Job advertisement

Vacancy ID: 025/2024
Closing date: 03.03.2024

FRIEDRICH-SCHILLER-UNIVERSITÄT JENA

Friedrich Schiller University is a traditional university with a strong research profile rooted in the heart of Germany. As a university covering all disciplines, it offers a wide range of subjects. Its research is focused on the areas Light—Life—Liberty. It is closely networked with non-research institutions, research companies and renowned cultural institutions. With around 18,000 students and more than 8,600 employees, the university plays a major role in shaping Jena's character as a cosmopolitan and future-oriented city.

You will be embedded in the Cluster of Excellence Balance *of the Microverse* (microverse-cluster.de). The Cluster combines expertise in life, material, optical and computational sciences to elucidate fundamental principles of the interactions and functions in microbial communities in diverse habitats. We aim to identify the shared characteristics of disturbed or polluted ecosystems as well as infectious diseases on the microbiome level, and develop strategies for their remediation by targeted interventions.

The Viral Ecology and Omics Group (veo.uni-jena.de) aims to study the role of viruses in the Microverse. To do this, we combine microbiological and eco/evolutionary experiments with molecular biology, microscopy, (meta-) genomics, bioinformatics, artificial intelligence, and computational modelling. Our wet lab manager oversees a level S1/S2 wet lab featuring a state-of-the-art laboratory automation system with high throughput plate reader, microscopy, microbiology, and molecular biology facilities. Our dry lab manager supports access to bioinformatics tools and databases on the FSU high-performance compute cluster consisting of 100 CPU and 8 GPU nodes, plus a 4Tb fat node.

In the context of the ERC-funded project "Predicting the evolution of complex phage-host interactions: DiversiPHI", we are looking for a:

Postdoctoral Researcher Bioinformatics & Machine Learning

Phage-host interactions (PHI) are an emergent trait that depends on the complex integration of factors like their taxonomic identity, the environment, and phage- and host-encoded proteins. The DiversiPHI project aims to unravel PHI by 1) measuring, 2) modelling, and 3) experimentally testing these diverse factors to develop a predictive understanding of host-range evolution. Your role will be to integrate experimental evolution data that we have obtained in the project with data from public repositories, to predict and understand the evolution of phage host-range.

Your responsibilities:

- Plan, design, and create machine learning tools to integrate bacteriophage and bacterial (meta-) genomics data.
- Analyse phage-host association datasets, which are often noisy and require specific knowledge to interpret.
- Communicate and discuss your predictions with experimental group members.
- Report your findings in publications and presentation at international scientific platforms.
- Support PhD students, Master students and undergraduate project students.
- Collaborate productively with experimental and computational researchers in the Microverse.

Your profile:

- A Ph.D. degree in bioinformatics, computational biology, machine learning, or a related field with specialist knowledge and demonstrated hands-on expertise in meta'omics data analysis, bacteriophages, and machine learning.
- Track record of planning, performing, and publishing original research.
- Track record of supervision and training of students or junior researchers.

- Enthusiasm and talent for working on a variety of projects in parallel and for interdisciplinary research.
- Strong motivation, excellent organisation skills and ability to contribute to a friendly and collaborative working environment in a cross-disciplinary scientific research group.
- Fluency in English is required, both written and spoken. Fluency in other languages is advantageous.

We offer:

- Embedding in a highly interactive and collaborative research group at the forefront of the viral ecology and metagenomics field
- A unique opportunity to integrate modelling, omics data, and wet lab experiments
- Jena – City of Science: a young and lively town with a vibrant local cultural agenda. Jena is among the most liveable cities in Germany. Situated on the Saale River and surrounded by the famous Thuringian Forest, this city is ideal for lovers of nature and hiking.
- University health promotion and a wide range of university sports activities
- Attractive fringe benefits, e.g. capital formation benefits (VL) and an occupational pension (VBL)
- Remuneration based on the provisions of the Collective Agreement for the Public Sector of the Federal States (TV-L) up to salary scale E 13 (depending on the candidate's personal qualifications) including a special annual payment in accordance with the collective agreement.
- 30 days of vacation per calendar year plus two days off on December 24 and 31

This is a full-time position (40 hours per week) for 2.5 years. The Friedrich Schiller University Jena is an equal opportunity employer and part-time contracts can be discussed.

To promote gender equality in science, applications by woman are especially welcome. Candidates with severe disabilities will be given preference in the case of equal qualifications and suitability.

If you have any questions about the position or the work in the VEO Group, please contact Bas Dutilh at b.e.dutilh@uni-jena.de.

Are you eager to work for us? Then apply by **March 3, 2024** using our online form.

Online application

For further information on your application and the collection of personal data, please refer to our Privacy Statement for Applicants