

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



18 August 2021

The Zuse Institute Berlin (ZIB) is a non-university research institute under public law of the state of Berlin. We conduct research and development in applied mathematics and computer science as well as the analysis and processing of complex data in conjunction with high-performance computing.

For the Visual Data Analysis research group, located in the division of Mathematics for Life and Materials Sciences, we are looking for a candidate to start as soon as possible. This vacancy offered is a fixed-term contract for three (3) years with the possibility of extension.

**Research Position (m/f/d)  
(PhD student) Reference Code: WA 46/21  
Pay Grade: E13 TV-L Berlin (100%)**

### **Job description**

Goal of this DFG-funded project is the development of visual data analysis tools to support the virtual unfolding of ancient papyrus packages from tomographic images. The project will be carried out in cooperation with the Egyptian Museum and the Papyrus Collection Berlin. In particular, existing approaches to virtual unfolding of ancient papyri will be extended and new methods will be developed within our visualization software. One focus of the project will be the development of real-time visualization methods to support virtual unfolding. In addition, the generation and accurate matching of 2-dimensional (2D) surfaces to the papyrus layers visible in the 3-dimensional images is of particular importance. This includes the development of both interactive and automatic algorithms to fit the 2D surfaces to the image data. Finally, the generation of suitable transfer functions and specific methods in the area of volume rendering will be of great importance for the visualization of the writing.

### **Ideally, you fulfill the following requirements**

- very good diploma or master's degree in computer science or a related field of study (mathematics, physics, electrical engineering)
- good knowledge and experience in the field of computer graphics
- experience in the software development with C++
- good communication and teamwork skills, both internally and across disciplines
- high degree of self-reliance and commitment
- ability to work in a goal-oriented manner
- very good command of written and spoken English

### Additionally, you are

- experienced in working with large software frameworks
- experienced in scientific visualization, image analysis and geometry processing
- curious and you enjoy interdisciplinary work.

**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 complete application, quoting the reference code **WA 46/21**, including a curriculum vitae in table form and the usual documents, in PDF format by **October 03, 2021** (date of receipt) to

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. Daniel Baum ([baum@zib.de](mailto:baum@zib.de)).

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