November 13th, 2025

Zuse Institute Berlin (ZIB) is a non-university research institute under public law of the state of Berlin. Within the research group “Computational Diagnosis and Therapy Planning” of the department “Visual and Data-Centric Computing”, we are offering a fixed-term research position starting on February 1, 2026, for a

Researcher (f/m/d)

on a full-time basis (39,4 hours per week), limited until January 31st, 2029. If the applicant meets the relevant wage requirements and personal qualifications, the salary will be based on remuneration group 13 TV-L of the pay scale for the German public sector.

Background

The position is part of a collaborative research project on improved therapy planning in orthopedic surgery, funded by the German Federal Ministry of Research, Technology and Space (BMFTR). In close collaboration with clinical, industrial, and research partners, we will investigate novel and advanced therapy planning concepts for orthopedic knee surgery.

The position involves conducting independent research with a focus on the specified subject area. This includes the development and application of suitable methods for image and geometry processing, in particular the 3D reconstruction of anatomical structures from 2D radiographs and the geometric adaptation of patient-specific instrumentation to the 3D patient model. The position requires active interdisciplinary collaboration with project partners to ensure the integration of different areas of expertise. The research results will be disseminated through publications in conference proceedings and journal articles. The work is characterized by a goal-oriented scientific approach, supplemented by participation in project management and coordination tasks.

Your tasks

- Medical image analysis and segmentation (CT, X-ray, MRI)
- Geometric modeling and analysis of anatomical structures of the lower limbs
- Statistical shape modeling and analysis of population data
- Non-rigid model-to-image registration and optimization
- Geometric design of patient-specific tools and implants
- Development of software tools for analysis, treatment planning, and decision support

Your profile

- A completed Master’s degree in Computer Science, Computer Engineering, or Mathematics

- Strong interest in application-oriented research within the domain of medicine and biomechanics
- Excellent programming experience - preferably in Python and/or C++
- Experience in medical image analysis (2D, 3D)
- Solid understanding of discrete geometry processing (surface and volume meshing) as well as computational linear algebra and mathematical optimization, combined with practical experience software development tools, Git, and Integrated Dev. Environments (IDEs)
- Familiarity with GPU programming (OpenGL/CUDA) and CAD applications is a plus

We offer a friendly work environment with flexible work and meeting times, excellent equipment and a challenging professional environment

as well as

- an active onboarding process to provide new employees with the skills and knowledge that are important to their success in our institute and their careers,
- a varied, future-oriented and responsible field of activity,
- professional training opportunities and support in professional development,
- an additional pension scheme (VBL),
- 30 days annual leave, flexible working hours (flexitime),
- a salary based on TV-L (collective agreement for the public service of the federal states) in accordance with qualifications and professional experience with annual bonus payment,
- capital allowance of up to € 150 per month, or alternatively a BVG job ticket plus the remaining balance,
- the use of canteens and sports programs of the Freie Universität Berlin (FUB) at reduced rates.

Applicants with disabilities will be given preference if equally qualified. Female applicants are highly encouraged to apply, since women are under-represented in natural sciences and ZIB seeks to increase the proportion of women in this field.

Please send your complete application including a cover letter, your CV and the standard supporting documents by **January 10th, 2026** (date of receipt), quoting the **Reference Number WA 28/25** as **one PDF file** to: jobs@zib.de.

For further information about the position, please refer to our website www.zib.de, contact Dr. Stefan Zachow (zachow@zib.de).

Our private policy statement regarding application data is available at www.zib.de/impressum.

For further job offers please visit our website at www.zib.de/jobadvertisement.