




Name: Nils Henrik Pehlivan Rhodin
Date of birth: 1989-02-04
Nationality: Swedish
Home address: Meijerbergsgatan 4, 412 60 Göteborg, Sweden

Objective: Tackle information with a critical mindset and a data-driven approach.
Qualifications: Mathematical proficiency; data processing; image analysis

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ACADEMIC MERITS

- 2015 – present **Ph.D. student, Dark Cosmology Centre, Niels Bohr Institute**
◇ Acquired skills: *Project management; data analysis; programming; teaching*
◇ Thesis: *Cosmic Silhouettes in Space and Time: probing the galaxy population with beacons from afar*
◇ Principal supervisor: Assoc. Prof. Lise Bech Christensen
- 2013 – 2015 **Master's Degree in Astronomy and Astrophysics, Lund Observatory**
◇ Acquired skills: *Hypothesis-testing; programming; communicating science*
◇ Thesis: *Determining the effective temperature of cool stars from near-infrared spectra*
◇ Principal supervisor: Assoc. Prof. Nils Ryde
- 2009 – 2013 **Bachelor's Degree in Physics, Edinburgh- and Lund University**
◇ Acquired skills: *Mathematical proficiency; collaborative -and independent work*
◇ Thesis: *Line identification and temperature diagnostics of Eta Carina's Sr-Filament*
◇ Principal supervisor: Assoc. Prof. Henrik Hartman

EMPLOYMENT

- 2015 – present **Ph.D. student, Dark Cosmology Centre, Niels Bohr Institute, Denmark**
Employed as a P.h.D. student, I conduct research projects, take courses, and act as a teaching assistant (TA). As a TA, I was responsible for preparation, supervision and evaluation of lab-work and telescope observations in a quantum mechanics course for two semesters, and in a telescope observing school at the Nordic Optical Telescope in La Palma for one semester, both on undergraduate level. I regularly attend conferences and visit collaborators internationally.
- 2013 – 2015 **Private Tutor, Akademisk Omtanke, Malmö, Sweden**
As a private tutor I taught youth from primary school through to university. The work spanned english and most natural-science oriented subjects, with a strong emphasis on physics and mathematics. My students have successfully graduated, with grades exceeding expectations.
- 2014 June – Aug. **Observational Assistant, Swedish Solar Telescope (SST), La Palma, Spain**
Stationed at the Swedish solar telescope operated by the Institute of Solar Physics at Stockholm University, my duties included the daily routines associated with the handling of the telescope (opening, closing, data acquisition, troubleshooting) as well as assisting the visiting observers in every aspect of the observations.

PROFESSIONAL EXPERIENCE AND COLLABORATIONS

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| 2018 May | I organised a workshop on DLA-galaxies. The event resulted in multiple projects in collaboration with Oscar Agertz at Lund Observatory, one of which I lead. |
| 2017 May – June | Collaboration with the “Galaxies and Cosmology” group at Department of Astronomy, Stockholm University, Sweden |
| 2017 Jan. | Observing at the Nordic Optical Telescope (NOT), La Palma, Spain |

PROGRAMMING AND COMPUTER SKILLS

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| Operating systems | Daily usage of UNIX-based operating systems and bash -and tcsh terminal shells. Operate in Mac OS X on a daily basis. Prior experience with Windows . |
| Languages | Proficient in PYTHON . Experience scripting in MATLAB , IDL , HTML , CSS . |
| Version control sys. | Git , minor experience. |
| Text-editors | Daily use of Sublime Text and L^AT_EX . Prior experience with VI/VIM , EMACS , TextWrangler and the Microsoft Office Package . |
| Softwares | IRAF for image and spectral data reduction; SEXTRACTOR , GAIA:SkyCat , ds9 and GALFIT for image analysis (photometry and morphology); Spectroscopy Made Easy (SME) and VOIGTFIT for spectral analysis; LEPHARE for spectral energy distribution (SED) fitting. |

MISCELLANEOUS

- **English:** working language, fluent. • **French:** good listening comprehension and oral, some written.
- **Danish:** Good listening comprehension. • **Swedish:** Mother tongue. • **Driver’s License (B)**
- **Cambridge Certificate in Advanced English** • Together with my wife, I am a *Sponsor* for a child in Cambodia through the Child Fund Organisation since 2016. • Co-organiser of “Cake Talks”; weekly research-seminars at Dark Cosmology Centre since 2015.

SELECTED CONFERENCE PRESENTATIONS

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| 2018 | Dec. | Occasion: Guest seminar on absorbing galaxies Location: Onsala Observatory, Sweden | <i>Oral</i> |
| 2017 | Dec. | Conference: Gas/Galaxies On Top of Quasars Location: IUCAA, Pune, India | <i>Oral</i> |
| 2017 | Apr. | Conference: Big Questions in Astrophysics Location: Lund Observatory, Sweden | <i>Oral</i> |
| 2017 | June | Conference: European Week of Astronomy and Space Science Location: Prague, Czech Republic | <i>Oral</i> |
| 2016 | Dec. | Meeting: Lund-Malmö Centre for Atomic Systems Location: Malmö University, Sweden | <i>Oral, Invited</i> |
| 2016 | Apr. | Conference: Gas/Galaxies On Top of Quasars) Location: University of Pittsburgh, U.S. | <i>Oral</i> |

ACADEMIC PUBLICATIONS

N. H. P. Rhodin, O. Agertz, L. Christensen, J. P. U. Fynbo, F. Renaud, 2018, *The role of disk and halo gas in zoom-in simulations of Damped and sub-Damped Lyman- α Absorbers?*, MNRAS, (in manuscript)

N. H. P. Rhodin, J. -K. Krogager, L. Christensen, K. E. Heintz, P. Møller, T. Zafar, and J. P. U. Fynbo, 2018, *HST unveils stellar populations in absorption-selected galaxies*, ApJ, in manuscript)

N. H. P. Rhodin, L. Christensen, P. Møller, T. Zafar, and J. P. U. Fynbo, 2018, *Stellar masses, metallicity gradients and suppressed star formation revealed in a new sample of absorption selected galaxies*, A&A, 618, A129

J. P. U. Fynbo, K. E. Heintz, M. Neeleman, L. Christensen, M. Dessauges-Zavadsky, N. Kanekar, P. Møller, J. X. Prochaska, **N. H. P. Rhodin**, and M. Zwaan, 2018, *ALMA observations of a metal-rich damped Ly α absorber at $z = 2.5832$: evidence for strong galactic winds in a galaxy group*, MNRAS, 479, 2126

N. Kanekar, J. X. Prochaska, L. Christensen, **N. H. P. Rhodin**, M. Neeleman, M. A. Zwaan, P. Møller, M. Dessauges-Zavadsky, J. P. U. Fynbo, and T. Zafar, 2018, *Massive, Absorption-selected Galaxies at Intermediate Redshifts*, ApJL, 856, L23

P. Møller, L. Christensen, M. A. Zwaan, N. Kanekar, J. X. Prochaska, **N. H. P. Rhodin**, M. Dessauges-Zavadsky, J. P. U. Fynbo, M. Neeleman, and T. Zafar, 2018, *ALMA + VLT observations of a damped Lyman- α absorbing galaxy: massive, wide CO emission, gas-rich but with very low SFR*, MNRAS, 474, 4039

K. E. Heintz, D. Malesani, K. Wiersema, P. Jakobsson, J. P. U. Fynbo, S. Savaglio, Z. Cano, S. Covino, V. D’Elia, A. Gomboc, F. Hammer, L. Kaper, B. Milvang-Jensen, P. Møller, S. Piranomonte, J. Selsing, **N. H. P. Rhodin**, N. R. Tanvir, C. C. Thöne, A. de Ugarte Postigo, S. D. Vergani, and D. Watson, 2018, *The luminous, massive and solar metallicity galaxy hosting the Swift γ -ray burst GRB 160804A at $z=0.737$* , MNRAS, 474, 2738

K. E. Heintz, J. P. U. Fynbo, P. Jakobsson, T. Krühler, L. Christensen, D. Watson, C. Ledoux, P. Noterdaeme, D. A. Perley, **H. Rhodin**, J. Selsing, S. Schulze, N. R. Tanvir, P. Møller, P. Goldoni, D. Xu, and B. Milvang-Jensen, 2017, *Steep extinction towards GRB 140506A reconciled from host galaxy observations: Evidence that steep reddening laws are local*, A&A, 601, A83