

Statute of the Structured Doctoral Training Program of Leibniz IOM

1. Objectives and Tasks

The structured doctoral training program (in the following shortly 'doctoral program') of Leibniz Institute of Surface Engineering (IOM) serves to provide additional training and expertise transfer to doctoral candidates at IOM that go beyond purely academic education. The focus is on improving soft skills, interdisciplinary research practice and profession-oriented skills in order to provide doctoral candidates with a wide range of qualifications and perspectives.

The Leibniz IOM is distinguished by a wide range of research and technological topics in the fields of material and surface development. Expertise from chemistry, physics and related natural sciences as well as engineering sciences are combined for fundamental research and the development of new processes, technologies and equipment up to technology transfer into the industry. Research in fundamental physical and chemical processes enable IOM scientists to contribute to surface technologies using ions, electrons, plasmas and photons. Our mission and goal is the development of innovative surfaces for high-tech materials and socially relevant future fields - from the idea to the product. The IOM sees itself as an integrated strategic partner for industry and research.

The goal of the IOM doctoral program is to provide doctoral candidates practical access to this wide field of expertise and to prepare them optimally for a successful career in both applied research and industry. All doctoral projects at IOM are supervised and mentored by supervision teams, also called mentoring committees (MC). A MC is composed of the Principal Investigator (PI), and at least two other postdocs or senior scientists. A mentoring agreement between the MC and the doctoral candidate defines the rights and obligations of all parties.

2. Program

The program of the IOM doctoral program consists of scientific courses and activities at IOM, and is completed by additional, non-scientific workshops (e.g. soft skill courses) of the research academy Leipzig (RAL) competence school at Leipzig University.

The credit point (CP) system of the doctoral program is related to the European Credit Transfer and Accumulation System (ECTS). Including self-study, 1 CP requires a workload of 25 to 30 hours. As a doctoral researcher a minimum of 15 CPs has to be completed, thereof a minimum of 12 CPs for courses and participation in the junior research seminar, and elective

modules. Activities should contribute at least 3 CPs. The courses provided by RAL should not exceed 1/3 of the CPs achieved by elective modules.

The weekly junior researcher seminar and the yearly overview/introduction module are mandatory for each doctoral candidate at the institute. A total amount of 5 CPs must be achieved. Detailed information can be found in the module description. Both modules will not be graded.

The elective courses consist of several scientific and soft skill courses and should cover a total amount of minimum 7 CPs. The courses can be chosen according to the individual demands and interests. One third of these courses should be soft skill courses, commonly offered by a cooperation partner (e.g. Research Academy Leipzig). A minimum of 5 CPs should be achieved by scientific modules, which can be covered by internal and external courses. The courses can be graded by an examination (written/oral exam, homework). This is decided by the person responsible for the module. Additionally, introduction and training in measurement techniques and special equipment, which need to be an essential part of the thesis' course of the doctoral candidate, can be awarded with a maximum of 2 CPs.

In order to get the CPs from external courses, the course certificate needs to be sent to the coordinator of the doctoral program and must be confirmed by the board of the doctoral program. A course website or detailed course programme is needed for evaluating the correct number of CPs.

A minimum of 3 CPs should be achieved by research related activities, such as presentations at international conferences or participating in a Winter or Summer School, or attending study trips. The granted CPs depend on the amount of time spend for the activity. Optionally, assisting a bachelor or master thesis within the course of a research project or teaching assistance for university courses shall be awarded with CPs. Activities are generally not graded.

If the doctoral candidate does not achieve 15 CPs, the board of the doctoral program will decide if an exceptional rule can be applied.

		Credit points	Min. Credit points
Mandatory			5
Presentation at junior researcher seminar		0.5 per talk per semester	2
Introduction/Overview Module		0.5	0.5
Attendance at junior researcher seminar		0.5 per semester	2.5

		Credit points	Min. Credit points
Elective Modules			7
Soft Skill courses (RAL)		1-2	2
Scientific modules		1-2	4
Introduction and training on scientific equipment		0.5-1	
Activities			3
Presentation/participation at conferences		1	
Winter-/Summer school (internal or external)		1-2	
Study trips		Depending on hours	
Acting as elected doctoral representative		1	
Assisting the supervision of B.Sc. or M.Sc. research projects or internships (optional)		1	
Teaching assistance for university course (optional)		1-2	
Total (minimum)			15

At the end of the postgraduate studies, a certificate of the IOM doctoral program will be issued listing all courses and activities completed. Doctoral candidates who have not completed the minimum of 15 CPs or participated in doctoral program less than 3 years may apply for a list of the completed courses and activities.

3. Recruiting and Supervision of Doctoral Candidates

3.1 Recruiting:

All doctoral candidates at the IOM are members of the doctoral program, regardless at which university they are going to graduate.

3.2 Supervision:

The doctoral candidate will appoint a mentoring committee (MC), which consists of three mentors (see mentoring agreement). The first mentor is commonly the PI. One member is accepted as supervisor by the respective faculty of the graduating institution. All parties have rights and obligations. These are specified in the Mentoring Agreement (see attachment),

which is signed by the doctoral candidate and the members of the MC within the first 6 months of the postgraduate studies.

The MC will have at least one meeting per year with the doctoral candidate to monitor the progress of the project. During these meetings, the doctoral candidate will provide a short presentation focusing on the current developments and plans during the project, including an updated timeline of the project. A subsequent discussion the future career of the doctoral candidate should be addressed. A short protocol will summarize the agreements of the joint evaluation and will be signed by all participants. A copy of the protocol will get the MC and the doctoral candidate and will be stored until the end of the doctoral thesis.

Membership of Principal Investigators

Postdocs, group leaders and heads of the departments can be PIs of the IOM Doctoral program. PI-membership is desired if supervising a doctoral candidate. Active participation is expected from every member (see program). The membership automatically ends when all supervisory functions are completed.

4. Organization

The doctoral program will be supported by IOM. A linkage to the Research Academy Leipzig (RAL) will be established.

5. Organizational Structure

The doctoral program is an interdepartmental unit of the IOM to support the career development of doctoral candidates. The unit has a coordinator, who is an employee of IOM, managing the activities of the doctoral program.

The organizational units are:

(a) Spokesperson

The spokesperson is the head of the doctoral program and represents it externally and within the RAL. The spokesperson and its deputy are elected by the PI meeting from amongst the PIs. The spokesperson summons the general meeting at least once a year.

(b) Board of the doctoral program

Members of the board are the spokesperson and its deputy, the director and all professors of the institute, the representative of the doctoral candidates, a representative of the scientific and technical council, the coordinator, and at least two PIs.

The board meets at least twice a semester and makes decisions with simple majority of the attendees. It is responsible for the development and the program of the doctoral program and decides upon the accreditation of achievements gained at cooperating doctoral programs.

(c) Coordinator

The coordinator is elected by the PI meeting. The coordinator organizes the doctoral program, coordinates an attractive course program - also in cooperation with the RAL or, if possible, other doctoral programs - and is the contact person for doctoral candidates. The coordinator is responsible for course evaluations and compiles the contribution to the IOM biennial reports.

(d) General Meeting

The general meeting is held once a year. At least 50% of all members of the doctoral program, including doctoral candidates, PIs and mentoring postdocs, must be present to make decisions with a simple majority. The discussion of the IOM biennial reports is one focus of the meeting. Requests from members regarding for instance the development of the doctoral program, additional support of young scientists and gender-based aspects are discussed and decided. Suggestions regarding improvements of coordination processes and the course program are debated. A protocol of the general meeting will be distributed among the members.

(e) Doctoral Representative

The doctoral representative is representative of the junior researchers is elected as stated in the company agreement (Betriebsvereinbarung). The representative serves as contact person for the doctoral candidates in general, not only related to the doctoral program. The representative is member of the board of the doctoral program and calls the doctoral candidates meeting once a year.

(f) Doctoral Candidates Meeting

The doctoral candidates meeting is called by the doctoral representative once a year. To make decisions with simple majority, at least 50% of all active doctoral candidates must be present. Important items of the agenda are the discussion of the offered qualification program and claims regarding the supervision of doctoral candidates as well as discussions about additional support of young scientists.

(g) PI meeting

The meeting of the PIs is held once a year, at least 50% of the PIs have to be present and decide with simple majority. The meeting focuses on the election of the spokesperson and its deputy for a two-year term. The conceptual and thematic development of the doctoral program are discussed and decided.

6. Career Support

The IOM will support the doctoral candidate independent career by following measures:

1. Research stay abroad and integration into a foreign environment
2. Active participation in national and international conferences
3. Assistance in forming and cultivating a professional network
4. Supporting collaborations within and outside the IOM
5. Training and supervision of student assistants
6. Preparing publications and presentations
7. Excursion to a cooperating company or research institute

Especially, the application center and GRAVOMER e.V. (www.gravomer.de) are unique platforms to initialize cooperation with industrial partners. Doctoral candidates and PI are highly encouraged to join GRAVOseminars and GRAVOnet network meetings providing excellent opportunities to build up a network with regional industrial partners. Furthermore, the Leibniz PhD Network provides a unique transdisciplinary platform for the doctoral candidates. Additionally, IOM will provide a coordinator for the doctoral program (part time), support for outreach activities and rooms/lecture halls for courses and activities. Furthermore, doctoral candidates are highly encouraged to organize scientific breakfasts or lunches to get better in touch with each other.

7. Quality Management

To ensure the quality of the modules, anonymous evaluations are regularly carried out using a short feedback form. Additionally, an internal evaluation of the doctoral program within the IOM by the doctoral candidates meeting and the PI meeting will be carried out regularly after 3 years. These evaluations will be organized by the coordinator.

In addition, external evaluations of the doctoral program will take place as part of the institute evaluation by the Leibniz Association. Finally, reports about the doctoral program will be included in the IOM biennial reports.

The criteria for admission to the doctoral program correspond to those for admission of doctoral candidates at the IOM. Project leaders will pursue an active international recruiting

of above-the-average doctoral candidates for the IOM following transparent procedures with a focus on gender balance and diversity.

8. External Communication

Information on the doctoral program will be provided on the website of the IOM where the coordinator serves as contact person. Furthermore, the IOM aspires to share information about the doctoral program on social media and LinkedIn.

Agreed by the Leitungskreis on September 9, 2021.

Leipzig, September 10, 2021



Prof Dr A. Anders

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Leipzig, September 10, 2021



Dr. Carsten Bundesmann

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