

The **Jena School for Microbial Communication (JSMC)** is funded by the German **Excellence Initiative** and comprises more than 180 PhD students who are educated in a structured, interdisciplinary training program based on top-level fundamental research. Five faculties of the Friedrich Schiller University Jena, six non-university research institutions as well as twelve partner companies are participating in this cutting edge research and training program which includes an innovative PhD program, career development and intensive sociocultural care.

“Beutenberg-Stipendien” is a PhD fellowship program within the JSMC, funded by the federal initiative “ProExzellenz” of the Free State of Thuringia. Research projects within this program are situated at interfaces between life sciences and physics. The projects will be mentored by at least two supervisors at collaborating research institutions in Jena.

The Graduate School of Excellence ‘JSMC’ invites applications for a
PhD Student Fellowship (Ref.No. JSMC-47/2010) on the topic

High-resolution in vivo micro-/spectroscopy for the analysis of nuclear migration in fungi

Within this project, in vivo studies with real-time, high-resolution microscopy will be applied to determine the precise co-localization of proteins involved in the rapid nuclear migration processes typically associated with mating interactions in higher basidiomycetes. Our aim is to provide the experimental basis for a modular enhancement of the rapid fluorescence wide field microscopy in the sub-100nm range. This, together with a Raman-based image contrast, should pave the way for an improved multicontrast microscopy technology. In addition, microspectroscopic approaches combining rapid fluorescence nanometer resolution microscopy with resonance spectroscopic contrast will be developed. This will be used for the online analysis of growth processes in homobasidiomycetes.

We expect:

- a Master’s degree (or equivalent) in Natural Sciences (e.g., Biology, Biogeosciences, Chemistry, Earth Sciences, etc.). Candidates about to earn their degree are welcome to apply.
- high motivation and interest to join one of the interdisciplinary research areas of the JSMC
- creativity and interest to shape your own thesis project
- an integrative and cooperative personality
- very good communication skills in English (instruction language at JSMC)

We offer:

- a research project at the interface between life sciences and physics/technology
- a highly communicative atmosphere within a scientific network providing top-level research conditions
- a PhD stipend paid according to the rules of the DFG (German Research Foundation)
- a comprehensive mentoring program with efficient supervision by a team of supervisors situated a life science and a physics/technology institution
- a structured PhD training program including courses in novel technologies and soft skills
- Jena – the **German City of Science 2008**: a young and lively city with dynamic business activities, successful scientific centres of innovation and a vibrant cultural scene around the famous Friedrich Schiller University

Friedrich Schiller University Jena is an equal opportunity employer.

The application procedure is handled online exclusively via the JSMC website:

www.jsmc.uni-jena.de

To apply, please acquaint yourself with the vacant PhD projects and the application process described on this website. Applications can only be considered upon receipt of the completed ‘Statement of Interest’ form, submitted by email to **apply-jsmc@uni-jena.de** before the deadlines listed below.

Selected applicants will be invited to a JSMC Recruitment Meeting in Jena, Germany, in September 2010. Awarding decisions will be made shortly thereafter, allowing for an immediate start of the PhD projects.

Application deadlines (i.e. deadline for submission of the completed ‘Statement of Interest’ form):

For applicants who will require visa to attend the recruitment meeting in September: **Deadline July 5, 2010**

For applicants who will not require a visa: **Deadline July 26, 2010**

(Please note: applications from non-EU-national can only be considered if attendance at the recruitment meeting is possible with 2 weeks prior notice. Please provide an explanatory statement)