



UNIVERSITY
OF COLOGNE



Foto: Thomas Jösel

Scientific Staff (f/m/x) in the field of IT System Architecture and Data management

IT Center University of Cologne (ITCC)

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 IT Center University of Cologne (ITCC), as a central facility of the University, provides support to all members of the academic community and also participates in dedicated research projects, like the CRC1601. In this project, the ITCC assists the consortium members in research-data management (RDM), for instance by testing and setting up systems and platforms for organizing, sharing, and analyzing data. The CCAT Data Center at the ITCC will process and manage the data produced by the Fred Young Submm Telescope, which is currently under construction in Chile. This telescope will generate approx. 10 petabytes of raw data in the first five years of operation starting in 2026. The successful candidate is expected to support both of these initiatives as an integral member of the existing teams at the Department of Research Infrastructure Services (RIS at ITCC) and at the Institute of Physics I (PHI).

<https://itcc.uni-koeln.de>
<https://phi.uni-koeln.de>

<https://www.ccatobservatory.org>
<https://sfb1601.astro.uni-koeln.de>

YOUR TASKS

- » **IT architecture:** Research into novel techniques for managing and processing large amounts of astrophysical data, incl. workflow management systems, data processing pipelines, cloud technologies, high-performance computing
- » **Infrastructure and Systems Management:** Testing, installation, configuration and maintenance of project-specific hardware and software, incl. on the HPC-system
- » **Astronomical Data Science:** Further development and optimization of the software and workflows used for the processing of astronomical data
- » **Security and Data Management:** Design and implementation of backup and transfer strategies, as well as IT security best-practices and data governance
- » **User Support and Communication:** Assist the project and consortium members in the usage of different technologies. Participate in project and consortium activities, as well as in publications, oral presentations, and grant applications
- » **Education (2h/week):** Teaching a course in accordance with the teaching obligations for academic staff as well as the development of innovative tools for training and education and the daily supervision of Bachelor's and Master's students and guest scientists. Providing support in lectures or in connection with the laboratory activities of the Department of Physics programme.

YOUR PROFILE

- » University degree (BSc with at least three years of professional experience or MSc) in computer science, or a related discipline with several years of professional experience
- » Experience in programming (Python, Linux-Shell, git) and Linux system administration
- » Several years of professional experience with network or server infrastructures. HPC-system administration and optimization are an advantage.
- » Strong interest or experience with workflow management tools (e.g. nextflow, snakemake, pegasus, reana, or others)

- » Strong interest or experience with container technologies (e.g. docker, kubernetes, podman, apptainer), and databases (e.g. sqlalchemy, redis, postgres)
- » Team-oriented personality. Experience in consulting is an advantage.
- » Very good communications skills in German and English
- » Experience in the research area of astronomy/astrophysics or data science/analysis is an advantage
- » Ability to lead and execute complex IT projects, i.e. conveying technical concepts and partnering with scientists to develop solutions

We seek a proactive, resourceful colleague with a hands-on attitude to problem-solving.

WE OFFER

- » Exciting position at the interface between research and IT
- » A diverse working environment with equal opportunities
- » Support in balancing work and family life
- » Extensive advanced training opportunities
- » Occupational health management offers
- » Flexible working time models
- » Opportunity to work remotely

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 term of the contract initially extends until 30 June 2027. If the applicant meets the relevant wage requirements and 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 Wiss2509-07. The application deadline is 16 October 2025.

For further inquiries, please contact Monica Valencia-Schneider (vs@uni-koeln.de) or Christof Buchbender (Buchbend@phi.uni-koeln.de) and take a look at our [FAQs](#).



HR EXCELLENCE IN RESEARCH