

## Terms of good practice in doctoral training in the International Helmholtz Graduate School for Plasma Physics (HEPP)

### 1. Membership

All doctoral candidates at IPP are required to become either *HEPP Members* or *HEPP Fellows*.

*HEPP Members* fully participate in the scientific curriculum and the training program of the HEPP graduate school.

*HEPP Fellows* do not bear the specific responsibilities of *HEPP Members*, but may still participate in the HEPP training program. *HEPP Fellows* will not receive the HEPP certificate.

In agreement with their supervisors, doctoral candidates can become *HEPP Fellows*, if their full participation in the scientific program of HEPP is not justified. This may be the case if their topic of research is unrelated to the scientific program of HEPP, they already participate in another graduate program with similar obligations, or their daily place of work would make regular participation in the HEPP program unreasonable.

### 2. Supervision Agreement

The doctoral candidate and his/her thesis advisor(s) will enter into a supervision agreement within two months after the start of the doctoral project.

### 3. Thesis advisory committee

The doctoral candidate is mentored by a *Thesis Advisory Committee (TAC)*, which consists of the *Academic Supervisor*, the *Scientific Supervisor*, and a *Scientific Counsel*.

The *Scientific Counsel* is an expert in the same or a related research area, but independent of the *Academic* and the *Scientific Supervisors*. He/she is an experienced scientist who provides an outside view on the doctoral project and contributes additional expertise. The *Scientific Counsel* is selected by the doctoral candidate in consensus with the other supervisors.

The TAC meets at least once per year, upon invitation of the doctoral candidate. The kick-off meeting should take place not much later than three months after the start of the doctorate. Regular TAC meetings are usually preceded by a presentation of the doctoral candidate in the HEPP seminar, a group seminar or similar. External TAC members can participate in the TAC meetings via teleconference.

The TAC members advise the doctoral candidate on subject specific training and interdisciplinary qualification measures while offering support and encouragement to ensure the doctorate proceeds swiftly and uninterrupted. They provide support and mentorship in career questions.

### 4. Thesis project plan

Within the first three months of the doctoral project, the doctoral candidate prepares a draft project plan. The project plan should contain an outline of the research project, an approximate schedule with targeted milestones, and expected necessary resources for the research project.

During the kick-off meeting, the TAC discusses the research plan and its elements, as well as the expectations with regard to the research project.

The doctoral candidate finalizes the project plan after the meeting and updates the plan as needed.

### 5. Roles and Responsibilities of the doctoral candidate

#### 5.1 Responsibilities of all doctoral candidates (HEPP members and HEPP fellows)

- a. The doctoral candidate agrees to make provision for, and take advantage of the offered mentoring services through regular contact to the supervisors.

- b. The doctoral candidate must be prepared to provide his/her supervisors with details of the progress he/she has made with his/her research work so far whenever he/she is asked to do so.
- c. The doctoral candidate participates in a seminar on “Good Scientific Practice” during the course of the doctoral project.
- d. The doctoral candidate must communicate to the HEPP management office the successful submission of the thesis and the date of the final examination. As soon as the doctoral candidate has received his/her certificate or doctoral degree, he/she must submit an electronic copy of the certificate.
- e. The doctoral candidate invites to TAC meetings and is responsible for the documentation of the meetings.

## 5.2 Additional Responsibilities for doctoral candidates as HEPP members

- a. The *HEPP member* regularly and actively participates in the scientific training program of HEPP for at least six semesters. This includes at least the weekly HEPP seminar, and the annual HEPP colloquium.
- b. The *HEPP member* agrees to take part in subject-related courses (seminars, special lectures, summer/winter academies, etc.) for the equivalent of at least 6 semester weekly hours (SWS) spread over the entire duration of the doctoral project.
- c. The *HEPP member* is expected to submit at least one scientific article for publication in a peer-reviewed journal or for the proceedings of an international conference with peer-review procedures.
- d. The *HEPP member* is expected to become actively involved in the international research community. This can take the form of
  - one or several placements at a research institution or an industrial firm engaged in research abroad,
  - presentations (lectures/posters) of the doctoral candidate's own scientific results at conferences with a majority of international participants,
  - joint research work in conjunction with international guests, who may also be invited to their institution for an appropriate period of time by a group of doctoral candidates.
- e. As a *HEPP member*, the doctoral candidate benefits from numerous qualification opportunities. In return, he/she undertakes to participate actively in the training program.
- f. The *HEPP member* needs to comply with all conditions and to provide corresponding documentary evidence in order to qualify for the HEPP certificate.

## 5.3 Supervisors

- a. The *Academic Supervisor* bears the primary responsibility for the supervision of the doctoral candidate's independent research. He/she oversees the progress of the project and shares joint responsibility with the doctoral researcher for the successful completion of the doctoral research project. The Academic Supervisor must be eligible to serve as doctoral examiner at the degree awarding institution. The doctoral candidates have the opportunity to meet with their supervisor at least quarterly. The academic supervisor guarantees the doctoral candidate suitable working conditions.
- b. The *Scientific Supervisor* provides guidance on a day-to-day basis and supports the doctoral candidate with all scientific and technical problems.
- c. Both supervisors provide expert advice, in particular by
  - introducing the subject-matter and the relevant or related academic topics to the doctoral candidate,
  - providing advice on obtaining the relevant specialist literature and research material,
  - providing advice on formulating and clarifying the subject-matter and defining restrictions on the topic and any problematic issues,
  - discussing and assessing hypotheses and methods,
  - reviewing results and their evaluation,
  - encouraging participation in scientific conferences (depending on available funds),

- arranging practical experience, where appropriate,
- making regular appointments with the doctoral candidate to review the progress in detail,
- offering advice on the scheduling and presentation of the thesis (structure, language and layout)

#### 5.4 Scientific counsel

The *Scientific Counsel* agrees to participate in the TAC meetings and to support the TAC and the doctoral candidate with his/her expert advice.

#### 6. Mediation in conflicts

The parties acknowledge the existence of the *Ombudspersons* for doctoral education appointed by IPP. In case of conflicts between the doctoral candidate and the supervisors, the parties concerned should contact one of these *Ombudspersons* who will advise or mediate in strict confidentiality. *Ombudspersons* must be independent from all members of the TAC.

#### 7. Compliance with the Rules of good scientific practice

The doctoral candidate and the TAC members are obliged to comply with the Rules of Good Scientific Practice<sup>1</sup>. For doctoral candidates this includes the obligation to seek advice with a person of trust when in doubt. For supervisors and counsel this explicitly includes the obligation to comply with the intellectual property rights of their doctoral candidates and others.

#### 8. TUM Membership

Doctoral candidates graduating at the Technische Universität München (TUM) must be a member of the TUM Graduate School (TUM-GS) for at least two years, attend the TUM-GS Kick-off-Seminar and participate in the TUM-GS qualification program according to the rules and regulations of TUM and the TUM-GS.

#### 9. Settlement of disputes

In the event of any factual/technical or personal differences of opinion, which stand in the way of a sustainable, constructive and purposeful cooperation based on trust and which appear to be beyond clarification or reconciliation, the person or the parties concerned may jointly or collectively appeal to the HEPP *Executive Council*.

#### 10. Other regulations and area of validity

The supervisors and the doctoral candidate confirm that they acknowledge

- the statute of HEPP
- the rules and regulations of the respective faculty of the respective university
- the rules and regulations of the graduate school/graduate center (if applicable)
- the respective university's doctoral degree regulations
- the guidelines for awarding doctoral grants from donations or other third-party funding (where applicable)

and will act in accordance with the provisions contained therein.

#### 11. Coming into force

These Terms of good Doctoral Training will become effective by Aug. 1, 2019.

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<sup>1</sup> <https://www.mpg.de/197494/rulesScientificPractice.pdf>

(adopted by the senate of the of the Max Planck Society on November 24, 2000, amended on March 20, 2009)