

# Curriculum Vitae of Patrick Barth

---

## Contact

Address                      University of St Andrews  
                                 School of Physics and Astronomy  
                                 North Haugh  
                                 KY16 9SS St Andrews  
                                 UK  
Email                        pb94@st-andrews.ac.uk

## Work experience

Since 2019                **Postgraduate Researcher**  
                                 University of St Andrews, School for Physics and Astronomy & School for Earth  
                                 and Environmental Sciences, UK  
                                 St Andrews Centre for Exoplanet Science  
Feb. - July 2017        **Student Research Assistant**  
                                 Max Planck Institute for Astronomy, Heidelberg, Germany

## Education

Since 2019                **PhD in Astronomy**  
                                 University of St Andrews, School for Physics and Astronomy & School for Earth  
                                 and Environmental Sciences, UK  
                                 St Andrews Centre for Exoplanet Science  
                                 Supervisor: Dr. Christiane Helling & Dr. Eva Stüeken  
2017 - 2018                **International Student**  
                                 University of Washington, Seattle, United States of America  
2017 - 2019                **Master of Science in Physics** (2-year program)  
                                 Final Grade: 1.1 (very good), University of Heidelberg, Department of Physics and  
                                 Astronomy, Germany  
2013 - 2017                **Bachelor of Science in Physics**  
                                 Final grade: 1.7 (good), University of Heidelberg, Department of Physics and As-  
                                 tronomy, Germany  
2013                         **Abitur**  
                                 Final grade: 1.1 (very good), Karl-Friedrich-Gymnasium Mannheim, Germany

## Awards

2017 - 2018                **Baden-Württemberg-Stipendium**  
                                 Scholarship for distinguished students studying abroad

## Publications

- **Barth, P.** et al., *Magma Ocean Evolution of the TRAPPIST-1 planets*, submitted to Astrobiology
- Barnes, R., et al., incl. **Barth, P.**, 2020, *VPlanet: The Virtual Planet Simulator*, PASP 132 024502
- Carone, L., Baeyens, R., Mollière, P., **Barth, P.**, et al., *Equatorial anti-rotating day side wind flow in WASP-43b elicited by deep wind jets?*, submitted to MNRAS. <https://arxiv.org/abs/1904.13334>.

## Talks

- |               |  |
|---------------|--|
| 18 Dec 2019   | <b>"Magma Ocean Model for Terrestrial (Exo)Planets"</b><br>PSF-Coffee, MPIA, Heidelberg, Germany   |
| 27 March 2019 | <b>"Coupled Atmosphere-Interior Model for Terrestrial Planets - Application to Early Earth"</b><br>General Meeting SPP 1833 Habitable Earth, DFG, Cologne, Germany |
| 30 April 2017 | <b>"Zirkulation mit Wolkenbildung in planetaren Atmosphären"</b><br>(G)Astro-Seminar, jDPG, Bad Kreuznach, Germany   |
| 11 Jan. 2017  | <b>"Large-Scale Circulation with Cloud Formation in Planetary Atmospheres"</b><br>PSF-Coffee, MPIA, Heidelberg, Germany  |

## Posters

- |                  |  |
|------------------|--|
| 15-20 Sept. 2019 | <b>"Desiccation of the TRAPPIST-1 Planets During Their Magma Ocean Phase"</b><br>EPSC-DPS Joint Meeting, Geneva, Switzerland (presented by Ludmila Carone)           |
| 24-28 June 2019  | <b>"Desiccation of the TRAPPIST-1 Planets During Their Magma Ocean Phase"</b><br>Astrobiology Science Conference, Seattle, WA, USA (presented by Rory Barnes)        |
| 24-28 June 2019  | <b>"Desiccation of the TRAPPIST-1 Planets During Their Magma Ocean Phase"</b><br>"Star-planet interaction" workshop, Ringberg, Germany (presented by Ludmila Carone) |

## Outreach

- |            |   |
|------------|---|
| Since 2019 | <b>Mobile Planetarium</b><br>University of St Andrews, School for Physics and Astronomy |
|------------|---|

## Programming Skills

- Intermediate: Python, C
- Basics: Fortran

## Languages

- Native language: German
- Fluent: English
- Basics: Spanish, French

## Volunteer Experience

|             |  |
|-------------|--|
|             | <b>University of St Andrews Liberal Democrats</b>                |
| Since 2020  | Treasurer  |
|             | <b>SaintsLGBT+, University of St Andrews Student Association</b> |
| Since 2019  | Postgraduate Officer   |
|             | <b>Hector-Seminar Alumni Association</b>                         |
| Since 2019  | Vice President   |
| 2015 - 2019 | Secretary  |
| 2013 - 2019 | Election Worker in Mannheim, Germany                             |