

Job advertisement

Vacancy ID: 097/2024

Closing date: 31.05.2024



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

The core mission of the [Cluster of Excellence "Balance of the Microverse"](#) of the Friedrich Schiller University Jena, Germany, is to elucidate fundamental principles of the interactions and functions in microbial communities in diverse habitats, ranging from oceans and groundwater to plant and human hosts. 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 affiliated early career program of the Jena School for Microbial Communication (JSMC) offers an ambitious, structured and interdisciplinary post-graduate training based on top-level fundamental research.

The new Junior research group *Mechanisms of Metabolic Microbial Interactions* seeks to fill the position of a

Postdoctoral Researcher in Computational Biology and Microbiome Dynamics

commencing on 1st August 2024 or the earliest possible date thereafter. We offer a full-time position (40 hours per week) for two years with the possibility of extension.

Position Overview: *We are seeking an exceptional Postdoctoral Researcher to join our team on two innovative projects aimed at advancing our understanding of microbial life histories and microbiome dynamics. The first project focuses on the conceptualization and prediction of microbiome life history functions, utilizing computational models to explore trade-offs microbes face in growth, survival, and reproduction. The second project aims to identify functional driving forces behind microbiome community dynamics, with a focus on developing predictive frameworks that capture essential microbiome functions. This integrated role will involve extensive metabolic and ecological modeling, dynamic simulation, and statistical analysis of microbial communities. Developing modeling frameworks for microbial life histories and microbiome dynamics enables predicting future microbial community states and allows for targeted interventions, e.g., ecosystem restoration or microbial transplantations.*

Your responsibilities:

- **Framework and Model Development:** Lead in the expansion of life history theories and the development of predictive models for microbiome dynamics, focusing on microbial functions and their roles in community assembly.
- **Computational Analysis:** Utilize metabolic and ecological modeling for trait prediction and perform dynamic simulations of microbial communities.
- **Data Analysis and Publication:** Analyze diverse datasets to compare theoretical models with empirical data, employing selection techniques to identify the best-fitting models and quantify the contribution of different microbial functions.

Your profile

- PhD in Computational Biology, Bioinformatics, Systems Biology, or a closely related field.
- Experience with ecological and evolutionary theories, particularly related to microbiomes.
- Strong proficiency in data analysis, particularly using R or Python, and experience with statistical modeling.
- Proven track record of peer-reviewed publications in relevant fields.
- Excellent communication skills and the ability to collaborate effectively in a multidisciplinary team.

Desirable Skills:

- Demonstrated experience in metabolic modeling, microbial genomics, or the application of computational tools in biological research.
- Proficiency in time series analysis and experience with differential equation modeling
- Knowledge of microbial life history traits and community dynamics.
- Familiarity with large-scale computational analyses and the use of computer clusters.

Are you hesitating because you don't meet one or some of our requirements? Please do not hesitate to apply and give us a chance to get to know you.

We offer:

- An opportunity to work on groundbreaking research projects with significant implications for understanding microbiome functioning and dynamics.
- Access to a dynamic and collaborative research environment, state-of-the-art computational resources, and leading experts in the field.
- Opportunities for professional growth through international conferences, workshops, and high-impact publications.
- A competitive salary and benefits package.
- Flexible working hours (flexitime and, if applicable, teleworking)
- A family-friendly working environment with a variety of offers for families: University Family Office 'JUniFamilie' and flexible childcare ('JUniKinder');
- University health promotion and a wide range of university sports activities;
- 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

The two-year full-time position (40 hours per week) commences on 1st August 2024 or the earliest possible date thereafter.

We particularly encourage female researchers to apply, as we are committed to increasing the representation of women in science and providing a supportive and inclusive research environment.

Candidates should submit a comprehensive CV, a cover letter explaining their motivation and suitability for the position (1-2 pages), a list of publications, and contact information for three references.

In principle, the job is also suitable for part-time employment. The extent to which a part-time request can be granted, in particular with regard to the location and scope of the part-time work, will be assessed on the basis of the needs of the service.

Candidates with severe disabilities will be given preference in the case of equal qualifications and suitability.

This position is ideal for an ambitious researcher eager to explore and integrate computational biology, microbiology, and systems biology to address complex questions about microbiome dynamics and microbial life histories in diverse environments. Apply by **23, 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](#)