

The Forschungszentrum Jülich (FZJ) invites applications for a PhD student position in young star cluster classification. The position is in the research group led by Prof Dr Susanne Pfalzner and part of the PUNCH4NFDI Initiative. The successful applicant will also work with the HeAT group at FZJ.

The large data volumes produced by modern astronomical surveys provide unprecedented chances for exploration but also new challenges. Modern tools of machine learning are quickly becoming indispensable in this context. The PhD project will include developing new tools for the classification of young star clusters in big data cubes. This project combines research in young cluster dynamics with the development of new algorithms that make efficient use of high-performance computing. It includes the development of machine learning techniques for large, distributed datasets in the context of the HeAT project.

Applicants should hold a Master's degree (or equivalent) in physics, astronomy, data science or a related discipline at the time of taking up the position. Any of the following skills would be advantageous: experience in scientific coding, experience with running numerical simulations, analyzing astronomical data, or studies of star clusters. Advanced English skills (spoken and written) are a requirement.

The salary is based on the German public service TVöD scale. Employer contributions to medical and dental insurance, parental leave, and retirement benefits are included. The position comes with funding for research travel. The successful applicant will be supported by JuDocS, the Jülich Center for Doctoral Researchers and Supervisors, by providing onboarding, qualification opportunities and project monitoring.

The application deadline is Monday the 15th of December 2021, and the anticipated start date is March 1, 2022, but an earlier or later start can be negotiated. To apply, please send a cover letter motivating the application, a curriculum vitae, and a one-page statement of research interests and experiences to the address below. The application should contain your Master degree certificate or expected degree completion date, and a link to the Master thesis if already available. Please send all documents in a single pdf file to: [s.pfalzner@fz-juelich.de](mailto:s.pfalzner@fz-juelich.de). Applications received by December 31, 2021 will be given full consideration. Applicants should also arrange for two letters of recommendation to be sent to the same address by this date.