

Guidelines for mentoring at MPS

Preamble

These guidelines for mentoring at MPS are based on discussions at the institute's retreat in 2012. They describe common practices already in effect, add new recommendations and provide a more formalized structure. This document also contains heritage from the recent application for the International Max Planck Research School (IMPRS) hosted at MPS, at least as far as mentoring of PhD students is concerned. This document is distributed among all scientists at MPS, including PhD students, PostDocs and mentors. New arrivals will be provided with a copy.

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This outline for mentoring concerns PhD students and young scientists with typically five years or less of post-doctoral experience. In the following the term "S/P" will be used when referring to PhD students and PostDocs alike.

Not yet experienced in research, PhD students will receive close guidance through a precise plan laid out by their supervisor in their 1st year. In their 2nd year the student is expected to develop own ideas and realize these ideas in close collaboration with their supervisor. This is expected to result in a research plan for the 3rd year. In this final phase the PhD students are expected to work mostly independently, with some guidance, now including career planning. The mentor of the student is the supervisor or the day-to-day supervisor. The PhD student will obtain guidance also from the thesis advisory committee (TAC) that has three members, including the supervisor, as outlined in the IMPRS rules.

PostDocs usually still need some guidance concerning their scientific work, which is ensured through their full integration in a research group at MPS. The mentor of the Postdoc is a senior scientist of that research group. For the mentoring of PostDocs there will be a strong emphasis on the planning of their further careers.

The S/P is encouraged to seek mentoring advice also from other senior members of the institute that she or he thinks are appropriate to approach. In case of severe problems, the S/P can seek confidential advice from the ombuds person. The yearly institute's retreat provides a feedback mechanism for the mentoring in general.

The mentors consider the supervision of a S/P as teaching experience, with the goal being to teach the S/P to perform independent work and to be creative in defining new research projects. There are regular meetings of the mentors of MPS to identify problematic or particularly good examples of S/P projects. Such meetings are instrumental in resolving problems in supervision and to find synergies between the projects of different S/P.

Scientific practice

There are yearly discussions between mentor and S/P on overarching plans for the upcoming year. Starting with the second year these are based on a self-evaluation for the preceding year provided by the S/P. For PhD students these discussions can be combined with the TAC meetings, that also include a performance review.

For day-to-day scientific work, there are regular meetings between mentor and S/P, typically on a weekly basis. These meetings ensure that problems are recognized as soon as possible and that motivating feedback can be given to the S/P.

The S/P is fully integrated into one or more research groups within MPS. This includes the participation in the research group meetings, journal clubs and other meetings these groups might hold. Because of the wide diversity of groups within MPS there is a range of activities the S/P is involved with in their respective group. In particular, the mentor is expected to give a good example and attend such seminars whenever possible.

The S/P is introduced to the tools and methods that are used in the hosting research group and that the S/P needs for the research work. In addition, the S/P is familiarized with tools and methods that might be of potential interest for the broader context of her or his work.

The S/P is advised on where to publish which parts of her or his results. Here an emphasis is put on reaching the proper audience and on publishing the results effectively in a timely manner. Because writing and publishing is an integral and key part of science work, the mentor encourages the PhD students to publish results already during the thesis work. By suggesting papers to read, the mentor motivates the S/P to keep up with the literature, which is prerequisite to writing good papers.

The mentor discusses the rules of good scientific practice with the S/P ensuring that she or he understands the full implications of these rules. During their PhD the students have to participate once in the regularly provided block course on “good scientific practice and research ethics”, and PostDocs are encouraged to attend. Furthermore, the mentor introduces the S/P to science-related work such as refereeing of manuscripts and proposals, and responsible work in committees.

Scientific mentoring

The S/P give regular reports on their work within MPS; the PhD students in the IMPRS seminar (S³) and the PostDocs in the various group seminars. The mentor gives feedback to the S/P not only on the scientific content of the talks, but also on the organization and presentation of the talk and on the right level for the audience.

The S/P is also provided with some guidance for improving teaching and mentoring skills. In part, the PhD students participate in the teaching program of the University of Göttingen tutoring exercises for lectures. The PostDocs have the possibility to participate in the supervision of PhD students in their research group.

The S/P is introduced to (senior) researchers within MPS and from other institutions in order to encourage collaborations with people from similar and other scientific backgrounds. This encourages the S/P to deepen the understanding of their field of research and to familiarize themselves also with other areas.

Each S/P has a travel budget that is to be used at the disposal of the S/P. With some guidance from the mentor the S/P can use this to participate in conferences or visit other institutions to gain contacts that will give new inspirations for her or his work and that could be instrumental for their future career.

Career planning

The mentor provides counseling regarding which summer schools, workshops and conferences the S/P should visit to enhance the visibility of her or his research, and to make contacts with colleagues from other institutions that might be potential collaborators.

MPS provides internal teaching on paper writing and grant writing strategies. This is done through block courses in the framework of the IMPRS. These courses are also open to PostDocs. PostDocs are encouraged to write their own proposals for which the mentor provides some direct advice for the science plan and practical matters. Furthermore, mentoring courses at the University of Göttingen are open to each S/P. Contacts with MPS alumni can be used to prepare applications to jobs after the stay at MPS.

The mentor discusses with the S/P possibilities for career opportunities after the post at MPS ends. This includes counsel for the application process, such as advice for the preparation of applications and eventual job interviews. The mentor also reviews with the S/P well-suited career paths considering strengths and weaknesses of the S/P. In particular, these discussions include the preferences and abilities of the S/P for a balance of research, teaching, and service activities. The mentor is available to give guidance to the S/P regarding her or his application for a position or a grant, including the CV etc.