

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



September 23, 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, part of the division of Mathematics of Complex Systems, we are looking for a candidate to start as soon as possible. This vacancy offered is a fixed-term contract for three (3) years:

**Research Position (w/m/d)
(PhD student) Reference Code: WA 50/21
Pay Grade: E13 TV-L Berlin (100%)**

Job description – project goal

The aim of the DFG-funded research project **CTcoral**, which is being conducted in close cooperation with the Center for Marine Environmental Sciences (MARUM) in Bremen, is to develop image analysis methods for the taxonomic classification and morphological characterization of cold-water corals based on computed tomograms. For the analysis of the image data, classical image analysis methods as well as methods of shape analysis and machine learning (deep learning) will be applied. Both primary image information and secondarily derived extracted structures such as surfaces and coral skeletons will be important for the classification of the corals. Another important component of the project for the reliable classification of natural coral samples is the prior determination and removal of bioerosion traces in the coral frameworks. In addition, visualization of the data and the classification results will be of central importance for the entire duration of the project.

Ideally, you fulfill the following requirements

- very good diploma or master's degree in computer science, mathematics, or a related field of study (physics, electrical engineering)
- good knowledge in image processing and visualization
- experience in the software development with C++ and Python
- 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

- interested and have prior knowledge in computer graphics and geometry processing
- interested in methods of machine learning/artificial intelligence
- curious and you enjoy interdisciplinary work.

We are offering a challenging professional environment, excellent equipment as well as a family-friendly working atmosphere due to flexible work and meeting times. In addition, project funds are available to promote particularly women and the compatibility of research and family.

Additionally we are offering

- 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 50/21**, 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 31, 2021** (date of receipt) in pdf-format to: jobs@zib.de

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

For further information about the position, please refer to our website www.zib.de or contact Dr. Daniel Baum (baum@zib.de).

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