

## How to become a JSMC Doctoral Researcher



*A guide to the Jena School for Microbial Communication*

*Last update: 15.04.2026*

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## 1. A brief introduction to JSMC

### JSMC history in brief

- **2006:** Foundation as umbrella organization of three Research Training Groups and as Model Graduate School within the Jena Graduate Academy at the Friedrich Schiller University.
- **Nov 2007:** The JSMC concept was awarded funding by the **German Research Foundation (DFG)** for 5 years under the prestigious and highly competitive **German Excellence Initiative**.
- **June 2012:** The JSMC renewal proposal was successfully evaluated, resulting in an extension of funding for another five years (2<sup>nd</sup> phase of the German Excellence Initiative).
- **2019:** The JSMC received funding from the **Carl Zeiss Foundation** as part of the **Jena Alliance Life in Focus**.
- **2025:** JSMC is now funded by the State of Thuringia.

### The three aspects of JSMC

#### Graduate School

JSMC provides a comprehensive training program to early career researchers working on one of the multiple facets of 'Microbial Communication'. This includes a **scientific mentoring program** and an extensive **pool of state-of-the art methods courses**. In conjunction with the Jena Graduate Academy, a broad **study program on transferable skills** for scientists is offered. JSMC aims to prepare early career scientists for both a successful career in academia and in industry.

JSMC offers different grant schemes to provide support in the phase after earning the PhD, summarized under the '**JSMC Career Orientation Grants**'.

#### Scientific Network

The JSMC network comprises:

- 15 university institutes within 5 Faculties of the Friedrich Schiller University
- 2 clinics at the University Hospital Jena
- 6 non-university research institutions
- 10 biotech partner companies

JSMC serves as a **crystallization point for numerous, innovative major projects**.

### **Umbrella Organization**

The JSMC has its origin as umbrella organization of three **Research Training Groups** in Jena. These are/were

- the International Leibniz Research School for Microbial and Biomolecular Interactions (ILRS Jena)
- the International Max Planck Research School (IMPRS) on "The Exploration of Ecological Interactions with Molecular and Chemical Techniques"
- the DFG Research Training Group GRK 1257 "Alteration and Element Mobility at Microbe-Mineral Interfaces"

JSMC conceptually unites the different research areas of these three groups (microbial communities, interactions with plant, animal and human hosts, and environmental interactions) into a comprehensive picture of microbial communication. One of the aims of this integration is to use scientific and educational resources jointly in order to enhance their efficiency.

**More information about JSMC can be found on our homepage: [www.jsmc-phd.de](http://www.jsmc-phd.de)**

## 2. Regulations for JSMC admission

There are three ways of how to become a 'JSMC Doctoral Researcher' (and, with this, being eligible to the services listed in **section 3** and being subject to the expectations in **section 4**):

### A. By successful participation in a JSMC Recruitment

Candidates who applied directly for a JSMC Doctoral Researcher position offered within a **JSMC Recruitment** and got invited to a JSMC Recruitment Meeting are selected for admission to the Graduate School by the JSMC Faculty represented in the recruitment selection committee. After admission, please send the following documents to the **JSMC Office**:

- a CV (**form A4** in **section 6A**)
- a signed supervision agreement (**form A1** in **section 6A**)

### B. By application, backed up by the PhD supervisors (after having successfully passed a JSMC Research Training Group recruitment)

The qualification criteria of all Research Training Groups (RTGs) embedded in the JSMC have been standardized and, thus, are almost identical to those of the umbrella Graduate School JSMC. Therefore, after having successfully passed a recruitment of one of these groups, admission to the JSMC is very straightforward. Please send the following documents to the **JSMC Office**:

- a short cover letter
- a CV (**form A4** in **section 6A**) including your master's degree (or equivalent)
- a signed supervision agreement (**form A2** in **section 6A**)

Admission is granted after confirmation by the **JSMC Office** that the formal admission criteria are fulfilled.

### C. By application, backed up by at least two JSMC Faculty members (without having passed a recruitment)

Doctoral researchers who have not participated in a recruitment meeting by the JSMC or one of its affiliated Research Training Groups can nevertheless apply for admission. To assure equivalency to the procedures required by A and B, a letter of support signed by at least two JSMC Faculty members is required as well as a letter of motivation from the candidate. Please only send complete applications as a single PDF file to the **JSMC Office**. Your application has to including the following:

- a short cover letter
- a separate motivation letter stating clearly what you expect to achieve, why you want to join the JSMC, etc.
- a CV (**form A4** in **section 6A**) including your master's degree (or equivalent)
- a signed supervision agreement (**form A3** in **section 6A**).
- a recommendation letter signed by at least 2 JSMC faculty members

The JSMC Executive Board decides about these applications for admission.



# BALANCE OF THE MICROVERSE



**IMPORTANT for applications via B and C:**

Applications for JSMC admission with regard to the above sections B and C have to be submitted to the JSMC Office **within three months after acceptance by the faculty**. Please provide a confirmation from the faculty that you have been accepted as a PhD candidate. In singular exceptions, acceptance to the JSMC Program within six months after starting the doctorate project is possible. For details, please contact the **JSMC Office**.

### **3. Services for 'JSMC Doctoral Researchers' – the benefits of being a JSMC member**

A brief overview of benefits and services offered to doctoral researchers admitted to the Graduate School JSMC based on the regulations described in [section 2](#).

#### **Career training and general support**

- JSMC PhD Certificate: a certified list of accomplishments after successful completion of the JSMC Training Program
- Administrative and organizational support by the JSMC Office
- Joint course pool together with the JSMC Research Training Groups (all courses are open for all members of these groups) including centralized course evaluations
- JSMC Events (see also [sections 4B – 4D](#)):
  - 'MiCom' – the international doctoral researchers' conference including the opportunity to participate in the conference organization
  - Early Career Research Exchange (ECRE) Seminar
  - Microbial Communication Colloquium MiCoCo Stars (including the opportunity to invite guest speakers for this colloquium series)
  - JSMC Symposia
  - Joint Workshops with partner organizations
  - Numerous seminar series within the JSMC network
  - Alternative Careers in Science seminars
  - Social events
  - ...

#### **Grant schemes for career & networking support**

- **JSMC Career Orientation Grants** (applications are possible at any time)
  - travel grants for international lab visits
  - 6-month postdoctoral orientation phase fellowships
- **JSMC Travel Grants** (applications are possible at any time)
  - support for active conference participation (accepted presentations)
  - support for research stays
  - each JSMC Doctoral Researcher is eligible to apply annually for up to 1.000 € from JSMC funds to support scientific travel activities
  - the funding can be partially granted depending on the applicant's participation at the JSMC
  - successful applicants are expected to acknowledge the JSMC funding in their presentations (posters or talks) and to submit a brief report along with 1 or 2 photos for the use in the JSMC Newsletter and the JSMC's online presence

For more information, please contact the [JSMC Office](#).

### **Networking services**

- JSMC mailing list (for communication among doctoral researchers, e.g., on experimental issues, joint social events, etc.)
- Personal CV/project description/list of publications on the JSMC website
- JSMC Alumni Network

### **Participation in decision-making in JSMC through candidature or election**

- Doctoral Researchers are represented by their Speakers at JSMC Executive Board meetings
- The JSMC Doctoral Speakers coordinate activities within the JSMC Community and communicate ideas, input, and concerns with the JSMC Management

For more information, please contact the **JSMC speakers**.

### **Informational resources**

- JSMC Newsletter (JSMC Community news & events, career opportunities, ...)
- **JSMC Event Calendar** covering all seminars, courses, symposia etc. within the JSMC network

## 4. What is expected from JSMC Doctoral Researchers?

### A. The JSMC PhD Training Program / JSMC Credit Points

First and foremost, JSMC Doctoral Researchers are expected to invest great efforts in their research project, striving to build up a publication record that makes them internationally competitive for their subsequent career steps. Next, they are expected to participate in the **JSMC PhD Training program** to **further strengthen their career opportunities**. This program consists of three areas:

- **Scientific program** (e.g., participation in methods courses, summer schools and conferences, research stays abroad or in the industry)
- **Mentoring program** (e.g., thesis committee meetings, participation in workgroup seminars and school symposia)
- **Soft skills program** (e.g., advanced training in communication and management skills, teaching activities, public relations, and networking activities)

JSMC provides a pool of opportunities to allow each Doctoral Researcher to individually design his/her career training geared toward personal career plans. Activities beneficial to the career or to JSMC are flexibly rewarded with credit points (cp) to secure the JSMC career support standards. The JSMC Certificate will be awarded if a total of 30 cp is gained within a 3-year doctorate (see JSMC Credit Point Key in **section 6C**).

#### Requirements for doctoral researchers affiliated with a JSMC Research Training Group:

Usually, activities/achievements within the programs of the Research Training Groups embedded in JSMC can straightforwardly be transferred into JSMC credit points. The **JSMC Office** strives to keep the Doctoral Researchers' bureaucratic efforts required for this at a minimum.

### B. Activities within the JSMC Community

JSMC Doctoral Researchers are expected to integrate and actively participate in the JSMC Community. There are numerous different possibilities to do this. Some examples:

- utilizing the JSMC network for access to analytical facilities in the JSMC-associated institutes
- seeking collaborations with or input from other JSMC researchers
- participating in the organization of the international JSMC conference '**MiCom**'
- participating in and organizing **Microverse JSMC Early Career Exchange (ECRE) seminars** for informal exchange between the doctoral researchers
- giving presentations at **ECRE seminars** and other **JSMC Symposia**
- joining JSMC social events (e.g., canoeing, city visits, board game nights, beach volleyball...)
- inviting guest speakers to **MiCoCo**
- using opportunities for participation in decision-making within JSMC
- posting questions, opinions, ideas, or constructive criticism to the JSMC mailing list or making suggestions for the **JSMC Newsletter**
- ...

### **C. The Microbial Communication Colloquium (MiCoCo)**

**MiCoCo** is a bi-annual seminar series with invited guest speakers aimed to cover all disciplinary facets of 'Microbial Communication'. It is coordinated by the JSMC Doctoral Speakers with assistance from the JSMC Office. All JSMC members are encouraged to suggest MiCoCo guests by email to the **JSMC Speakers**. **MiCoCo** is considered central to the JSMC and aims to:

- provide insights in current research on 'Microbial Communication' outside Jena
- provide an opportunity to personally get to know interesting researchers in the field
- regularly bring together the JSMC members
- foster early networking of the JSMC Doctoral Researchers (e.g., for future postdoc positions or collaborations)

Therefore, JSMC Doctoral Researchers **are expected to regularly attend one guest lecture per semester**. Moreover, they are strongly encouraged to invite guest speakers and to look after them during their stay in Jena. Through suggesting and inviting guests, they can ensure that MiCoCo covers aspects of their research can establish personal contacts with renowned scientists of their interest.

### **D. The International Conference on Microbial Communication – MiCom**

**MiCom** was initiated by JSMC Doctoral Researchers in 2010. The conference has since been organized annually/biennial by JSMC Doctoral Researchers for doctoral researchers from all over the world. Over the years, **MiCom** has grown both in international visibility and professionalism, while at the same time retaining its original concept as a lively forum for vivid discussions and personal contacts.

For the JSMC Doctoral Researchers, **MiCom** provides a unique opportunity to gain hands-on experiences in scientific event organization and to enhance personal networks through participation in the conference organization. Moreover, JSMC Doctoral Researchers are expected to support the continuous success of this 'JSMC flagship' by their participation and by spreading the word about the conference.

Each JSMC Doctoral Researcher is **expected to present their research to the JSMC Community at least once per year** either on the occasion of the ECRE Seminar, MiCom, or at an internal JSMC symposium.

## 5. What is expected from supervisors of JSMC Doctoral Researchers?

All mentors of JSMC Doctoral Researchers are expected to adhere to the **JSMC supervision standards** as outlined in the JSMC Supervision Agreement (see **section 6A + B**). The most important aspects of this agreement are the supervision by a team of at least two mentors (**‘Thesis Committee’**) and annual meetings of this team with the JSMC Doctoral Researcher (**‘Thesis Committee Meetings’**).

It is the responsibility of the Thesis Committee to provide regular guidance on the principles of **Good Scientific Practice** for their mentees and to support their **integration into the scientific community**, thereby enhancing their career prospects after completing the PhD. All JSMC supervisors are strongly encouraged to participate in **JSMC Events** such as the Microverse JSMC Early Career Exchange (ECRE) seminar, symposia, MiCoCo, or **MiCom**, and are expected to actively support the JSMC Doctoral Researchers in their engagement with the JSMC Training Program and within the JSMC Community.

Since the JSMC Training Program relies considerably on ‘internal expertise’, supervisors of JSMC Doctoral Researchers are expected to contribute to this program by organizing practical **Methods Workshops**, providing training on state-of-the-art research methodologies applied in their labs.

To recognize outstanding mentorship, the JSMC annually presents the **JSMC Supervision Award**. This award honors supervisors who demonstrate exceptional dedication, support, and guidance to the JSMC Doctoral Researchers, fostering both their scientific development and professional growth. The award underscores JSMC’s commitment to high-quality supervision as a cornerstone of its doctoral training program.

## **6. Further informational resources & forms regarding the JSMC membership**

Please click on the links below to access the documents. They are also available from the **JSMC Office**.

### **A. Application documents for JSMC admission**

- A1 Supervision Agreement for Doctoral Researchers who have passed a JSMC recruitment (**see section 2A**)
- A2 Application form & Supervision Agreement for Doctoral Researchers who have passed a JSMC Research Training Group recruitment (**see section 2B**)
- A3 Application form & Supervision Agreement for Doctoral Researchers seeking a Joining Membership (**see section 2C**)
- A4 CV template (for all applicants)
- A5 Abstract template (for all applicants)

### **B. Thesis committee meetings**

- B1 Protocol template for Thesis Committee Meetings

### **C. JSMC Training Program / Credit Points**

- C1 Batch Card template
- C2 Credit Point Key

### **D. General info**

- D1 JSMC Statutes (German)
- D2 JSMC Statutes (English)