg	<i>Spring 2026</i>
"(Photo-) Chemical Modeling of Jupiter: A self-consistent model" Contr. talk WWAS 2025	<i>December 2025</i>
"Simulating the upper atmosphere of Jupiter and prospects for exoplanets", Contr. talk GWESM VII	<i>September 2025</i>
"Thermo-chemical simulation of the upper atmospheres of Jupiter and Saturn", Contr. talk GWESM VI	<i>May 2025</i>
"Atmospheric modeling of Jupiter" Contr. talk Ariel Consortium, Leiden	<i>Spring 2025</i>
The Nature of Compact Obscured Nuclei and Outflows in ARP 299	<i>In Progress</i>
First Observational Evidence of 33GHz Methanimine Maser in the ISM	<i>Data received, In progress</i>
Formation of compact obscured nuclei (CON) (MSc publication)	<i>Spring 2023</i>
"Simulation possibilities of CONs" invited speaker "Behind a curtain of dust IV"	<i>Summer 2022</i>
"The wonders of space", Month-long lecture tour of southern Sweden	<i>Fall 2022</i>
Sibels Stipend Award (10000 SEK) for academic achievement	<i>Summer 2018</i>