

**Are you looking for a new professional challenge?  
Then this is the place to be!  
Become part of our international team!**



August 12, 2021

The Zuse Institute Berlin (ZIB) is a non-university research institute under public law of the State of Berlin. Within the division of Mathematics of Complex Systems, the research group Computational Diagnosis and Therapy Planning is offering a

**Research Position (m/f/d)**  
**Reference Code: WA 45/21**  
**Pay Grade: E13 TV-L Berlin (100%)**

This vacancy can be filled at the end of the year 2021 and will be a fixed-term contract for 4 years.

As part of a research group funded by the DFG we will investigate in close interdisciplinary collaboration with the Charité Berlin and the Julius-Wolff Institute the morphology, motion, and mechanics of the human spine within the context of low back pain.

#### **Your tasks**

- medical image analysis (CT, MRI, X-ray, video-fluoroscopy)
- segmentation of spinal structures from tomographic image data
- geometric 3D modeling of the flexible spine
- model-image registration under consideration of a flexible 3D spine model
- statistical analysis of 3D shapes and motion patterns

#### **Your profile**

- Master Degree in Computer Science, Physics, Mathematics or a comparable discipline,
- strong interest in biomechanics, image analysis, 3D modeling,
- strong interest in application-oriented research within the domain of medicine,
- interest in and knowledge of medical image analysis,
- programming experience - preferably in C++ and Python as well as in GPGPU programming,
- ability to tackle complex challenges in a structured manner ,
- ability to prepare structured reports and scientific publications in English,
- good communication skills, both within the research group and with the project partners,
- ability to work independently and goal-oriented within an interdisciplinary team.

We also expect creativity as well as a strong commitment to the project. Working on a project-related dissertation topic is possible and would be supported by us.

**We are offering** a friendly working atmosphere with flexible work and meeting times, excellent equipment and a challenging professional environment

as well as

- a varied, future-oriented and demanding field of activity,
- comprehensive training in a competent and cooperative team,
- an additional pension scheme (VBL),
- 30 days annual leave, flexible working hours (flexitime),
- a salary in accordance with TV-L (Collective Agreement for the Public Service of the Federal States), taking into account the relevant professional experience,
- an end-of-year bonus,
- discounted BVG (public transport) ticket as part of the capital city allowance,
- and the use of canteens and sports programs of the Freie Universität Berlin (FUB) at reduced rates.

Female applicants are highly encouraged to apply. Since women are underrepresented in information technology, the ZIB is trying to increase the proportion of women in this research area.

Applicants with disabilities will be given preference if equally qualified.

Please send your application, quoting the reference code **WA 45/21**, including a cover letter containing a statement of your research interests, a CV with a list of publications, academic transcripts and contact details of two references by **October 3rd, 2021** (date of receipt) by email to: [jobs@zib.de](mailto:jobs@zib.de)

Our private policy statement regarding application data is available at [www.zib.de/impressum](http://www.zib.de/impressum).

For further information about the position, please refer to our website [www.zib.de](http://www.zib.de) or contact Dr. Stefan Zachow ([zachow@zib.de](mailto:zachow@zib.de)).

For further job offers please visit our website at [www.zib.de/jobads](http://www.zib.de/jobads).