Within the interdisciplinary research project MOSLA (MOlecular Storage for Long-time Archives), the Faculty of Mathematics and Computer Science - Bioinformatics Group, Prof. Dr. Dominik Heider, offers one position as

**Research Assistant**

(PhD student).

The position is offered for a period of 3 years, if no former times of qualification must be considered. The starting date is as soon as possible. The positions are part-time (65% of regular working hours) with salary and benefits commensurate with a public service position in the state Hesse, Germany. Classification is in pay grade 13 of the Hesse collective agreement.

The candidate will be responsible for the development of bioinformatics software to improve the comparability and reproducibility of state of the art methods to evaluate molecular data mining methods, i.e., implementing efficient methods for text mining in the specific case of biological sequences. Moreover, the successful candidate will examine information visualization approaches to create suitable data abstractions. In the specific example of data storage in biological molecules, such data abstractions would represent changes in accuracy, compression, error, and showcasing the uncertainty of different data encodings. A foundational aspect of this project is the creation of an evaluation framework that integrates state of the art methods for text mining (e.g., Markov chains, Long short-term memory or LSTM, etc).

In the research project MOSLA, the University of Marburg and the University of Giessen will jointly develop novel approaches and solutions for long-time archives based on molecular and chemical storage systems. Besides the technical solutions of data storage, they will also research in (de-)coding of information for long-time storage, which will be achieved by a combination of genetic and chemical information encoding. The project is funded by the Hessian Ministry for Science and Arts.

The positions are limited to a time period deemed adequate for the completion of a doctoral degree. As part of the assigned duties, there will be ample opportunity to conduct the independent scientific research necessary for the completion of a doctorate. The limitation complies to § 2, 1 WissZeitVG.

We expect the candidate to have a Master in bioinformatics, computer science, data science, physics or a similar field, good programming skills, and the willingness to work in an interdisciplinary collaborative project together with partners from different areas. Disposition to own scientific qualification (e.g. a doctorate project in the area bioinformatics) is expected.

We actively support the professional development of junior researchers, e.g., by the offers of Marburg Research Academy (MARA), the International Office, and the Human Resources Development Office.

We support women and strongly encourage them to apply. In areas where women are under-represented, female applicants will be preferred in case of equal qualifications. Applicants with children are welcome - Philipps-University is certified as a family-friendly university. Sharing a full-time position (§ 8 Abs. 2 S. 1 HGlG) as well as a reduction of working time is possible. Applicants with a disability as described in SGB IX (§ 2 Abs. 2, 3) will be preferred in case of equal qualifications. Application and interview costs can not be refunded.

Application documents are to be submitted as one pdf-file to the Department of Mathematics and Computer Science, moslajob@synmikro.uni-marburg.de, until January 03rd 2020, quoting the reference number fb12-0029-MOSLA-wmz-2019.