



22.11.2018

The Zuse Institute Berlin (ZIB) is a non-university research institute under public law of the state of Berlin. The department Visual Data Analysis is offering a

**Research Position (f/m)**  
**(Reference code: WA 56/18)**  
**Pay grade E13 – TV-L Berlin (75%)**

The position – subject to the approval of funds – is offered starting 1<sup>st</sup> of January, 2019 or at the earliest possible date and will be a fixed-term contract until 31.12.2020 with the option to be extended.

### **Description**

The aim of the project, which is part of the Cluster of Excellence MATH+, is the development of analysis methods for empirically defined shape trajectories. The development will be driven by applications from cardiology and archaeology. The focus will be on the derivation of statistical methods for non-Euclidean shape spaces based on Riemannian splines. The main tasks will be the creation of discrete shape trajectories from application-specific data, the derivation of spline-based regression approaches and the generalization of hierarchical statistical models to splines. The algorithms are to be implemented as prototypes and applied to data from the applications.

We offer a friendly working atmosphere and a challenging professional environment with excellent equipment. In addition, Berlin offers a rich mathematical landscape that is especially interesting for junior researchers due to the Cluster of Excellence MATH+ with the research center Matheon and the Berlin Mathematical School. We provide opportunities for researchers at all career levels to further qualify and strongly support their research at the highest level and with international visibility. Participation in international and national conferences is welcome and possible.

### **Requirements**

- master's degree in mathematics or a related field of study
- very good knowledge of differential geometry
- good programming skills (C++, Python, or similar)
- experience in the areas of computational statistics, geometry processing, numerical optimization and/or data science is of advantage
- interest in interdisciplinary cooperation
- good command of spoken and written English

We expect cooperation with users, communication and team skills, creativity, a high degree of independence and commitment, cooperation within the Cluster of Excellence, and participation in outreach activities. Possibility for an in-depth familiarization with the subject is given. Scientific publications at the highest international level are our goal.

The candidature of women is encouraged. Since women are underrepresented in information technology, ZIB is trying to increase the proportion of women in this research area.

Persons with disabilities will be given preference, when equally qualified.

Please send your application, quoting the reference code **WA56/18**, including CV in tabular form and all relevant documents by **Dec. 13<sup>th</sup>, 2018** (date of receipt) to

**Zuse Institute Berlin (ZIB)**  
**- Administration -**  
**Takustr. 7**  
**14195 Berlin**

or electronically as pdf-form to: [jobs@zib.de](mailto:jobs@zib.de).

You can find our privacy policy on our website at [www.zib.de/impressum](http://www.zib.de/impressum).

Further information about the position can be obtained on our website [www.zib.de](http://www.zib.de) or from Dr. Christoph von Tycowicz ([vontycowicz@zib.de](mailto:vontycowicz@zib.de)).

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