



We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

The Universities of Cologne and Bonn have established the new Cluster of Excellence „Our Dynamic Universe“ in collaboration with non-university partner institutions. The computational astrophysics position offered here is focused on the development of a new, versatile simulation code for star and galaxy formation in the context of exascale computing.

YOUR TASKS

- » Development of a new simulation code for exascale-ready astrophysical MHD simulations
- » Implementation of overset grids in an adaptive mesh framework
- » High-resolution numerical simulations of star formation
- » Analysis and interpretation of the simulation data
- » Close collaboration with the other teams within the Cluster of Excellence
- » Presentation of results at international conferences
- » Publication of the results in peer-reviewed journals

YOUR PROFILE

- » You have a doctorate in astrophysics, computer science, mathematics, or a related discipline
- » Strong background in code development and numerical simulations, ideally related to star formation or the interstellar medium
- » Experience with high-performance computing and programming languages such as Python, C/C++, or Fortran
- » Experience with heterogeneous HPC systems including GPUs
- » Strong interest in interdisciplinary research combining astrophysics, simulations, and data analysis
- » Very good command of English; knowledge of German is an advantage
- » High motivation, ability to work independently, and strong teamwork skills

WE OFFER

- » An ambitious scientific position within the new Cluster of Excellence
- » A diverse working environment with equal opportunities
- » Support in balancing work and family life
- » Flexible working time models
- » Extensive advanced training opportunities
- » Occupational health management offers

The University of Cologne promotes equal opportunities and diversity. Women will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from all suitable candidates regardless of their gender, nationality, ethnic and social origin, religion, disability, age, sexual orientation and identity.

The position is available immediately on a full-time basis (39,83 hours per week). The position is to be filled for a fixed term until 30 June 2029. If the applicant meets the relevant wage requirements and has the appropriate personal qualifications, the salary is based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please apply online with proof of the required qualifications (without a photo) under <https://jobportal.uni-koeln.de>. The reference number is Wiss2606-12. The application deadline is 30 July 2026.

For further inquiries, please contact Professor Dr. Stefanie Walch-Gassner at (walch@ph1.uni-koeln.de) and take a look at our [FAQs](#).