

The Computational Microscopy group of Prof. Dr. Philipp Pelz at FAU Erlangen-Nürnberg offers, subject to resources being available, a position as

Postdoctoral Scientist Computational Microscopy (m/f/x)

(subject to personal qualifications, remuneration according to salary group E 13 TV-L 100%)

starting **September 1, 2022, or the earliest date after**, limited for two years, with the option for extension to up to 6 years. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG).

Position and tasks

- Develop and test new approaches and algorithms for large-scale multi-dimensional, multi-modal reconstruction of electron-microscopy datasets at the atomic-, nano-, and microscale
- Design, optimize, and execute multidimensional STEM experiments
- Develop simulators, open-source software, and algorithms toward the goal of self-driving microscopes
- Publish and present the results of these studies to the community.

Position Requirements

- Ph.D. in materials science, physical sciences, computer science, engineering, or a related discipline.
- Proficiency in scientific Python programming.
- Demonstrated record of scientific excellence through publications and talks.
- Excellent communications and interpersonal skills to be able to interact effectively with a diverse group of scientists and technical staff.
- Self-motivated and able to work in a team environment.

Preferred Knowledge, Skills, and Abilities (experience in one or more of the following):

- Experience with machine learning frameworks such as PyTorch, TensorFlow, Jax
- Background in diffraction physics, crystallography, or modern microscopy methods (e.g. ptychography, holography, etc.)
- Data acquisition at aberration-corrected STEMs
- Developing and deploying AI models.
- Background in Computer Vision or Computational Imaging
- Demonstrated record of collaborative software development, especially in distributed teams.

We offer access to state-of-the-art aberration-corrected electron microscopes and a lab-based x-ray microscope at the [Center for Nanoanalysis and Electron Microscopy](#), access to high-performance computing resources at the [Erlangen National High-Performance Computing Center](#), and the enthusiastic support of an early-career principal investigator.

For informal inquiries, please get in touch with Philipp Pelz (philipp.pelz@fau.de). Applications from underrepresented minorities are particularly welcome. Your application (in English or German) must include a motivation letter, your CV with a publication list, and contact information for two references.

Applications will be accepted until the position is filled.