New Guidelines ("Leitfaden") for Applicants and Reviewers for the Habilitation at the Faculty of Informatics at TU Wien

(Resolution in the Faculty Council on 26th June, 2019.)

Purpose:

The purpose of a habilitation at the Faculty of Informatics at TU Wien is to
• document scientific maturity comparable to the scientific qualifications required for a tenured professorship at the Faculty of Informatics,
• document research at the forefront of international research in one or more specific research fields of Informatics,
• document lasting and significant, scientific contributions to these research fields,
• document the ability to formulate research questions, and conduct independent research, and
• document teaching ability and experience at university level, including the ability to supervise Master’s and PhD theses.

The topic of the habilitation shall
• describe a sufficiently broad field in Informatics, relate to the main research areas of the Faculty of Informatics, and
• cover the actual research area of the applicant.

The following, more detailed guidelines ("Leitfaden") complement the bylaws of TU Wien, by which the work comprising the habilitation thesis must
• be carried out in a methodologically sound manner,
• incorporate new scientific results, and
• prove the applicant’s scientific mastery of the field of the habilitation and her/his abilities to contribute to the further development of this field.
The habilitation thesis can be either cumulative or in the form of a research monograph, as outlined in the following

**Cumulative habilitation:**

A cumulative habilitation thesis consists of

1. An overview of the submitted contributions placing them in the general research field, written for a competent audience with strong, general computer science background, but not necessarily experts in the specific field. The overview delineates the field, describes the state of the art, discusses (open) issues and questions, and summarizes and positions the contributions to the field. The overview is self-contained and readable on its own, and, where necessary, fills in details that are not present in the submitted papers. The nature and level of detail of the submitted papers dictate the length of the overview.
2. Five to eight detailed research papers forming the summit of a larger body of concentrated research that could correspond to five to eight years of scientific work after the doctorate. The submitted papers are normally backed up by a number of additional papers in the field or related fields. The submitted papers must have been published or accepted for publication in peer-reviewed journals and/or conferences regarded as influential in the field and having high scientific standards.

Generally, the submitted habilitation thesis, as well as the other scientific work of the applicant, must reveal appropriate breadth, thematic coherence, and depth according to high international standards. As a rough guideline, depending on the tradition in the field of the habilitation, it is expected that

- at least three papers are journal papers with substantial technical detail and merit,
- at least one paper is single-authored (in areas where single-authored papers are common), and
- one or more of the papers are co-authored.

In general, the selected five to eight papers should not be position papers, but have substantial technical detail and content. Apart from the habilitation overview, additional survey papers should only be included if they are very comprehensive and have been published in a journal of very high standing. Workshop contributions are discouraged, unless a strong case is made by the intrinsic quality and impact of the contribution.

The overview should make clear that the applicant was involved in a major way in the research that led to the selected five to eight papers, and as far as possible identify the applicant’s specific scientific contributions to these papers. For co-authored papers, the breakdown of co-authorship must be acknowledged by at least two-thirds of the authors and submitted together with the thesis. This breakdown will be made available to the reviewers.
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Additional activities like establishing funding and academic contacts, supervising research of students, committee work, public relations, etc. are not considered primary scientific contributions, and should not be detailed in the overview but should be provided in the CV.

Monograph:

The habilitation in the form of a monograph is a self-contained, independent work of high scientific standard, which is mostly based on the applicant’s own, typically published research over a number of years.

Reviewing:

In accordance with international standards in Informatics, the minimum requirement of at least two reviews foreseen in the Satzung of TU Wien is strengthened to at least three reviews, among three of which must be provided by external reviewers of high international standing in the specific field. The external reviewers should not have been recent (i.e., in the last three years before the submission of the habilitation thesis) co-authors or close collaborators of the applicant. The reviewers are expected to give an overall evaluation of the work in light of the purpose of a habilitation as outlined above, but not of the candidate, and a review should not take the form of a recommendation letter. The scientific reviews comment critically on the technical and scientific strength and merit, methodology, soundness, importance etc. in a specific and concrete way (as a guideline: three to seven pages).

The scientific quality of the published contributions should be judged on appropriate breadth, thematic coherence, and depth of the submitted work and not be argued solely based on impact factors, acceptance rates, and similar indices.

The applicant’s fundraising abilities and her or his community standing etc., should be evaluated but should not be the primary focus of the reviews.

Reviewers should make clear whether they have collaborated with the applicant in the past, and to what extent, e.g., in the form of co-authored papers or proposals.

The timeframe for submitting reviews is at most three months. Anonymized reviews will be made available to the habilitation applicant, and permanent staff with habilitation (“Lehrbefugnis”) of the Faculty of Informatics; the reviews are essential for the decision of the habilitation commission.
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Habilitation commission:

The role of the commission is to grant or reject the habilitation, based on the quality of the habilitation thesis, the submitted reviews, the habilitation defense with ensuing scientific discussion, and the trial lecture.

The commission consists of nine members, appointed by the senate of TU Wien. External reviewers are usually only advisory to the commission, but could also be part of the commission. At least one member of the commission should be familiar with and preferably be an expert in the field of research of the habilitation. The commission members are expected to familiarize themselves thoroughly with the work of the habilitation as presented in the habilitation thesis, although they may not necessarily be experts in the specific field. External members of the habilitation commission are allowed to participate in the commission meetings remotely.

Teaching abilities:

Independently of the habilitation thesis, the applicant must document teaching ability at the university level. This is done as follows:

- Public trial lecture (“Probevorlesung”) of 45 minutes on a topic of a typical undergraduate course in one of the curricula at the Faculty of Informatics. This trial lecture will be evaluated by the participating members of the habilitation commission. A report is provided by one non-student member of the habilitation commission.
- The topic of the trial lecture is selected by this commission, guided by three suggestions by the applicant, and communicated to the applicant at least four weeks before the lecture takes place.
- Teaching of at least one regular lecture (at least 3 ECTS VO/VU, individual teaching) in one of the Bachelor or Master curricula at the Faculty of Informatics, with positive teaching evaluation by the participants.
- Didactical reviews on two or more lectures by students that actually attended these lectures (typically one page).
- A statement from the habilitation applicant on her or his teaching philosophy and experience (one page). This statement is not part of the habilitation thesis overview.

The process:

The applicant is requested to find a mentor who is supposed to guide the applicant through the habilitation process. Four weeks before initiating the process, the applicant asks, together with the mentor, for a meeting with the dean (or a person which is nominated from the dean for this kind of meetings). In this meeting, the applicant can introduce her/himself and explain her/his motivation.
The process of obtaining a habilitation has two stages:

1. Pre-Habilitation Procedure:
Prior to submitting the habilitation thesis (typically one year before submission), the habilitation applicant is requested to present the proposition in a public, scientific lecture directed to the permanent staff with habilitation (“Lehrbefugnis”) of the Faculty of Informatics. The lecture is supplemented with the applicant’s CV, including a full list of publications (in the case of a cumulative thesis: with an indication of the five to eight selected papers that are intended to make up the habilitation thesis). The lecture takes about 45 minutes with ensuing discussion. The lecture sets the context, gives an overview of the research field (“state-of-the-art”), and presents the candidate’s specific contributions.

A committee (not to be confused with the habilitation commission, which will be appointed later) consisting of two members with habilitation or equivalent qualification per main research area of the Faculty of Informatics, but excluding members of the candidate’s research division, gives a recommendation on the habilitation submission and the continuation of the process. The attending permanent staff with habilitation (“Lehrbefugnis”) of the Faculty of Informatics is invited to state an opinion to the committee. The mentor is not allowed to be present in this discussion. The Dean of the Faculty conveys the response to the candidate at the earliest the day after the presentation.

Each semester will have one day with 3 slots for presentations by prospective habilitation candidates.

In case there are more applications than slots, the dean can postpone applications to the next semester. Applications from internal persons (especially persons with qualification agreement) will have higher priority than applications from external applicants.

2. Habilitation Procedure
After submission of the habilitation thesis, the habilitation commission is formed and reviewers are determined by the TU senate. In the first meeting of the habilitation commission reviewers are asked for their reviews of the habilitation thesis and the additional documents provided by the applicant. Furthermore, the topic and date of the trial lecture is determined. Normally the thesis can be defended after at most six months. The trial lecture is scheduled at least two weeks before the defense.
The defense takes the form of a public presentation of up to 45 minutes covering state-of-the-art and specific contributions, and a questioning and discussion of up to a maximum of two hours.
The habilitation commission reconvenes at the earliest two days after, and at the latest two weeks after the defense and decides on whether the habilitation is granted or rejected. The Dean of the Faculty conveys the decision.