

# OFFICIAL ANNOUNCEMENT

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## **Regulations Governing Doctoral Studies**

### **Of the Faculty of Mathematics, Computer Science and Natural Sciences**

**Dated September 27, 2010**

**In the Seventh Revised Version**

**Dated September 7, 2018**

**Published as a Complete Version**

**Please note: This publication is an English translation of the Regulations Governing Doctoral Studies. Only the German original of these regulations as published in the Official Announcements of RWTH Aachen University (“Amtliche Bekanntmachungen”) is legally binding.**

Based on §§ 2 (4) and 67 (3) of the Higher Education Act of the State of North Rhine-Westphalia (Hochschulgesetz; HG) in the version of the announcement dated September 16, 2014 (Law and Official Gazette of the State of North Rhine-Westphalia p. 547), most recently amended by Art. 3 of the Act to Ensure the Accreditation of Degree Programs in North Rhine-Westphalia dated October 17, 2017 (Law and Official Gazette of the State of North Rhine-Westphalia p. 806), RWTH Aachen University (Rheinisch-Westfälische Technische Hochschule; RWTH) has issued the following regulations of the Faculty of Mathematics, Computer Science and Natural Sciences:

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Issued on Behalf of the Rector by Division 1.1 of Department 1.0 at RWTH Aachen University

Templergraben 55, 52056 Aachen | Tel. +49 241 80-99087 | Fax. +49 241 80-92664 | akad@zhv.rwth-aachen.de

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## I. General

### § 1

#### Right to Award Doctorates

- (1) The Faculty of Mathematics, Computer Science and Natural Sciences at RWTH Aachen University has the right to award doctorates.
- (2) The doctorate establishes the candidate's ability to undertake independent academic work that exceeds the general objective of the degree programs of the Faculty. The ability is determined based on a thesis (dissertation) of high quality demonstrating an advancement of the state of scientific knowledge and an oral examination (defense). The doctoral degree is awarded upon successful completion of the doctoral program.
- (3) The Faculty of Mathematics, Computer Science and Natural Sciences awards the degree of Doktorin/Doktor der Naturwissenschaften (Dr. rer. nat.) [Doctor of Natural Sciences] and Doktorin/Doktor der Ingenieurwissenschaften (Dr.-Ing.) [Doctor of Engineering Sciences].

### § 2

#### Doctoral Committee

- (1) The Faculty forms a doctoral committee. Members with voting rights include the spokespersons of the five Faculty departments (as far as they are university instructors in accordance with § 35 Higher Education Act), the dean, the vice-dean, the dean of academic affairs, and a representative from the group of academic staff. One person from the group of technical and administrative staff and one person from the group of students shall be members of the doctoral committee without voting rights. Up to two deputies from the relevant group may be nominated for each of these committee members. The chairperson of the doctoral committee is the dean. In the absence of the dean, the committee shall be chaired by the vice-dean. The ombudsperson shall be a committee member in an advisory capacity (pursuant to § 22).
- (2) The doctoral committee shall perform the following tasks:
  1. determining the doctoral requirements and deciding on admission to doctoral studies in accordance with § 8, 9, 10,
  2. accepting the doctoral candidate in accordance with § 11 and admitting them to the doctoral examination in accordance with § 12,
  3. deciding on special cases during doctoral examination processes and appeals against decisions made by the doctoral commission.The doctoral committee shall meet regularly. The doctoral committee may delegate the ongoing affairs to its chairperson. This does not apply to decisions in appeal proceedings.
- (3) The doctoral committee meetings are not public. Committee members are sworn to secrecy.

- (4) The doctoral committee makes decisions with a simple majority. In the event of a tie, the chairperson's vote shall decide the matter. The doctoral committee has a quorum if more than half of its members, including the chairperson or their deputy, are present. A record shall be kept of the doctoral committee meetings.
- (5) The doctoral committee's chairperson shall inform the candidate about any decisions relating to them by a written notification that includes information on legal remedies.

### § 3

#### Doctoral Commission

- (1) A doctoral commission is formed to carry out the doctoral examination process. It is composed of the following members:
  1. a chairperson (who may not serve as a reviewer),
  2. the reviewers,
  3. a minimum of one and a maximum of six other members in accordance with Paragraphs 2 through 4.
- (2) The doctoral committee shall appoint the chairperson of the doctoral commission, who must belong to the group of university instructors according to § 35 HG. Pursuant to Paragraph 1, the other members must be university instructors in accordance with § 35 HG, adjunct professors, honorary professors, visiting professors, or private lecturers at RWTH (Privatdozenten). These members are to be selected in such a way that the members of the Faculty of Mathematics, Computer Science and Natural Sciences form the majority in the doctoral commission (including the reviewers). For interdisciplinary dissertations, at least one representative of another faculty or university must be included as a member for the topic that is not covered by the Faculty of Mathematics, Computer Science and Natural Sciences.
- (3) At the request of an expert committee, the Faculty Council may decide that research group leaders active in the Faculty of Mathematics, Computer Science and Natural Sciences or in a higher-level research project of the Faculty may assume the role of a reviewer or an additional member of the doctoral committee according to Paragraph 1.
- (4) In accordance with § 35 HG of the Faculty of Mathematics, Computer Science and Natural Sciences, any university instructor can be nominated at their own request as a member of the doctoral commission by the doctoral committee. This request must be submitted no later than the appeal deadline in accordance with § 14 (2). If the doctoral committee rejects the nomination, the candidate may call in the Faculty Council. The final members of the doctoral commission must be appointed before the decision on the acceptance of the dissertation is made.
- (5) The doctoral commission has a quorum if at least four members, including the chairperson and at least two reviewers, are present. All members of the doctoral commission shall have voting rights. The doctoral commission makes decisions with a simple majority. In the event of a tie, the chairperson's vote shall decide the matter.

- (6) If a member appointed to the doctoral commission is not able to carry out the doctoral examination process (e.g. due to illness), the doctoral committee shall select a replacement member.

#### § 4 Reviewers

- (1) The doctoral committee shall appoint at least two reviewers for the examination of the dissertation, usually from the group of university instructors in accordance with § 35 HG, professors relieved of teaching duties or retired, adjunct professors, honorary professors, visiting professors, or private lecturers (Privatdozentinnen und Privatdozenten) from RWTH Aachen University.
- (2) If the dissertation has been supervised in accordance with § 5 (4), the supervisor must be one of the reviewers.
- (3) In principle, at least one reviewer must be a tenured professor at the Faculty of Mathematics, Computer Science and Natural Sciences. Upon request, the doctoral committee may decide that this role may also be assumed by an affiliated member of the Faculty of Mathematics, Computer Science and Natural Sciences if the content of the dissertation is closely related to the research field of the affiliated member and, at the same time, to that of the Faculty of Mathematics, Computer Science and Natural Sciences. The affiliated member must be a tenured professor. This application must be submitted at the beginning, but no later than two years before completion of the dissertation.
- (4) Reviewers can also be university instructors, adjunct professors, honorary professors, or private lecturers (Privatdozenten) employed at another German or international university or research institution.
- (5) If the content of the dissertation relates to scientific areas of another faculty, one or several university instructors in accordance with § 35 HG, professors relieved of teaching duties or retired, adjunct professors, honorary professors, visiting professors, or private instructors from that faculty may be appointed as reviewers by the doctoral committee in accordance with Paragraph 1 or as members of the doctoral commission in accordance with § 3 (1) No. 3. The dean of the other faculty is to be informed of this.
- (6) If a doctoral candidate has completed a Diplom or Master's course of study at the Faculty of Mathematics, Computer Science and Natural Sciences and now wants to complete a doctorate in engineering (Dr.-Ing.) at the Faculty of Mathematics, Computer Science and Natural Sciences, one reviewer must be a member of an engineering faculty. The reviewer should confirm in a special statement to the dean that the dissertation is of engineering interest and that the candidate also has sufficient specialist knowledge in engineering.

Kommentiert [PR1]: Bezeichnung okay für Zweitmitglied?

- (7) If the content of a doctoral thesis relates to the scientific field of another faculty in addition to those of the Faculty of Mathematics, Computer Science and Natural Sciences and if one of the reviewers is a member of another faculty, at least one reviewer must belong to the Faculty of Mathematics, Computer Science and Natural Sciences in accordance with Paragraph 3.
- (8) Within the scope of a partnership with RWTH Aachen University, an instructor from a university of applied sciences can also be appointed as a reviewer. In accordance with § 36 (1) No. 4 HG the reviewer must have completed a habilitation (postdoctoral teaching qualification) or an equivalent scientific qualification. The doctoral committee shall determine whether this requirement has been met. As part of this cooperative supervision, the scope and content of the studies that are adequate in preparation for the doctorate are to be determined for the doctoral candidate together with the supervisor from the university of applied sciences, in accordance with § 67 (4) Sentence 1 letter b) HG.

## § 5 Dissertation

- (1) The candidate is required to submit an academic thesis (dissertation) that they have written independently in German or English. Upon request, the doctoral committee may also permit a dissertation to be written in another language. In this case, the doctoral committee may request a certified translation of the binding text. The doctoral committee shall decide on whether to admit a dissertation written in a language other than German or English as part of assessing the doctoral application in accordance with § 13. After the oral examination has been passed, the doctoral committee shall decide whether a dissertation submitted in a language other than German or English must be published in a German or English translation.
- (2) A substantial part of the dissertation must relate to the scientific fields of the Faculty of Mathematics, Computer Science and Natural Sciences, including its pedagogical fields.
- (3) Work submitted for previous qualifications may not be used for the dissertation.
- (4) Publications that have arisen from the doctoral work must name RWTH as an affiliated institution.
- (5) The coherent presentation of a larger field of knowledge is one of the essential achievements of the dissertation. For this reason, the dissertation is basically a stand-alone monograph. Research results from the candidate's own publications that have arisen from the doctoral work can be used in the dissertation in agreement with the supervisor and must be fully referenced. These results must be placed in the context the dissertation. The candidate is not permitted to fully integrate their own publications without sufficiently adapting them to the context of the dissertation. For these reasons, cumulative dissertations are not accepted.

**Kommentiert [PR2]:** Diese Textstelle bitte gut überprüfen!

- (6) If the doctoral candidate is not the sole author of a publication, according to § 3 (5), their own contribution to the publication is of decisive importance for the evaluation of the dissertation. For this reason, in particular, also in the interest of the doctoral candidate, it should be noted that:
- a. The doctoral candidate must specify their own contribution to all publications used in the dissertation.
  - b. The contribution of the doctoral candidate must be evaluated by the reviewers in their expert opinion.
  - c. The doctoral committee reserves the right to request the authors' agreement in individual cases.
- (7) The dissertation must be produced under the academic guidance of a university instructor in accordance with § 35 HG, a professor relieved of teaching duties or retired, an adjunct professor, an honorary professor, a visiting professor, a private lecturer (Privatdozentin oder Privatdozent), or a research group leader in accordance with § 3 (1), who serves as supervisor of the dissertation and is a member of RWTH. The supervisor is required to ensure appropriate academic supervision during the doctoral process. The willingness to accept this responsibility shall be confirmed by entering into a supervision agreement.

## § 6

### Grading of the Doctoral Examination

- (1) If the dissertation is rejected or if the candidate fails the repeat oral examination (§ 16 (7)), the dean shall inform the candidate that they have not passed the doctoral examination and will state the reasons for this.
- (2) If the doctoral examination is not passed, the dissertation cannot be presented again for the purposes of a doctorate.
- (3) The candidate shall only be given one final attempt to complete a doctorate and no earlier than one year after the rejection has been announced. A new dissertation is to be presented.
- (4) Copies of the dissertation in which objections or other comments have been included and, at the very least, one copy shall remain with the Faculty.
- (5) If the dissertation has been accepted and the candidate passes the oral examination, they pass the doctoral examination.
- (6) The doctoral commission shall determine an overall grade of the doctoral examination as

"with distinction"	(summa cum laude),
"very good"	(magna cum laude),
"good"	(cum laude), or
"sufficient"	(rite).

Instead of an overall grade, separate grades can be given for the dissertation and the oral examination.

If an overall grade of "with distinction" is to be awarded, all commission members must unanimously support this decision. The result of the vote must be recorded, including the names of the voters.

- (7) The candidate must be informed of the result immediately after the oral examination. The evaluation of the dissertation and the oral examination is to be completed no later than six months following the presentation of the dissertation.

## § 7

### Doctoral Degree Requirements

Doctoral degree requirements within the meaning of these regulations are

- a) the dissertation,
- b) the oral examination (defense), and
- c) the publication of the dissertation.

Once these doctoral degree requirements have been met, the doctorate can be declared completed by issuing a doctoral certificate.

## II Admission to Doctoral Studies

### § 8

#### General Admission Requirements

- (1) The candidate is admitted to doctoral studies and the doctoral examination process can commence if the candidate has obtained
- a) a degree after relevant university studies with a standard study period of at least eight semesters for which a degree other than "Bachelor" is awarded, or
  - b) a degree after relevant university studies with a standard study period of at least six semesters and subsequent adequate courses in the doctoral subjects that prepare the candidates for the doctorate, or
  - c) a Master's degree within the meaning of § 61 (2) Sentence 2 HG,

and can demonstrate their suitability to undertake the independent scientific work necessary for a doctorate through their academic work and achievements. The request to determine the admission requirements in accordance with § 11 is to be submitted to the Faculty as soon as the doctoral candidate has started to work on the dissertation.

- (2) The scope of courses and related assessment criteria considered suitable preparation for the doctorate according to Paragraph 1 Sentence 1 b), including the number and type of certificates required, as well as the academic work and achievements demonstrating the candidate's suitability to undertake the scientific work necessary for a doctorate, is determined by the doctoral committee after consultation with the candidate. The doctoral committee can delegate the task to the responsible examination committee.

- (3) a) Prerequisite for taking up studies leading to the title of Dr.rer.nat. is
1. A Diplom degree in mathematics, computer science, physics, chemistry, biology, geology, mineralogy or
  2. completion of another, equivalent Diplom degree in the natural sciences, or
  3. a Master's degree in accordance with § 61 (2) sentence 2 HG in a mathematical, computer science, or natural science discipline, or
  4. having successfully passed the first state examination for a teacher training degree for Gesamtschule (vocational school) or Gymnasium (secondary school) or a comparable teaching profession examination in mathematics, computer science, or a natural sciences subject.

Holders of a Diplom or Master's degree in engineering may be admitted to doctoral studies leading to a Dr.rer.nat. degree if it is established before the initiation of the doctoral examination process that the dissertation is relevant to mathematics, computer science, or the natural sciences and the candidate has sufficient knowledge of mathematics, computer science, or the natural sciences. In justified exceptional cases, this also applies to holders of another professional qualification from a university in another subject. The Faculty of Mathematics, Computer Science and Natural Sciences is entitled to examine whether the candidate meets the above mentioned requirements and possesses the required knowledge before opening the doctoral examination process.

- b) A general requirement for admission to doctoral studies leading to the degree of Dr.-Ing. is
1. the degree of Diplom-Ingenieur (Dipl.-Ing.) or a Master's degree in an engineering subject within the meaning of § 61 (2) Sentence 2 HG,
  2. a separate expert opinion of the reviewer from an engineering faculty to the dean (cf. § 4 (6)) that the dissertation is of engineering interest and that the candidate has sufficient engineering knowledge.

Holders of a Diplom or Master's degree in mathematics, computer science or natural sciences may be admitted to doctoral studies leading to a Dr.-Ing. degree if the Faculty has established before the initiation of the doctoral examination process that the dissertation is relevant to engineering and the candidate has sufficient knowledge of engineering. In justified exceptional cases, this also applies to holders of another professional qualification from a university in another subject. The Faculty of Mathematics, Computer Science and Natural Sciences is entitled to examine whether the candidate meets the above mentioned requirements and possesses the required knowledge before initiating the doctoral examination process.

- (4) If a candidate shows exceptional scientific achievements, the doctoral committee may admit the candidate to the doctoral examination process at the request of least three university instructors from the Faculty for Mathematics, Computer Science and Natural Sciences in accordance with § 35 HG with a majority of two thirds of its members in accordance with the provisions of § 49 (11) HG.

## § 9

### Admission to Doctoral Studies Based on a Degree Awarded by an International University

A general requirement for admission to doctoral studies within the meaning of § 8 (1a) is a professional qualification or another final examination to complete a relevant academic degree program with a standard period of study of at least eight semesters including an academic final thesis integrated into the course awarded by a university outside Germany if the degree

1. is to be considered equivalent to corresponding degrees that are awarded at German universities based on intergovernmental agreements, or
2. is to be considered a general requirement for admission to doctoral studies based on evaluations of the Central Office for Foreign Education at the Standing Conference of the Ministers of Education and Cultural Affairs (ständige Konferenz der Kultusminister) of the federal states or the German Rectors' Conference (Hochschulrektorenkonferenz),
3. is to be considered equivalent to a relevant degree that can be awarded by RWTH based on agreements with partner universities outside of Germany by RWTH.

Within the scope of admission to doctoral studies based on a degree awarded by an international university, the doctoral committee may impose additional requirements that are related to the scientific field that is to be addressed in the dissertation. The doctoral committee can delegate the task to the responsible examination board.

## § 10

### Doctoral Program and Cross-Faculty Doctoral Steering Committee

- (1) In addition to meeting the doctoral requirements as defined in §§ 8 and 9, the candidate shall complete a preparatory doctoral program. This is intended to encourage the candidate's scientific independence and prepare them for the doctoral examination.
- (2) As part of the doctoral program, candidates complete
  - a. a course program with a total of 8 weekly contact hours over the entire duration of the doctoral program, including participation in relevant seminars for doctoral candidates, including those hosted by Research Training Groups or Collaborative Research Centers (if applicable), as well as
  - b. courses and workshops offered by the Center for Doctoral Studies (CDS) and subject-specific qualifications, such as tutorials, internships, or presentations at conferences, which promote their academic independence and encourage the acquisition of key qualifications.
- (3) If a candidate is referred to the Faculty of Mathematics, Computer Science and Natural Sciences by the Cross-Faculty Doctoral Steering Committee between RWTH and Forschungszentrum Jülich, the entire doctoral examination process will also be conducted according to these regulations. In cases of conflict, the doctoral committee shall consult with the Cross-Faculty Doctoral Steering Committee.

**Kommentiert [PR3]:** Ist das korrekt so? Die Dauer des Doktorandenprogramms ist u.E. nicht klar definiert. Wir unterscheiden zwischen doctoral studies (Doktorstudium) und doctoral program (Doktorandenprogramm)

**§ 11**  
**Application for Admission to the Doctoral Program**

- (1) Candidates must submit an application for admission to the doctoral program. Simultaneously this serves as a request for admission to the CDS. The application should be submitted as soon as the candidate has started to work on the dissertation. The application is not the same as the application for admission to the doctoral examination in accordance with § 12. Approval of the application is a prerequisite for enrollment in the doctoral program in accordance with the enrollment regulations of RWTH in their currently valid version.
- (2) If the candidate already has sufficient knowledge and skills, they may be exempted from participation in the doctoral program or parts thereof upon application, which must be supported by the supervisor and approved by the doctoral committee. In this case, an application for assessment of the admission requirements must be submitted instead.
- (3) In accordance with Paragraphs 1 and 2, the application shall be submitted in writing to the doctoral committee of the Faculty. The following must be submitted together with the application:
  - a) the intended topic of the dissertation,
  - b) the declaration of willingness of a university instructor according to § 35 HG, an associate professor, an honorary professor, a visiting professor, a private lecturer of the Faculty, or a research group leader in accordance with § 3 (3) to supervise the candidate academically and with respect to the doctoral program in accordance with § 5 (4),
  - c) proof that the admission requirements pursuant to §§ 8, 9, and 10 (3) are met. Documents are to be submitted as officially certified copies; alternatively, the candidate may submit copies and present the original documents. If the admission requirements in accordance with §§ 8 and 9 cannot be proven with certificates and final transcripts when submitting the application, the admission requirements can be met by providing a certificate from the university that the course of study has been successfully completed. The certificates and final transcripts must be submitted within 6 months.
  - d) CV and an overview of the scientific career; including evidence about additional completed studies or exams as well as a declaration of any past unsuccessful doctoral examination processes;
  - e) a declaration that the candidate accepts these regulations.
  - f) in the case of an application in accordance with Paragraph 1, a certificate of enrollment in the discipline in which the candidate is completing the doctorate.

Subsequently, the doctoral committee examines the documents submitted with the application.

- (4) The doctoral committee decides whether to accept or reject the doctoral candidate. If the candidate is accepted, they will be added to the Faculty's list of doctoral candidates and accepted into the CDS. The academic supervisor will be officially confirmed. Acceptance may be conditional on completing additional requirements or examinations in accordance with § 8 (2) and § 9.
- (5) The candidate shall be notified in writing of the acceptance and, if applicable, additional requirements. In case of rejection, the candidate shall receive a written notification, including the reasons for this decision and information on legal remedies.

**§ 11a**  
**Data Collection, Processing, and Transfer**

In accordance with § 5 of the Act on Statistics for Higher Education (Hochschulstatistikgesetz – HSchStG), universities must collect personal data about those who have been admitted to doctoral studies in accordance with § 11 (4). The personal data of the doctoral candidates are automatically stored by the University and are processed by the IT Center as well as the Central University Administration in order to comply with legal requirements. The University will only transmit the data if this is necessary to comply with its legal duties or duties specified in its statutes. Data transfer to the Statistical Office of the State of North Rhine-Westphalia (IT NRW) concerns the data collection characteristics in accordance with § 3 (1), § 4, and § 5 (2) HSchStG.

**III Doctoral Examination Process**

**§ 12**  
**Application for Admission to the Doctoral Examination**

- (1) The candidate's application for admission to the doctoral examination shall be submitted in writing to the doctoral committee of the Faculty of Mathematics, Computer Science and Natural Sciences.
- (2) The application must include:
  - a) the pursued doctoral title and
  - b) the title of the dissertation in German and English.
- (3) The following documents are to be submitted with the application:
  - a) a CV in tabular form including information on the candidate's career and education,
  - b) the transcripts, certificates, and documents required in accordance with §§ 8, 9, and 10, unless they have already been submitted with the application for admission to the doctoral program,
  - c) a certificate of good conduct from the Federal Central Register of document type O. Presentation of the Certificate of Good Conduct is not required if the candidate works in the public or church service,
  - d) the dissertation in accordance with § 5 (1) in printed and electronic (PDF) formats on a data carrier, the type of which is to be agreed upon with the Dean's Office,
  - e) a list (bibliography) of pre-publications (if applicable),
  - f) information on who was the main supervisor of the dissertation,
  - g) an affidavit, which is part of the dissertation and specified by the Faculty, stating that the candidate has independently completed the dissertation, indicated any means of support used for the dissertation, and complied with RWTH's principles for safeguarding good scientific practice,
  - h) an affidavit on whether the candidate has submitted doctoral applications in the past, including (if applicable) the result, stating the date, the German or international university, the faculty, as well as the topic of the dissertation,

- i) confirmation of completion of a course on Safeguarding Good Scientific Practice at RWTH or a corresponding course at another institution. The chairperson of the doctoral committee shall decide whether this confirmation is recognized or whether any exceptions apply.
  - j) a brief summary of the dissertation of one printed page.
- (4) If the dissertation was produced at an institution outside RWTH Aachen University, the candidate must submit a written declaration that the publication of the dissertation does not violate any existing trade secrets.
  - (5) Certificates must be submitted as an officially certified copy. Alternatively, the candidate may submit copies and present the original documents. Certified translations of certificates not in English or German are to be included on request.

### § 13

#### Initiation of the Doctoral Examination Process

- (1) The doctoral committee initiates the doctoral examination process once a written application for its initiation and all requested documents (see § 12) have been received and the reviewers have declared that they are willing to provide an expert opinion. The process shall be initiated no later than one month after receipt of the application.
- (2) The reviewers and the doctoral commission are to be appointed upon initiation. For this purpose, the candidate has a right to propose the reviewers and the members of the doctoral commission. The decision on the composition of the doctoral commission is made by the doctoral committee, which is not bound by the candidate's nominations. The candidate shall be notified of the initiation immediately in writing.
- (3) If the application for admission to the doctoral examination and the submitted documents do not meet the requirements (see §§ 8, 9, 10, 12), the doctoral examination process shall not be initiated. If the doctoral committee decides not to initiate the doctoral examination process, the candidate shall be informed by the doctoral committee's chairperson immediately in writing, stating the reasons for this decision along with information on legal remedies.
- (4) An application for admission to the doctoral examination that has been submitted to the Faculty can be withdrawn within a week of the announcement of the initiation of the doctoral examination process in accordance with Paragraph 2.

**Kommentiert [PR4]:** Im Dt. Steht "Hierzu hat die Bewerberin bzw. der Bewerber ein Vorschlagsrecht" – was genau ist gemeint? Sollen wir weniger explizit schreiben „... the candidate has a right of nomination"? Das Problem ist, dass sofort die Frage entsteht, nomination of whom?

### § 14

#### Evaluation of the Dissertation

- (1) The reviewers evaluate the dissertation and report back to the Faculty in separate written expert opinions, usually within three months. They can request that the dissertation either be accepted, rejected, revised, or not even considered if they deem the Faculty not to be the responsible authority. They must furthermore include the reasons justifying their recommendation. An expert opinion supporting the acceptance of the dissertation must include a recommended grade.

The grading scale includes the grades

"very good" (1.0),  
"good" (2.0),  
"satisfactory" (3.0),

By raising or lowering the individual grades by 0.3, intermediate values can be formed to allow a differentiated evaluation. The grades 0.7 and 3.3 are not permitted, however. If the dissertation is evaluated to be outstanding and thus an overall grade of "with distinction" is considered for the doctoral examination, this must be explicitly stated and justified in the expert opinion. If a reviewer is not able to prepare their expert opinion within three months, the doctoral committee may appoint another reviewer.

- (2) Once the expert opinions have been received, the dean shall make the dissertation and the expert opinions available at the Dean's Office to allow the Faculty's professors (in accordance with § 35), professors relieved of teaching duties or retired, adjunct professors, honorary professors, visiting professors, and private lecturers from the faculty to make a statement or, if necessary, submit a written objection. The dissertation and expert opinions shall be available for review for a period of three weeks during the lecture period and five weeks during the lecture-free period. The objection period expires at the end of the second working day following the end of the review period.
- (3) If the reviewers unanimously recommend to accept the dissertation and no objection has been made, the dean shall determine that the dissertation is accepted. If the reviewers unanimously recommend the rejection of the dissertation and no objection has been made, the chairperson of the doctoral committee shall determine that the dissertation is rejected.
- (4) If the reviewers disagree on the acceptance of the dissertation or at least one of the reviewers recommends that the dissertation be revised or not considered in accordance with Paragraph 1 or an objection has been submitted within the deadline, the chairperson of the doctoral committee shall present the dissertation to the doctoral commission. The commission shall discuss the matter within a reasonable period of time. It can recommend consulting further reviewers. The doctoral commission recommends whether the dissertation, in accordance with § 15, is to be accepted, rejected, revised, or not to be considered. If the recommendation is made unanimously, the chairperson of the doctoral committee shall make the necessary determinations. Non-consideration does not mean that the dissertation has been rejected.
- (5) If a unanimous recommendation in accordance with Paragraph 4 cannot be achieved, the chairperson shall present the dissertation together with the expert opinions, statements, and objections to the doctoral committee. Based on these documents, the doctoral committee shall make a decision immediately on the acceptance, rejection, revision, or non-consideration of the dissertation. Acceptance of the dissertation requires the submission of two supporting expert opinions.
- (6) The candidate shall be notified in writing of the decision on the acceptance, rejection, revision of the dissertation or non-consideration. Decisions detrimental to the doctoral candidate on such objections must be substantiated and include information on legal remedies.

**§ 15**  
**Revision of the Dissertation**

- (1) In accordance with § 14 (4) or § 14 (5), the doctoral committee or the doctoral commission may ask the candidate to revise the dissertation once within a deadline. Requirements for the revision are to be put on record and are to be communicated to the doctoral candidate in writing. The deadline can only be extended once. If the deadline is exceeded, the chairperson of the doctoral committee shall determine that the dissertation is rejected.
- (2) Once the dissertation has been revised within the deadline, it shall be reexamined in accordance with § 14. The expert opinion of the revised dissertation must particularly address the question of whether the requirements in accordance with Paragraph 1 have been adequately met. The revised version of the dissertation may only be rejected if the requirements have not been adequately met or if there are strong scientific objections to sections that were rephrased or newly added to the dissertation during the revision that make rejecting the dissertation necessary.

**§ 16**  
**Oral Examination/Defense**

- (1) Once the dissertation has been accepted, the chairperson of the doctoral committee will arrange an oral examination. The candidate may submit a proposal for the date of the oral examination. The oral examination will be conducted by the doctoral commission in accordance with Paragraph 5.
- (2) The dean shall inform the university instructors of the Faculty of Mathematics, Computer Science and Natural Sciences, the rector, the other deans, the members of the doctoral commission, and the members of the Faculty Council as well as the candidate of the time and place of the oral examination within a deadline of at least ten days in accordance with § 35 HG. The time and place of the oral examination shall be announced on the department's notice boards.
- (3) At least four members of the doctoral commission, including its chairperson and at least two reviewers, must be present at the examination.
- (4) The members of the doctoral committee have the right to take part in the oral examination as guests. Other guests are only permitted with the consent of the candidate if they are members of RWTH Aachen University and they hold a doctorate. Doctoral candidates at the Faculty of Mathematics, Computer Science and Natural Sciences who have started working on a dissertation topic are to be admitted as audience members if the doctoral candidate agrees to this.
- (5) Each candidate shall be examined individually. The duration of the examination is 30 to 60 minutes. The oral examination is conducted in German or English. Upon request, the doctoral committee may also allow the oral examination to be conducted in another language.

- (6) The oral examination comprises of:
- a) Questions about the dissertation and related academic areas,
  - b) Questions about course material from the doctoral program and similar academic topics, which may be proposed by the candidate. If the candidate has not participated in a doctoral program, the members of the doctoral committee shall determine equivalent/appropriate examination topics.

The doctoral committee may require the candidate to give a 30-minute public lecture on the dissertation before the start of the actual oral examination, which will be graded as part of the oral examination.

- (7) The doctoral commission shall decide on the result immediately after the oral examination.
- (8) If the candidate fails the oral examination, it may only be repeated once. The candidate can enroll to repeat the examination no earlier than three months but at the latest 18 months later.

### § 17

#### Publication of the Dissertation

- (1) Once the candidate has passed the doctoral examination, they shall present the dissertation to the chairperson of the doctoral committee for the approval of the version intended for publication. The chairperson of the doctoral committee shall issue this approval in agreement with the reviewers once any additional requirements that may have been stipulated are met.
- (2) The Faculty of Mathematics, Computer Science and Natural Sciences is entitled to request that the doctoral candidate
- include a summary of their work of no more than one printed page and transfer the right to the University to publish this summary or offer it to a publisher or a database, and
  - provide the title and summary in two languages (usually in German and English).
- (3) The doctoral candidate is required to make their dissertation available in an appropriate manner to the scientific community by way of copying and distribution. This happens by
- submitting one deposit copy of the approved dissertation to be included in the examination files in the Faculty's Doctoral Office
  - submitting one additional deposit copy in the respective departmental library, provided that the doctorate is completed in the disciplines of physics or computer science,
- and
- a) either submitting 40 deposit copies to the University Library in the form of a book or photo print

or

- b) publishing it in a scientific journal; in this case, it is necessary to submit 14 deposit copies to the University Library; it must also be stated, e.g. on the back of the title page, in which journal the dissertation is published (including the publisher and its location); all deposit copies must include the note "D 82 (Diss. RWTH Aachen University), [indicating the year of the oral examination],

or

- c) distribution in book stores by a commercial publisher with a minimum circulation of 150 copies; in this case it is necessary to submit 14 deposit copies to the University Library; it must also be stated, e.g. on the back of the title page, which publisher published the dissertation (including the publisher and its location); all deposit copies must include the note "D 82 (Diss. RWTH Aachen University), [indicating the year of the oral examination],

or

- d) submitting a printed deposit copy and an electronic copy to the University Library, the data format and transfer of which is to be agreed with the University Library. An abstract in German and English is required for publication. The doctoral candidate shall transfer the right to publish the electronic version in data networks to the University Library, the DNB (German National Library) in Frankfurt/Leipzig and, if applicable, the German Research Foundation's Special Collection Library and attests that the electronic version corresponds to the accepted dissertation. The University Library shall check the delivered version to ensure it is legible and meets the specified requirements. The submission of files that do not meet the specified file format and data carrier requirements shall not be considered a publication.

All deposit copies to be submitted must include a dedicated title page with the candidate's name; their CV or educational background may also be added. They must be printed on age-resistant, wood-free, and acid-free paper and be permanently bound together. They must also be technically flawless. If it is determined that the copies do not meet these criteria, they shall be rejected. Rejected work shall be considered unpublished; the doctoral degree certificate shall therefore not be issued.

- (4) The dissertation is to be published no later than one year after the oral examination. In justified exceptional cases, the dean may extend the deadline. If the candidate misses the deadline, all rights acquired with the examination shall expire.

#### **§ 17 a**

##### **Joint Doctoral Examination Process**

- (1) A doctoral examination process jointly supervised with an international university (partner university) requires entering into an individual cooperation agreement for the performance and supervision of the doctoral project and evaluation and assessment of the doctoral degree requirements.

- (2) The individual cooperation contract may stipulate, deviating from § 3 (2) Sentence 3, that the involved universities must be represented equally on the doctoral commission.
- (3) After the doctoral examination process has been successfully completed, the Faculty of Mathematics, Computer Science and Natural Sciences shall award an academic degree in accordance with § 1 (3) and the partner university an academic degree in accordance with its applicable regulations. The academic titles of these degrees may not be used concurrently.

### **§ 18 Doctoral Degree Certificate**

- (1) In accordance with § 17, after the dissertation has been published, a doctoral certificate is issued and signed personally by the rector and the dean. The doctoral degree certificate shall bear the date of submission of the deposit copies to the University Library and the overall grade of the doctoral examination in accordance with § 6 (6). The reviewers who recommend acceptance of the dissertation are to be named on the doctoral certificate. The doctoral examination process is completed once the doctoral certificate has been issued. After receiving the doctoral certificate, the candidate has the right to carry the doctor title.
- (2) If the doctoral examination process has been assigned to the Faculty of Mathematics, Computer Science and Natural Sciences by the Cross-Faculty Doctoral Steering Committee in accordance with § 10 (3), the doctoral degree certificate shall contain an additional note stating the cooperation with Forschungszentrum Jülich.
- (3) For a completion of a doctoral program including CDS course offerings, the candidate shall receive a doctoral supplement from the CDS listing the achievements completed.

### **§ 19 Honorary Doctorate and Renewal of the Doctoral Certificate**

- (1) Upon request by the Faculty of Mathematics, Computer Science and Natural Sciences, the Senate may award the academic degree and title of an honorary doctor of science (Dr.rer.nat.) or engineering (Dr.-Ing.) honoris causa (h.c.) to individuals who show extraordinary personal, scientific, technical, or artistic performances in a field in which the university specializes. They may not be members or associates of RWTH Aachen University.
- (2) The Faculty may only submit honorary doctorate applications for the doctoral degrees that it is entitled to award. In preparation for this application, the Faculty should obtain at least two external expert opinions. The Faculty Council shall decide on the application to the Senate in two sessions.
- (3) The rector awards the honorary doctorate by presenting a doctoral certificate which commends the merits of the honored individual.
- (4) Doctoral graduates of RWTH who are distinguished for their scientific or practical professional work may be honored with the renewal of the doctoral certificate after 25 or 50 years or on extraordinary occasions. The decision on this honor is made by the Faculty for doctorates completed in academic fields assigned to the Faculty of Mathematics, Computer Science and Natural Sciences.

## **§ 20 Revocation of the Doctoral Degree**

- (1) The doctoral degree may be revoked
  - a) if it transpires that it was achieved on the basis of false statements regarding significant requirements for admission to doctoral studies,
  - b) if it transpires that it was achieved using deception regarding the doctoral degree requirements,
  - c) if academic misconduct has been determined in relation to the dissertation or
  - d) if the doctoral graduate has been sentenced to at least one year in prison after being found guilty of a deliberate crime.
- (2) If circumstances come to light that would justify the revocation of the doctoral degree in accordance with Paragraph 1, the doctoral graduate shall be consulted with regarding the accusations before the doctoral committee makes a decision. If an oral hearing is held, a record of the hearing is to be taken.
- (3) The doctoral committee shall communicate decisions detrimental to the doctoral candidate as well as the reasons for these decisions in writing and with information on legal remedies.
- (4) RWTH Aachen University shall inform all other German universities of the invalidity of the doctoral work or the revocation of the doctoral degree.
- (5) The provisions of Paragraphs 2 through 4 shall apply accordingly to the revocation of the degree and the title of an honorary doctor.
- (6) Following a decision in accordance with Paragraph 1, the doctoral degree certificate shall be revoked or invalidated in another way.

## **§ 21 Viewing of Examination Records**

After the announcement of the final grade of the doctoral examination, the candidate may submit a request to view their examination records. The application shall be submitted within a month of the announcement of the examination results. The chairperson of the doctoral committee shall determine the place and time to view the records.

## **§ 22 Ombudsperson for Doctoral Candidates**

The ombudsperson is a professor at the Faculty and is appointed by the Faculty Council upon nomination by the doctoral committee for a term of two years. The ombudsperson can be re-elected. They have the task of mediating possible conflicts if contacted for this purpose. Information provided to the ombudsperson is subject to confidentiality.

**§ 23**  
**Entry Into Force and Transitional Provisions**

- (1) Doctoral candidates who have submitted their complete application for admission to doctoral studies in accordance with § 11 of the Regulations Governing Doctoral Studies of the Faculty of Mathematics, Computer Science and Natural Sciences dated September 27, 2010, in the sixth revised version (replacing the Regulations Governing Doctoral Studies dated March 23, 2018) may change to the present Regulations Governing Doctoral Studies upon application. Doctoral candidates may pursue doctoral studies in accordance with the Regulations Governing Doctoral Studies in the sixth version until August 31, 2019, at the latest. After that date, it is mandatory to transfer to the present Regulations Governing Doctoral Studies.
- (2) These regulations shall be published in the official announcements of RWTH Aachen University and enter into force on the day after publication.

Issued based on the resolution of the Dean of the Faculty of Mathematics, Computer Science, and Natural Sciences dated September 3, 2018.

Rector  
of RWTH Aachen University

Aachen, September 9, 2018

signed

Rüdiger

Univ.-Prof. Dr. rer. nat. Dr. h. c. mult. Rüdiger

Title page of the deposit copies after passing the doctoral examination

"....."  
(Title of the Dissertation)

Dissertation approved by the Faculty of Mathematics, Computer Science and Natural Sciences at RWTH Aachen University to obtain the academic degree of a Doctor of Natural Sciences or Doctor of Engineering

Presented By

.....  
(Academic Degree or Approved Academic Degree From an International University)

.....  
(First Name, Last Name, if applicable: Birth Name)

Born in .....  
(Place of birth)

Reviewers:

University Professor \*) .....

University Professor \*) .....

Date of the Oral Examination: .....

***This doctoral dissertation is available online on the website of the University Library \*\*)***

\*) or other applicable title/designation

\*\*\*) This sentence must be added if the dissertation is published electronically.