Doing a Doctorate at the Department of Computer Science

9th Amendment of the Doctoral Regulations and new Specific Regulations of the Department

Prof. Dr. Dr. Christian Reuter
Head of the Doctoral Committee
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Doing a Doctorate at the Department of Computer Science

Academic Degrees

- The Department of Computer Science awards the academic degrees
    - *Doctor of Engineering (Dr.-Ing.) and*
    - *Doctor rerum naturalium (Dr. rer. nat.).*

- The degree **Dr.-Ing.** is generally awarded based on a dissertation containing predominantly engineering findings from computer science.

- The degree **Dr. rer. nat.** is generally awarded based on a dissertation containing predominantly theoretical scientific findings from the field of computer science.

Our department and TU Darmstadt offer young scientists an optimal research environment and a wide range of funding opportunities to realize their potential. Work and research together with leading scientists on a safe and livable future!

Doctoral Regulations and Specific Regulations

9th Amendment of the Doctoral Regulations (PO)

▪ In force since 27th of February 2024 and applicable immediately

▪ No transition period

▪ Doctoral candidates who started their doctorate under the 8th amendment of the PO/AT can apply to the respective doctoral committee to continue their doctorate under the 8th amendment of the PO/AT within 1 year (but then no advantages due to the 9th amendment)

Significant Changes

- §3 (1) e Expansion of the doctoral committee to include a **doctoral member**

- §9 (1) Strengthening of **plagiarism prevention**

- §9 (4) **Declaration of the referees** on the assessment is omitted

- §10 (5) Streamlining of the procedure

- §11 New regulation of persons who can be appointed as **referees**. Abolition of the special review procedure for early career researchers as referees

- §12 (5) **Inspection of expert reports** before disputation no longer applies

- §18 (3) Statistical **data collection** as a basis for reports

- §§19, 20 New regulation of the **publication** of the dissertation. Digital publication remains the standard. Extension of the submission deadline up to a maximum of 5 years for publication by a publisher and when registering industrial property rights is possible

- §21 Early completion, decentralized approval procedures, removal of approval requirements

- §22 **Bilingual certificates** (German/ English)

Link to Homepage

Doctoral Regulations and Specific Regulations

Specific Regulations of the Department (Besondere Bestimmungen)

- In force since 31st of August 2024 and applicable immediately

- Adoption of the changes by the 9th amendment of the PO

- Consolidation of the old specific regulations and the supplementary document with notes on the cumulative dissertation and own citations

Documents and important information are available on the homepage of the department

Application Procedure

- ⬇ Application of Admission and Assessment Process (Betreuungszusage)
- ⬇ Confirmation of a Doctoral Mentor
- ⬇ Termination of the Doctoral Procedure

Initiation of the Doctoral Procedure

- ⬇ Checklist
- ⬇ Application for Initiation
- ⬇ Declaration to the Initiation of the Doctoral Procedure
- ⬇ Payment of Doctoral Fee

Cumulative Dissertation

- ⬇ Declaration on Co-authorship within the Framework of a Cumulative Dissertation According to §9 (5) of the PO/AT

Publication of the Doctoral Thesis

⬇ Declaration Relating to the Doctoral Thesis and Transfer of Rights

Doctoral Regulations

- ⬇ General Doctoral Regulations of the TU Darmstadt | 9th Amendment from 15 November 2023 (PDF, in German only)
- ⬇ Specific Regulations of the Department of Computer Science, as of 30 August 2024 (in German only)

Link to Homepage

Formalities

Formal Requirements

- Recognized university degree (usually: M.Sc., diploma, or state examination)

- Confirmation of supervision by a professor

- Application for acceptance as a doctoral candidate with documents to be submitted to the Dean's Office

- Academic degrees **Dr.-Ing. or Dr. rer. nat.**

- Dissertation as a monograph or cumulative dissertation

Registration / Enrollment

- Online-registration in the campus management system TUCaN required
- Enrollment is optional

[Further information](#) on doing a doctorate

Types of Doctorates

Individual Doctorate

- Doctoral students conduct individual research under the supervision of a doctoral supervisor
- No compulsory study program

Structured Doctorate

- Doctorate as part of a structured doctoral program
- In cooperation with other doctoral candidates

Programs at the Department

- DAAD Konrad Zuse School of Excellence in Learning and Intelligent Systems (ELIZA)
- DFG Collaborative Research Center "CROSSING"

Publications

Publications

- Publication of (partial) dissertation results in the **peer review process** is desired.

- Labeled **verbatim copying** of material from pre-publications is permitted.

- Clarification of **publication rights** with copyright holders is the responsibility of the doctoral candidate.

- Observation of the **publication guidelines** of TU Darmstadt.

Link to the publication guidelines

Cumulative Dissertation - Synopsis

Synopsis in Cumulative Dissertations

- Pre-publication of (partial) results is **mandatory** for cumulative dissertation.

- A detailed **synopsis** in the dissertation precedes the publications.

    - The synopsis introduces the doctoral topic and places the doctoral candidate's publications in the context of the topic.

    - It must be possible to read the synopsis coherently and grasp the topic, research question, methodology, and contribution of the dissertation without reading all publications.

Example structure of a cumulative dissertation:

- Part I: Synopsis (e.g. Introduction, Related Work, Methodology, Findings, My Contributions, Discussion, Conclusion)

- Part II: Publications (Paper 1-X)

Cumulative Dissertation - Publications

Publications in Cumulative Dissertations

- **At least three** peer-reviewed publications

- Usually **more publications,** especially if publications are to be included in more than one (cumulative) dissertation

- If applicable, additionally: **submission, review, articles under revision or preprints** as part of the cumulative dissertation

- Dissertations must **differ significantly** in terms of the publications used

- Publication shares must be **clearly attributable** to the submitting doctoral candidate

- Publications can only be submitted if the doctoral candidate contributed a **significant proportion**

Declaration of Independent Achievements

Declaration of Independent Achievements

- Dissertation as an "independent achievement that meets scientific standards" and "contributes to the further development of scientific knowledge"

- Pre-publications by several authors: Show the doctoral candidate's **own contribution** to publications

- **Declaration** from both the **doctoral candidate and all co-authors,** as well as the academic supervisor, must be included

- An exemplary declaration can be found in the Specific Regulations of the department (§9(5) Co-authorship)

Doctoral Support (Promotionsbegleitung)

§10 (1) PO: Doctoral Support (Promotionsbegleitung)

The specific regulations of FB20 contain regulations on **doctoral support.**

Doctoral candidates are granted the right to nominate a person to **supervise the doctorate** and to **advise** the doctoral candidate on all issues (e.g. course of the doctorate, career development) in addition to the initial supervision.

The doctoral supporter

- is appointed by the doctoral candidate,

- must have at least a completed doctorate, and

- as a rule, should not be in an official dependency relationship to the first supervisor.
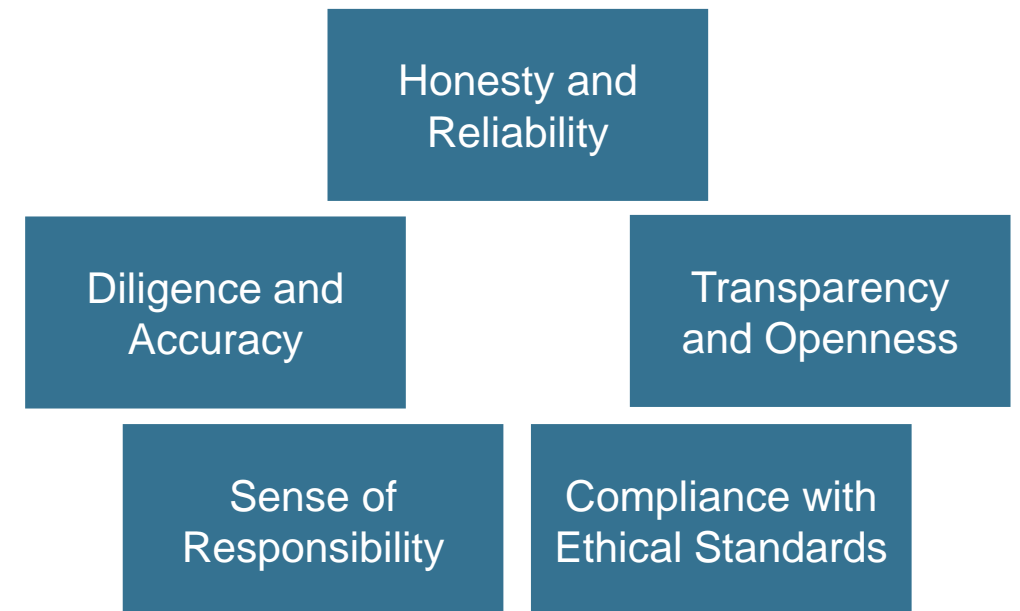
Good Scientific Practice

DFG Code of Conduct "Guidelines for Safeguarding Good Scientific Practice"

- 19 guidelines on the standards of good scientific practice (principles and research process) and the procedure for non-compliance.
- All research institutions must implement the guidelines.

TU Statutes "Principles for Safeguarding Good Scientific Practice at TU Darmstadt"

- The statutes commit TU Darmstadt to the general principles of good scientific practice, in particular
    - **methodologically appropriate work,**
    - **strict honesty** about own and third-party contributions,
    - **consistent questioning** of all results, and
    - allowing and promoting **critical discourse** in the scientific community.
- It makes statements on **scientific methods** and **documentation requirements**, **publications** and **authorship**, as well as **data management** and **archiving**.

Core Elements of Good Scientific Practice

Honesty and Reliability

Diligence and Accuracy

Transparency and Openness

Sense of Responsibility

Compliance with Ethical Standards

Link to DFG Code
Link to TU Statutes

Ombudspersons

§6 of the Statutes: Ombudspersons

- Ombudspersons provide **neutral advice** to all members or affiliates of the University in questions of good academic practice and questions of suspected academic misconduct and contribute, as far as possible, to the **solution-oriented mediation of conflicts**.

- Counseling is strictly confidential.

- In addition, the supra-regional body „*German Research Ombudsman*" is available to all members or affiliates of TU Darmstadt.

Ombudspersons at TU Darmstadt

TU Darmstadt's senate has appointed three ombudspersons on equal terms:

↗ Prof.'in Dr. Nina Janich

↗ Prof. Dr. Harald Kolmar

You are free to choose which ombudsperson you approach – this ombudsperson is then responsible for the entire procedure until its conclusion (incl. appeals procedure), provided there is no conflict of interest. It is not possible to initiate a second or parallel procedure on the same allegation by approaching another ombudsperson.

Guidance in cases of suspected scientific misconduct

Questions and Discussion