



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centres and help us to shape change!

DYNAVERSE is a new Cluster of Excellence lead by the Universities of Cologne and Bonn. Forschungszentrum Jülich is partner in Dynaverse, which is a world-class hub of researchers with expertise in Astrophysics, Computer Science and Mathematics. The position advertised here is located at the "Sim & Data Lab Astronomy and Astrophysics" (SDLAA) of the Jülich Supercomputing Centre (JSC). JSC operates one of the most advanced supercomputing infrastructures for scientific applications in Europe – including JUPITER, the first exascale supercomputer in Europe. The SDLAA is a research and support structure that provides an interface between the Supercomputer facilities and the Astrophysics communities, with a research focus on star and planet formation, in particular solar system formation, interstellar objects and young star cluster dynamics. The discovery of interstellar objects passing our Solar System raises the questions of their role in the larger picture of star and planet formation. The position advertised here provides the unique opportunity to work in this emerging new field.

We are offering a

PhD Position - Interstellar Objects

Your Job:

This project uses numerical simulations to determine the relative importance of the presence of interstellar objects (ISOs) in the interstellar medium. Specifically, the various formation process, the role of ISOs passing through molecular clouds, taking part in molecular cloud collapse and disc formation. Your tasks in detail:

- Perform scientific work on the research topic, in collaboration with the other SDLAA members
- Cooperate with partners in Dynaverse on relevant adjacent topics
- Present / publish results in collaboration meetings, workshops and conferences and the preparation of project reports
- Develop and apply software tools
- Document software and data according to the FAIR data principles

We look forward to receiving your application until 10.12.2025 via our

Online-Recruitment-System!

Questions about the vacancy?

Get in touch with us by using **our contact form.**

Please note that for technical reasons we cannot accept applications via email. www.fz-juelich.de

Your Profile:

- Master`s degree in astronomy, physics, computer science or equivalent degree
- Solid background in star and planet formation or small bodies of the solar system
- Experience in hydrodynamics and/or N-body simulations in the star and planet formation context
- Programming experience
- Proven background in software development
- Self-motivated personality with very good command of written/spoken English and ideally a very good command of German

Our Offer:

We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We offer ideal conditions for you to complete your doctoral degree:

- Comprehensive training courses and individual opportunities for personal and professional further development
- Extensive company health management
- Flexible work (location) arrangements, e.g. remote work
- 30 days of annual leave and provision for days off between public holidays and weekends (e.g. between Christmas and New Year)
- A large research campus with green spaces, offering the best possible means for networking with colleagues and pursuing sports alongside work
- Further development of your personal strengths, e.g. through an extensive range of training courses; a structured program of continuing education and networking opportunities specifically for doctoral researchers via JuDocS, the Jülich Center for Doctoral Researchers and Supervisors: <https://www.fz-juelich.de/en/judocs>
- Targeted services for international employees, e.g. through our International Advisory Service

In addition to exciting tasks and a collaborative working atmosphere at Jülich, we have a lot more to offer: <https://go.fzj.de/benefits>

The position is for a fixed term of 3 years. Pay in line with 65% of pay group 13 of the Collective Agreement for the Public Service (TVöD-Bund) and additionally 60 % of a monthly salary as special payment („Christmas bonus“). The monthly salaries in euro can be found on the BMI website: <https://go.fzj.de/bmi.tvloed.entgelt> Further information on doctoral degrees at Forschungszentrum Jülich (including its various branch offices) is available at <https://www.fz-juelich.de/en/careers/phd>

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.

The following links provide further information on diversity and equal opportunities: <https://go.fzj.de/equality> and on specific support options: <https://go.fzj.de/womens-job-journey>