Evert Nasedkin

Curriculum Vitae

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Nationality - Canadian
Date of Birth - 11.20.1995

Summary

An astronomer by training, I'm excited to apply the research and technical skills developed during my PhD to projects a little closer to home. I'm particularly interested in tackling problems related to climate change, biodiversity and sustainability through earth observation and analysis of geospatial datasets.

Education

2020-Present **Doctoral Candidate**,
University of Heidelberg, Heidelberg, DE.
International Max Planck Research School, Max Planck Institute for Astronomy

2018–2020 **Masters of Science in Physics**,
ETH Zürich, Zürich, CH.

2013–2018 **Bachelors of Science, Honours Co-operative Physics**,
University of Waterloo, Waterloo, ON.

Work Experience

2020-Present **PhD Candidate**, *Max Planck Institute for Astronomy*, Heidelberg, DE.
- Performed Bayesian statistical analyses to characterise the atmospheric properties of exoplanets.
- Designed tests to understand the impact of systematic noise on the physical interpretation of retrieved atmospheric parameters.
- Contributed to open source packages for 1D radiative transfer, atmospheric model fitting, and high-contrast imaging data analysis.
- Led large, community-focused teams through applications for observing time with world class facilities.

04-12 2022 **Supervisor for Bachelor's Miniprojekt**, *MPIA*, Heidelberg, DE.
- Supervised a bachelor's student in implementing a high-contrast imaging algorithm in Python.

05-08 2017 **Research Assistant**, *Institute for Astronomy*, ETH Zürich, Zürich, CH.
- Designed and performed mechanical tests at cryogenic conditions for astronomical instrumentation.

08-12 2016 **Research Assistant**, *nEXO Collaboration*, McGill University, Montreal, QC.
- Simulated and assembled electroluminescent test source for the nEXO neutrino experiment.

2015-2016 **Undergraduate Research Assistant**, *DEAP-3600 Dark Matter Search*, Sudbury, ON.
- Implemented and automated analysis routine for characterising detector behaviour.

2014-2016 **Aerodynamics Team Member**, *FSAE Student Design Team*, Waterloo, ON, .

01-04 2015 **English Teacher**, *TOBB University of Economics and Technology*, Ankara, TR.

Selected Publications

- Nasedkin, E. *et al.* submitted *"How do systematics from high-contrast image processing impact the physical properties inferred with atmospheric retrievals?"*

- Vasist, M. *et al.* incl Nasedkin (2023) *"Neural posterior estimation for exoplanetary atmospheric retrieval"* A&A 672, A147.
- Patapis, P., Nasedkin, E. *et al.* (2021) *"Direct Emission Spectroscopy of Exoplanets with the Medium Resolution Imaging Spectrometer on board JWST MIRI."* A&A 658 A72.

Selected Conferences & Talks

02 2023 **ESO Thirty-Minute-Talk.** *ESO Santiago.*
- Invited talk: So you found an exoplanet, now what are you going to do with it?

10 2022 **The First Six Months of Exoplanet Atmospheres with JWST.** *Ringberg Workshop.*
- Contributed talk: The Mid-Infrared Opportunity: Direct Imaging Spectroscopy with MIRI/MRS.

09 2021 **European Planetary Science Conference**, *Virtual.*
- Contributed talk: Four-of-a-Kind: HR8799 - Exploring the atmospheres of the HR8799 system with VLTI/GRAVITY.

08 2021 **Atmospheres, Atmospheres! Do I look like I care about atmospheres?** *Virtual.*
- Invited Lecture: petitRADTRANS: a how-to.
- Contributed talk: Four-of-a-Kind: HR8799 - Exploring the atmospheres of the HR8799 system with VLTI/GRAVITY.

07 2022 **Numerical Astrophysics School for Exoplanetary Sciences**, *Hanau, DE.*
- Lecture: Exoplanetary atmosphere models and transit spectroscopic retrieval.

02 2020 **Tackling the Complexities of Substellar Objects: From Brown Dwarfs to Exoplanets**, *Lorentz Centre, Leiden, NL.*

01 2020 **Deep Learning Meets (Astro)physics**, *Zürich, CH.*

06 2017 **5th EIROForum School on Instrumentation**, *EIROForum, Hamburg, DE.*

Outreach and Service

2021-Present **Member, Astronomers for Planet Earth.**

2020-2023 **IMPRS-HD 16th Generation Representative**, MPIA, Heidelberg, DE.

2021-2023 **MPIA Student Representative**, MPIA, Heidelberg, DE.

2020-2023 **Exocoffee Organizer**, *APEx Department*, MPIA, Heidelberg, DE.
- Organize speakers and chair the weekly Exocoffee seminar.

Technical Skills

Programming Numerical modelling and data visualisation.
Python (`numpy`, `scikit-learn`, `Tensorflow`, `JAX`), Fortran, C++ LaTeX, Linux

Electronics Digital and Analogue Circuits, Soldering, Cryogenic wiring

Languages

English Native speaker

Spanish A2

German A2

Personal Interests

Photography, Cycling, Triathlon, Music, Hiking.