



Integrated Research Training Group "Interface-driven multi-field processes in porous media" (IRTG-IMPM) of Collaborative Research Centre SFB 1313

Policies and procedures (AVO)

Version dated 29 March 2018

supplementing the University of Stuttgart Doctoral Degree Regulations (PromO) dated 22 February 2016.

1) Mission and goals of IRTG-IMPM

- a. The Collaborative Research Centre *Interface-driven multi-field processes in porous media* established on 1 January 2018 has identified its mission as the fostering of young scientific talent in a coordinated doctoral studies programme. In pursuit of this mission, SFB 1313 has set up the integrated research training group "IRTG-IMPM".
 - IRTG-IMPM is an internationally-oriented doctoral programme.
 - IRTG-IMPM provides its doctoral researchers with individual advisors who are professors of the University of Stuttgart and of SFB 1313's international partners.
 - To foster an interdisciplinary approach to work, IRTG-IMPM offers a regular programme of doctoral seminars and annual doctoral workshops in which individual work can also be presented. A summer school will also be held at two-year intervals.
- b. Doctoral researchers financed through SFB 1313 are required to become members of IRTG-IMPM.
- c. The University of Stuttgart's Doctoral Degree Regulations (PromO) dated 22 February 2016 in the respective current version apply to IRTG-IMPM.
- d. The Stuttgart Centre for Simulation Sciences (SC SimTech) oversees the completion of all doctoral degree studies in IRTG-IMPM with involvement by the respective subject-specific Faculty of the University of Stuttgart.
- e. Unless otherwise stipulated in PromO, the IRTG-IMPM "Council" is the responsible decision-making body for IRTG-IMPM.

2) Admission to IRTG-IMPM

- a. All full members or associate members of IRTG-IMPM must also be members of the Graduate Academy (GRADUS) of the University of Stuttgart.
- b. Upon being appointed, all doctoral researchers financed under SFB 1313 become provisional members of IRTG-IMPM. Once appointed, the doctoral researchers concerned must furnish in a timely manner an "Application for admission to full membership in IRTG-IMPM" to the IRTG-IMPM Coordination Office. Only with the latter's approval do the doctoral researchers become full members of IRTG-IMPM, unless they were not already members of another doctoral programme prior to their appointment. Admission to IRTG-IMPM will be confirmed in writing.
- c. Doctoral researchers financed by SFB 1313 or whose research supports the goals of SFB 1313 but who, upon being appointed, are already enrolled in another doctoral programme may apply for a partner membership. The same option is available to doctoral researchers from international partners of SFB 1313. Partner members of IRTG-IMPM may take part in all of its activities but have no right to financial support,

nor can they earn a certificate from IRTG-IMPM. The “Council” makes the final decision on admissions to IRTG-IMPM, with admission confirmed in writing.

- d. IRTG-IMPM will also accept applications for associate memberships from other doctoral researchers that are not financed by SFB 1313, provided their research supports the goals of SFB 1313, they are not enrolled in another doctoral programme, and their respective advisor is an SFB 1313 member. Associate members can take part in all activities of IRTG-IMPM and may earn a certificate from the programme. However, they have no right to financial support from IRTG-IMPM. Applications for admission are to be directed to the Coordination Office of IRTG-IMPM. The final decision on admissions is made by the IRTG-IMPM “Council” with admission to the programme confirmed in writing.
- e. The following items must be submitted with the application for admission to IRTG-IMPM as a full or associate member:

- Master’s certificate (copy)
- Curriculum vitae
- Description of the doctoral project (ca. 1 page)
- List of publications (if any)
- Application for acceptance as doctoral student to the responsible office in University Administration (copy)
- Confirmation of acceptance as doctoral student by the responsible office in University Administration (copy)
- Signed doctoral studies agreement (copy)

Together with the application for admission to the IRTG-IMPM programme, the doctoral researcher and her or his advisor must agree to comply with this AVO of the IRTG-IMPM.

- f. Applications for admission as partner member to the programme must be accompanied by:

- Master’s certificate (copy)
- Curriculum vitae
- Description of the doctoral project (ca. 1 page)
- List of publications (if any)
- Confirmation of acceptance as doctoral student by the responsible office in University Administration (copy)

Together with the application for admission to the IRTG-IMPM programme, the doctoral researcher and her or his supervisor must agree to comply with this AVO of the IRTG-IMPM.

3) Advisor concept

- a. IRTG-IMPM operates based on an “advisor concept.” Advisor ensure that the IRTG-IMPM AVO is complied with in all respects. The advisor confirms AVO compliance to the IRTG-IMPM Coordination Office at the time of the “milestone presentation” and at the start of the doctoral examination process. A detailed record of requirement completed by each doctoral researcher (e.g., courses passed) must be turned in to IRTG-IMPM.
- b. The respective advisors of every full and associate member of IRTG-IMPM must be members of SFB 1313 and have examiner rights under PromO § 9 (3).
- c. At least one co-examiner for each full and associate IRTG-IMPM member must belong to a foreign university or research institute. According to PromO § 9 (3), only professors

or assistant professors at a foreign university that have examiner rights granted at that university qualify.

- d. The advisor and the prospective co-examiners will be named in the admission application at the start of doctoral programme studies.
- e. The main examiner and co-examiners will be officially appointed for the “milestone presentation” as provided for in PromO § 9 (3). Examiners are to be appointed by resolution of the SC SimTech Doctoral Committee and the participating Faculty.

4) Phases of the qualification programme

The qualification programme consists of the following phases:

Phase 1 (12-18 months):

- Complete the subject-specific courses of the Institutes participating in SFB 1313 (core study programme) (6 credits)
- Complete the soft-skill courses offered by GRADUS (3 credits)
- Give a 20-minute presentation with following discussion before the advisor and the prospective co-examiner within the first 12 months.
- Doctoral project work
- Make a “milestone presentation”

Phase 2 (18-24 months):

- Further work on the dissertation topic and dissertation writing
- Complete short courses within SFB 1313 (3 credits)
- Stay abroad of 3 months duration
- A minimum of one presentation at an international conference
- At least one article published in a peer-reviewed scientific journal

For the duration of the doctoral programme, the doctoral researcher commits to regularly and actively participating in the biweekly doctoral seminars, the annual doctoral workshop, and at least one attendance at the biennially scheduled summer schools.

5) Elements of the qualification programme

- a. As a structured introduction to the dissertation topic, the doctoral researcher must complete the relevant subject-specific courses worth at least 6 credits and must sit for an examination covering these courses. The courses are to be selected from the regular offerings (core study programme) of the Institutes participating in SFB 1313. In exceptional cases and by arrangement with the advisor, it is permissible to take regular courses in or outside the University of Stuttgart (courses at other universities, suitable summer schools). The course selection is made by the advisor in consultation with the doctoral researcher (advisor concept). The relevant examinations must be passed by the time of the “milestone presentation”.
- b. To acquire interdisciplinary key competencies, the doctoral researchers complete soft-skill courses worth a total of 3 credits. The advisor selects the courses from the GRADUS programme in consultation with the doctoral researcher (advisor concept).
- c. To assess progress in a timely manner, during the first year after admission to the programme, the doctoral researcher gives a 20-minute presentation attended by the advisor and the prospective co-examiners.
- d. To promote interdisciplinary networking among the doctoral researchers and expand their scientific horizons, they regularly and actively participate in the biweekly doctoral seminars.

- e. The doctoral researchers present the findings from their scientific work at the annual doctoral workshops (which may take place as part of the annual SFB 1313 status seminar) with posters (annually) or possibly an additional presentation. Participation in the doctoral workshops is mandatory.
- f. Attendance at summer schools organized by doctoral researchers every two years is also obligatory.

6) Time horizon

The doctoral programme's first phase ending in the "milestone presentation" normally should be completed during the first 12 – 18 months.

7) Acceptance as doctoral student

- a. To be accepted into IRTG-IMPM as a full member or associate member all requirements per PromO § 3 must be met. The required documentation can, if necessary, be turned in during the doctoral programme's first phase in IRTG-IMPM.
- b. Admission to IRTG-IMPM does not confer a legal right to acceptance as a doctoral student. The latter is solely determined by the provisions of PromO § 4.
- c. To be accepted as a doctoral student requires an application at the start of the doctoral programme to the responsible office of University Administration. The acceptance confirmation must be attached to the application for acceptance to IRTG-IMPM.
- d. Failure to be accepted as a doctoral student pursuant to PromO § 4 or passing the milestone presentation per No. 8 below will result in expulsion from IRTG-IMPM. A revocation of the acceptance as doctoral student by the Doctoral Studies Committee will be exclusively determined in accordance with PromO.

8) The milestone presentation

- a. For the milestone presentation, the doctoral researcher must demonstrate in-depth knowledge of the subject discipline and convincingly explain interim findings already achieved in her or his doctoral project and work programme.
- b. The purpose of the milestone presentation is to gauge the progress made in working on the dissertation topic and to allow taking timely corrective steps in case of problems. In addition, the milestone presentation is intended to encourage doctoral researchers to take stock personally of their progress and of what remains to be done in their doctoral programme.
- c. At least two weeks before the milestone presentation, the doctoral researcher must turn in the milestone report to the main examiner, the co-examiners, and the IRTG-IMPM Coordination Office.
- d. The IRTG-IMPM Coordination Office posts the milestone report on the SFB 1313 website, provided the doctoral researcher has given his or her consent. Publishing it on the external-facing pages of the website is expressly desired. However, posting it on the internal pages only is also permissible. The doctoral researcher can also publish an abbreviated version of the milestone report on the external website.
- e. At least four weeks before the milestone presentation, the advisor confirms to the IRTG-IMPM Coordination Office in writing that the doctoral researcher has completed the subject-specific courses and the soft-skill courses. Further, she or he certifies that in the first year after acceptance into the doctoral programme a 20-minute presentation was given, followed by a discussion in the presence of the advisor and the prospective co-examiners. Finally, the advisor attests to the doctoral researcher having attended the biweekly doctoral seminars and presented her or his own work in the annual doctoral workshops.

- f. The milestone presentation consists of the following elements:
 - A comprehensive written summary of about 10 pages detailing the research done to date and the work programme ahead (milestone report).
 - A public presentation of a minimum 30 minutes length
 - A private, oral examination talk of at least 60 minutes between doctoral researcher, main examiner, and co-examiners.
- g. The main examiner and co-examiners decide the examination result as follows:
 - Passed (without conditions)
 - Passed with conditions

The doctoral researcher may have conditions imposed that must be fulfilled by a deadline and demonstrated as such to the main examiner. There will be no repeat of the milestone presentation.
 - Failed

A failed milestone presentation can be repeated once within three months after the initial examination. If the examination is failed a second time, the doctoral researcher is expelled from IRTG-IMPM.
- h. The milestone presentation can be given in German or in English.
- i. The main examiner prepares a protocol of the milestone presentation, which notes the presentation topic, date, place, and time of the examination, who was present at it, and the examination result. In addition, constructive criticism and suggestions for the further course of the doctoral studies are to be included. Signed by the main examiner, the protocol is routed to the IRTG-IMPM Coordination Office.

9) The stay abroad

- a. IRTG-IMPM doctoral researchers are encouraged to spend three months abroad. The advisor is required to certify the completed stay abroad to IRTG-IMPM with the application to start the doctoral examination process. If the stay abroad is precluded for compelling reasons, a brief explanation of what they are must be attached.
- b. Normally, it makes sense to arrange the stay abroad with an SFB international partner that belongs to a foreign university or research institute. However, this is not mandatory. The timing, duration, location, etc. of the stay abroad are determined by the advisor in consultation with the doctoral researcher under the “advisor concept.” While SFB 1313 is in effect, full members of IRTG-IMPM can apply for financing of their stay abroad.

10) Examining committee

The Examining Committee is appointed by the SC SimTech Doctoral Studies Committee and the participating Faculty with input from the IRTG-IMPM Speaker as provided for in PromO § 7 (2). The Examining Committee consists at minimum of a main examiner and one or two co-examiners. More examiners may be added.

11) Submitting the dissertation

As provided in § 6 (1), the candidate submits the dissertation to the SC Sim Tech Doctoral Studies Committee, the participating Faculty, and the IRTG-IMPM Speaker (with *n* copies, as called for in the Faculty guidelines + 1 copy for SFB 1313). In addition to handing in the dissertation, the advisor certifies to the IRTG-IMPM Coordination Office that the IRTG-IMPM AVO has been complied with.

12) Examiner's dissertation report

- a. As provided for in PromO § 10, written examiner reports are obtained for the submitted dissertation. The dissertation and reports can be inspected by the members of the SC SimTech Doctoral Studies Committee and the participating Faculty by being exhibited or by being circulated (PromO § 10 (2) resp. (3)).
- b. Following this, the Examining Committee decides if and in what form the doctoral examination process will be continued.

13) Doctoral oral examination

- a. The doctoral oral examination must take place within three months and not later than six months after the dissertation has been submitted. It can be taken in German or in English.
- b. The doctoral oral examination is conducted according to the guidelines of the participating Faculty. In the event no presentation of the dissertation topic to the university public has been planned, it must be completed in addition before the oral examination (Length: 30 minutes).

14) Publishing the dissertation

- a. The dissertation is published in accordance with PromO § 13.
- b. In addition to the mandatory number of copies called for by PromO, another copy is to be printed for SFB 1313 and an electronic version (pdf) of the dissertation is to be submitted to the IRTG-IMPM Coordination Office.

15) IRTG-IMPM certificate

After a successful dissertation defence, the IRTG-IMPM Coordination Office audits compliance with AVO. Provided the AVO has been complied with, the IRTG-IMPM Council then issues an IRTG-IMPM certificate to the candidate.