

# Matthias Samland

## Curriculum Vitae

Königstuhl 17  
69117 Heidelberg, Germany  
✉ [samland@mpia.de](mailto:samland@mpia.de)  
🌐 [Personal website](#)

### Personal Information

Position Post-doctoral researcher at Stockholm University  
Languages native German, native-level English, fluent Japanese (JLPT/N1)

### Education

- Nov. 2015 – **Ph.D., Astronomy**, *Max Planck Institute for Astronomy*, Thesis: HIGH-CONTRAST IMAGING CHARACTERIZATION OF EXOPLANETS, Ruprecht-Karls University, Heidelberg, Germany. Final grade: 1.0 (top grade), “very good”, with the highest distinction “summa cum laude”. Supervisor: Prof. Dr. Thomas Henning
- Jul. 2019
- Sep. 2012 – **Master of Science, Physics**, *Max Planck Institute for Astronomy*, Thesis: PRINCIPAL COMPONENT ANALYSIS IN THE CONTEXT OF HIGH-CONTRAST IMAGING, Ruprecht-Karls University, Heidelberg, Germany. Supervisor: Dr. Wolfgang Brandner
- Sep. 2015
- Nov. 2012 – **Research Project**, *Infrared Astronomy Group, Osaka University, Japan*, Topic: HIGH-CONTRAST IMAGING WITH THE SEEDS-SURVEY. Supervisor: Prof. Dr. Hiroshi Shibai / Prof. Dr. Misato Fukagawa
- Sep. 2013
- Sep. 2009 – **Bachelor of Science, Physics**, *Max Planck Institute for Astronomy*, Thesis: GLOBAL-SCALE GLACIATION EVENTS AND THE LINK TO EXOPLANETS, Ruprecht-Karls University, Heidelberg, Germany. Supervisor: Prof. Dr. Lisa Kaltenegger
- Aug. 2012

### Employment History

- Oct. 2021 onward **Post-doctoral researcher; Planet and Star Formation Department, Max Planck Institute for Astronomy, Heidelberg, Germany.**
- Oct. 2019 – **Post-doctoral researcher; Stars, Planets and Astrobiology Group, Stockholm University, Stockholm, Sweden.**  
Sep. 2021
- Aug. 2019 – **Post-doctoral researcher; Planet and Star Formation Department, Max Planck Institute for Astronomy for Astronomy, Heidelberg, Germany.**  
Sep. 2019
- Nov. 2015 – **Ph.D. candidate; Planet and Star Formation Department, Max Planck Institute for Astronomy for Astronomy, Heidelberg, Germany.**  
Jul. 2019  
Supervisor: Prof. Dr. Thomas Henning

### Teaching Experience

- 2018 – 2019 **Supervision of master’s student.**  
Jonas Kemmer – Homogeneous Reduction of the SPHERE/SHINE Survey Using ANDROMEDA and PyKLIP
- Sep. 2014 – **Undegraduate Teaching Assistant.**  
Feb. 2015 Introduction to Astronomy II

---

## Talks

- 06, 10, 18. **Application of transit light curve methods to direct imaging exoplanet detection.**  
April 2018 MPIA-JPL Meeting, Keck Institute for Space Studies, Pasadena, USA; UCSB Seminar Talk, Santa Barbara, USA; University of Arizona Seminar Talk, Tucson, USA
01. June **Increasing satellite spot stability for SPHERE.**  
2018 SPHERE Upgrade Meeting, Grenoble, France
01. June **CHARIS Pipeline adaption for SPHERE IFS.**  
2018 SPHERE Upgrade Meeting, Grenoble, France
16. Dec. **Spectral Analysis of Directly Imaged Planet 51 Eridani b with SPHERE and BACON.**  
2017 CHARIS International Workshop, Tokyo, Japan
17. Oct. **Testing alternative Pipelines for the Detection of Disks in the SHINE-wide IRDIS sample.**  
2017 SPHERE General Science Meeting, Nice, France
07. July **Summary of astrometric and photometric techniques used in direct imaging.**  
2017 NACO-ISPY Survey Meeting, Heidelberg, Germany
18. June **Spectral Analysis of Directly Imaged Planet 51 Eridani b with SPHERE and BACON.**  
2017 MIAPP Workshop, Munich, Germany
28. Sept. **Spectral and atmospheric characterization of 51 Eridani b.**  
2016 Japanese-German Planet Formation Meeting, Ishigaki, Japan
09. Feb. **SPHERE GTO Target List: Additional IR Excess Criteria.**  
2016 SPHERE Workshop, Lyon, France
21. Oct. **High angular resolution observations of the disk around HD61005.**  
2015 SPHERE General Science Meeting / Geneva Observatory, Switzerland
02. Sept. **SEEDS Direct Imaging Survey of Ursa Major Members.**  
2013 Autumn Meeting of the Astronomical Society of Japan / 日本天文学会 2013 年秋季年会, Tohoku University, Japan

---

## Posters

27. July - **TRAP: Applying transit techniques to direct imaging data.**  
31. July 2020 Exoplanets 3 Online, Heidelberg, Germany
29. July - **PDS 70 b - Discovery and characterization of a young planet in the gap of a transition disk using VLT/SPHERE.**  
3. Aug 2018 Cool Stars 20, Boston, USA
2. - 6. **PDS 70 b - Discovery and characterization of a young planet in the gap of a transition disk using VLT/SPHERE.**  
July 2018 Exoplanets II, Cambridge, UK
25. - 27. **Spectral Characterization of 51 Eri b with SPHERE and BACON.**  
Sept. 2017 Planet Formation and Evolution 2017, Jena, Germany
24. - 28. **Spectral Characterization of 51 Eri b with SPHERE and BACON.**  
April 2017 Atmospheres of Disks and Planets 2017: Chemistry, Dynamics and Observations, Ringberg, Germany

---

## Observing Experience

- Sept. 2015 **2.2m telescope/FEROS, La Silla, Chile, 10 nights as part of high-resolution spectroscopy of RV binary candidates survey.**
- June 2015 **VLT/SPHERE, Paranal, Chile, 11 nights as part of SHINE GTO exoplanet survey.**
- May 2013 **Subaru/HiCIAO, Mauna Kea, Hawaii, 4 nights as part of SEEDS exoplanet survey.**

## Accepted PI Proposals

- VLT/SPHERE 2020 winter: Targeted imaging of a benchmark brown dwarf detected by Gaia and RV (cancelled due to pandemic)
- LBT/ALES 2018 winter: IFU L-band spectroscopy of HD 206893 b (reddest known brown dwarf companion)
- LBT/LMIRC 2016 winter: Observational confirmation of planet candidate CVSO 30 c in L-band (weather loss)

## Organisational Roles

(Stockholm University) Work environment representative for post-docs

Weekly (MPIA) ExoCoffee: Seminar about current exoplanetary research with diverse speakers.

Bi-weekly (MPIA) MeetPy: Meeting for Python. Discussion about aspects of good programming. Introduction of astronomical and scientific packages.

## Computer Skills

General Proficient in both Windows and Linux

Programming Languages PYTHON (ADVANCED), CYTHON (INTERMEDIATE), C++ (BASICS)

Scientific Computing NumPy, SciPy, Pandas, astropy, scikit-learn, scikit-image, openCV

Data Visualization GlueViz, Bokeh, Matplotlib, Seaborn, pyds9