

Open position for a research assistant in the SEMS group at the University of Rostock

*Scientific Data Management in Computational Biology:
SED-ML and related standards*



We seek a full-time developer for 3 years to support us in the establishment of a data management node within the German Bioinformatics Infrastructure project de.NBI. The work is intended to be so innovative that it will open the opportunity for obtaining a doctorate. The position is linked to de.NBI and of temporary nature.

The candidate will be employed via the HITS Heidelberg, but he/she will be based at the University of Rostock, joining the department of Systems biology and Bioinformatics, more specifically the junior research group SEMS led by Dagmar Waltemath. One major goal of this position is to further develop, promote and integrate existing model management solutions with German and International research infrastructures as well as the COMBINE community.

The major tasks are to further develop the following standards, tools and libraries: a Neo4J graph database for storage, a Lucene-based tool for model retrieval and ranking, a Java library for the generation of simulation descriptions in SED-ML/XML, and a Java tool for XML difference detection in model versions. These tools shall be integrated into the existing data management system SEEK, which is being developed at Manchester and HITS (seek4science.org).

As part of your job, you will regularly visit the group Scientific Databases and Visualization at HITS Heidelberg. You will also travel to other German Bioinformatics groups and support them in implementing model management infrastructure.

The successful candidate should have a Master's degree in Computer Science, Computational Biology, or a related field. A solid background in database techniques, programming, and XML is highly appreciated. An interest for interaction with other research groups and for community work is necessary.

With your application, please indicate which project you would like to work on as part of your PhD topic. Please, also provide a short explanation of why you are most interested in the topic you chose.

Possible PhD topics include, but are not limited to:

- information retrieval: Ranked model retrieval
- graph databases: integrated storage of heterogeneous, linked data
- model comparison based on semantic annotations, bio-ontologies
- provenance of simulation studies

Desired qualifications:

- Java programming, library development
- interest in COMBINE standards and community work (SBML, SED-ML, SBGN)
- communicative

- knowledge of graph databases
- knowledge of XML

Process:

To apply for this position, please use the HITS application system <https://application.h-its.org/intern/register.php?id=rvp8826> (including curriculum vitae, copies of certificates, a letter of motivation that contains a short summary of your proposed PhD research topic). Optionally, you may as well include to the cover letter contact information of two references that may be consulted. *Please note, that your application will be processed both at HITS gGmbH and at Universität Rostock, and that HITS will share your application with Dagmar Waltemath from the University of Rostock.*

Deadline for applications is April 3rd, 2015. The intended starting date is late spring 2015, the exact starting date of the position is negotiable.

Please do not hesitate to send any questions to the email given below.

Inquiries should be addressed to:

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