

# Prachi Prakash Rahate

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## CONTACT INFORMATION

Phone: +49 176 36 975 104  
E-mail: prachirahate.18@gmail.com

Current Address: Appartment no. A006, Taubenbogen 2,  
Potsdam 14476, Germany

## MASTER THESIS

**Analysis of Facular to Spot ratios for Solar-like stars.**  
Institute: University of Potsdam. Golm

Supervisors:

1) Prof. Dr. Katja Poppenhäger  
Professor for Astrophysics of Exoplanets  
University of Potsdam, Golm  
Email : kpoppenhaeger@aip.de

2) Dr. Eliana Maritza Amazo-Gómez  
Postdoctoral Researcher in Cosmic Magnetic Fields  
Leibniz-Institut für Astrophysik, Potsdam  
Email: eamazogomez@aip.de

Completion Date: 5th September 2023.

## CURRENT POSITION

- Academic Administrator - BIMM University Berlin  
Using Microsoft Office Suite, Canvas, and Pebble Pad and Unit-E (student record management system) for efficient academic coordination. Skilled in updating assessment information, managing live assessments, tracking progress, and assisting in preparing moderation and board meetings to ensure smooth academic operations.

## EXPERIENCE

- Student Assistant in Stellar Physics and Exoplanets Department: Oct 2021 - Sept 2023  
*Leibniz Institute for Astrophysics (AIP), Potsdam (Prof. Dr. Katja Poppenhaeger)*
  - Analyzed a TESS candidate star system for false positives.
  - Worked with HARPS data of a host star.
- Student Assistant: Mar 2023 - Sept 2023  
*University of Potsdam — Department: Computer Science (Prof. Dr. Anna-Lena Lamprecht)*
  - Conducted test run for study materials and assignments over Moodle.UP platform
  - Assisted in reviewing student assignments and tabulated the results in Excel
  - Assisted in cataloging data using Excel and testing for the Scan and Review of Open Research Data and Software (SWORDS) project using python
  - Search optimization using web scrapping using python programming
- Student Assistant: Nov 2019 - Sept 2023  
*Leibniz Institute for Astrophysics (AIP), Potsdam (Dr. Michael Weber)*
  - Assisted in the collection, extraction, and organization of stellar data from HARPS data.
  - Conducted time series analysis using Lomb-Scargle Periodogram for the Betelgeuse star
  - Created a data reduction manual in Markdown for SES/STELLA Echelle Spectrograph
  - Assisted in building an Exposure Time Calculator for a spectrograph
  - Analyzed hot pixels from flat field images using Python
  - Cataloged and visualized star data using Matplotlib in Python
- Assisted in Astronomy Outreach Activity - 2016  
Helped in organizing and conducting astronomy outreach for high school students
  - Assisted in setting up equipment for moon observations
  - Supported students with their questions and provided guidelines

- Helped students troubleshoot technical issues
- Delivered concluding talks
- Engaged with students to highlight the significance of the event

EDUCATION	<b>Universität Potsdam</b> , Potsdam, Germany.	Year: 2023
	Degree: Master's in Astrophysics	Grade:- 1.9 (ECTS:- Max:1.0 and Min:4.0)
	<b>Institute of Science</b> , Nagpur, India.	Year: 2017
	Affiliated to Nagpur University, Degree: Bachelor's of Science	Grade:- 4.0 (Max:4.0 and Min:1.0)
	<b>Tuli Public School</b> , Bokara Road, Nagpur, India.	Year: 2014
	Affiliated to Central Board of Secondary Education 12 <sup>th</sup> Grade (Higher Secondary Education)	Grade:- 4.0 (Max:4.0 and Min:1.0)
	<b>Sri Guru Harkrishan Public School</b> , Bezonbagh, Nagpur, India.	Year 2012
	Affiliated to Central Board of Secondary Education 10 <sup>th</sup> Grade (Secondary Education)	Agg. percent: 93% (Max:100% and Min:33%)
TECHNICAL SKILLS	<b>Scientific skills:</b> Data analysis and interpretation, Observational analysis, Statistics, Data visualization, Time series analysis, lightcurve fitting, Bayesian statistics, Software Experimentation and Running, Web scraping. <b>Programming and Scripting Languages:</b> Python (Numpy, Scipy, Pandas, Astropy, Matplotlib) and C . <b>Operating Systems:</b> Windows, Linux Ubuntu. <b>Tools:</b> Jupyter Notebook, Latex, Microsoft Office, Github, Overleaf. <b>Astronomical Softwares:</b> Modules for Experiments in Stellar Astrophysics (MESA), Tool for Operations on Catalogues And Tables (TOPCAT), Lightkurve (tool to analyze time-series data from Kepler and TESS) , PHysics Of Eclipsing Binaries (PHOEBE).	
INTERNSHIP	<b>The Leiden/ESA Astrophysics Program for Summer Students (LEAPS) 2022.</b> Research Project: Search for Quasi-Periodic pulsations (QPPs) in stellar flares using TESS data. Supervisors: 1. Dr. Laura A. Hayes (ESA/ESTEC)                      Email: laura.Hayes@esa.int 2. Dr. Maximilian Guenther (ESA/ESTEC)              Email: maximilian.Guenther@esa.int	
TALKS AND PRESENTATIONS	Presented a seminar at <b>ESA Exoplanet Coffee Chat at ESA-ESTEC</b> , Noordwijk, Netherlands (online) in September 2022	
CONFERENCES ATTENDED	<ul style="list-style-type: none"> <li>• PLATO Mission Conference 2021 (Online)</li> <li>• SOFIA School 2022 (Online) Understanding mid and far-IR data</li> <li>• Europlanet Telescope Network Science Workshop (Online)</li> <li>• ESO-ASTRO2022 Conference (Online) The present and future of Astronomy.</li> <li>• Sagan Exoplanet Summer Workshop (Hybrid) Characterizing Exoplanet Atmospheres: The Next Twenty Years</li> </ul>	11 - 15 Oct 2021 02 - 04 Feb 2022 09 - 11 Feb 2022 14 - 18 Feb 2022 24 - 28 Jul 2023