

The **Jena School for Microbial Communication (JSMC)** is an ambitious Graduate School with over 130 doctoral and postdoctoral scientists. We offer structured, interdisciplinary PhD and career training programs based on top-level fundamental research. They conceptually combine different research areas to a comprehensive picture of microbial communication. The '**Cluster of Excellence 'Balance of the Microverse'**' studies the fundamental principles underlying microbial community interactions and functions in diverse habitats, ranging from oceans and groundwater to plants and human hosts.

The Theoretical Microbial Ecology research group at the JSMC and the 'Cluster of Excellence "Balance of the Microverse"' invites applications for a

Doctoral Researcher (TV-L E13, 65%) in assembly, function and stability of polymicrobial biofilm communities

commencing on 1st September 2026 or upon agreement. We offer a part-time position (65%) at the Friedrich Schiller University of Jena, offered as a fixed-term position for 3 years.

Microbes commonly form dense, surface-attached biofilms, but we do not know how and why microbial community composition, function and stability differ between biofilm and planktonic communities. We will collaborate with the Rosenbaum group at HKI Jena to sample and interrogate biofilm vs planktonic communities that form in bioreactor cultures that are initiated with 18 well defined groundwater isolates. The project will combine method development, to sample biofilms from bioreactors without disturbance, 16S analysis of biofilm communities, well-controlled biofilm growth experiments and biofilm analysis via plating, staining and microscopy assays. The doctoral researcher will also collaborate with other researchers in the group who will perform computational modelling of biofilm assembly. This project will contribute to fundamental understanding of the role of spatial structure in microbial community assembly, function and stability.

Your responsibilities:

- Perform laboratory experiments including bioreactor sampling, DNA-based microbial community analysis, microbial culture and plating assays, qPCR, biofilm culture and microscopy and work independently towards your doctoral research project
- Perform bioinformatic analyses and other quantitative data analysis where required
- Analyse project results, generate figures for publications, and write scientific manuscripts for publication
- Present your results at local, national, and international meetings and conferences
- Work closely together with other experimental and computational researchers in the research group and within the Cluster
- Assist with training and supervising other researchers (e.g. student assistants, BSc students)
- Contribute to the friendly, welcoming, and collaborative environment in our team

Your profile:

- A MSc in biological sciences / microbiology / microbial ecology / molecular biology / biochemistry or closely related disciplines. Candidates in the final stages of obtaining their MSc are encouraged to apply
- Laboratory expertise in one or several of: general microbiology, microscopy, microbial ecology, and biofilms is desirable.
- The project requires enthusiasm for collaborative research, including interaction with computational modellers.
- A high level of curiosity, self-motivation, enthusiasm and attention to detail



- A cooperative personality actively seeking to contribute to our interdisciplinary and inclusive Microverse community
- Excellent written and spoken English communication skills

We offer:

- A highly communicative atmosphere within an energetic and interdisciplinary scientific network
- The Jena School for Microbial Communication offers a structured and interdisciplinary doctoral training program based on top-level fundamental research and provides comprehensive mentoring programs and soft skills courses
- Jena – City of Science, a young and lively city with a vibrant local cultural agenda
- A dedicated management team, providing support and information on non-scientific subjects, such as onboarding and family life, and organising individualised career development programs, and events on topics like mental health and communication
- Remuneration based on the provisions of the Collective Agreement for the Public Sector of the Federal States (TV-L) at salary scale E13 — depending on the candidate’s personal qualifications—, including a special annual payment in accordance with the collective agreement

The 3-year doctoral researcher position (TV-L E13, 65%) will be funded through the JSMC through the Thuringian State government (2026-2028) and subsequently through the Excellence Strategy of the German Federal and State governments (2029). The University of Jena and the participating research institutes are equal opportunity employers. Part-time contracts can be discussed. Candidates with severe disabilities will be given preference in the case of equal qualifications and suitability. The employment contract will be with the Friedrich Schiller University of Jena.

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

Are you eager to join us? Then, apply by **April 26, 2026**, using our online portal.

[Online application](#)