

## Guidelines for Applicants and Reviewers for the Habilitation at the Faculty of Informatics at TU Wien

### Purpose:

The purpose of a habilitation at the Faculty of Informatics at TU Wien is to

- document scientific maturity considerably beyond the PhD level, comparable to the scientific qualifications required for a full professorship
- document research at the forefront of one or more specific fields
- document lasting and significant, scientific contributions to these research fields
- document an ability to formulate research questions, and conduct and supervise research
- document teaching ability at the university level, including the ability to supervise Master's and PhD theses

The following, more detailed guidelines complement the bylaws of the TU Wien, by which the work comprising the habilitation must:

- be carried out in a methodologically sound manner
- incorporate new scientific results
- prove the applicant's scientific mastery of the field of the habilitation and his/her 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/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 detail that is not present in the submitted papers. Nature and level of detail of the submitted papers dictate the length of the overview.

2. 5-8 detailed research papers forming the summit of a larger body of concentrated research that could correspond to 5-8 years of scientific work. 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 that have high scientific standards.

As a rough guideline, depending on the tradition in the field of the habilitation, it is expected that:

- at least three papers will be journal papers with substantial technical detail and merit
- at least one paper is sole-authored (in areas where sole-authored papers are common/possible)
- one or more of the papers are co-authored

In general, the contributed 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. Papers with a very large number of authors could also be problematic.

The overview should make clear that the applicant was involved in a major way in the research that led to the submitted, co-authored papers, and as far as possible single out the applicant's specific, scientific contributions to these papers. For co-authored papers, statements of co-authorship must be submitted together with the thesis, and will be made available to the reviewers.

Additional activities like establishing funding and contacts, supervising research of students, committee work, public relations, are not considered primary scientific contributions, and should not be detailed in the overview.

### **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:**

The habilitation thesis is scientifically reviewed by three external reviewers of high international standing in the specific field, and one TU Wien internal reviewer. The external reviewers should not have been recent 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/scientific strength and merit, methodology, soundness, importance etc. in a specific and concrete way (as a guideline: 3-7 pages). The scientific quality of the published contributions should not be summarily argued solely based on impact factors, acceptance rates, and similar indices. The applicant's teaching and fundraising abilities, her or his community standing etc., should also 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.

Reviewers will be invited – but not obliged - to participate in the habilitation defense, and will be given time to ask questions to the applicant on both general and specific matters and details. The timeframe for submitting reviews is at most 3 months. The non-anonymized reviews will be made available to the habilitation applicant, and the professors and associate professors of the faculty of informatics; the reviews are essential for the decision of the habilitation commission.

**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, and the habilitation defense with ensuing scientific discussion.

The commission consists of nine members, appointed by the senate of the TU Wien. Reviewers are advisory to the commission (by virtue of their reviews), but are not part of the commission. At least one member of the commission should be familiar with and preferably 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.

**Teaching abilities:**

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

- Reports 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 process of obtaining a habilitation has two stages:

#### *1. Presentation/opening of the habilitation.*

Prior to submitting the habilitation thesis, the habilitation applicant is requested to present the proposition in a public, scientific lecture directed to the full and associated professors 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 papers that are intended to make up the core of 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 specific, concrete contributions. A committee (not to be confused with the habilitation commission, which will be appointed later) consisting of two members per main research area of the Faculty of Informatics, but excluding members of the applicant's research group, gives a recommendation on the habilitation submission and the continuation of the process. The attending staff with habilitation is invited to state an opinion to the committee. The Dean of the Faculty conveys the response to the applicant at the earliest the day after the presentation.

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

#### *2. Habilitation defense*

After submission of the habilitation thesis, the habilitation commission is formed and internal as well as external reviewers are asked for their reviews of the habilitation thesis. Normally the thesis can be defended after at most 6 months.

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 2 hours. The discussion is opened with questions by the reviewers, who are invited to be present at the defense. Further discussion with the commission and the audience will follow.

The commission reconvenes at the earliest two days after, and at the latest two weeks after the defense and decides on whether the habilitation degree is granted or rejected. The Dean of the Faculty conveys the decision.