

Rules of Good Scientific Practice
at TU Dortmund University
adopted on 12 December 2017

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1. Preamble

1.1 TU Dortmund University is committed to upholding the principles of good scientific practice. In essence, this means that scientists and scholars must continuously check the methods and results of their own scientific work for correctness and accuracy. For each scientist or scholar, this includes exercising honesty towards himself/herself as well as towards the scientific community and the general public in all aspects of his/her scientific activities.

1.2 Every researcher is obliged to work according to the methodologies accepted in his/her discipline (*lege artis*), to provide correct information, to respect the intellectual property of others, and not to interfere with others in their research activities.

1.3 The teaching of the rules of good scientific practice is the subject of training in all degree programs and doctoral studies.

2. Rules of good scientific practice

The members of TU Dortmund University must observe the rules of good scientific practice laid down in the following section at all times.

Scientific integrity

2.1 The members of TU Dortmund University are committed to truth and honesty in their scientific activities (e.g. in the context of publications, degree theses, lectures, expert opinions, grant applications, job applications and statements to the public).

2.2 The scientific results, including an explanation of the methods used, shall be described in a way comprehensible to other scientists and scholars in the field. This also requires the inclusion of the data compiled and arguments considered that do not support the researcher's own conclusions. The included results of others must be clearly cited. Own results which as a whole or in part have already been the subject of a publication or a final project of an examination procedure must also be completely reported as such.

Authorship

2.3 Any individual who has made a significant scientific contribution to a publication must always be named as a co-author. A list shall be attached to the publication documents indicating the contribution of the co-authors, and this list shall be retained for a period of ten years.

2.4 Honorary authorship is prohibited.

2.5 All co-authors of a publication must have the opportunity to consent to its publication before submitting it for publication. They bear collective responsibility for compliance with the rules of good scientific practice.

Intellectual property of others

2.6 In the context of publications, the use of others' intellectual property must be disclosed and clearly cited.

2.7 Unpublished intellectual property of others may only be used for one's own scientific activity if the intellectual owner has consented to its use in writing.

Data

2.8 TU Dortmund University provides the infrastructure for securing all data relevant for a scientific publication. In particular, suitable formats ensure that the data can be accessed for at least ten years from the date of publication. The scientists and scholars at TU Dortmund University are obliged to store data which they have obtained directly in the course of their data collection carried out for publication (primary data) in a way comprehensible to other scientists and scholars in the respective field. Primary data includes all information necessary for understanding the analysis and its conclusions. This includes data that contradicts the conclusion of the publication. Whenever possible, the samples used to obtain primary data shall also be stored for the same period of time in an appropriate university infrastructure.

2.9 The scientists and scholars involved in the research project shall select a person within a collaboration, e.g. the corresponding author of a publication, to be responsible for the storage of the data on the storage platform.

2.10 The primary data of a publication must be made available to scientists and scholars who can prove a justified research interest for this purpose, provided that contractual or legal provisions or justified exploitation goals of the authors do not conflict with this.

2.11 Members of TU Dortmund University may not obstruct the research activities of others by their actions. The use of existing equipment may only be refused in justified cases, e.g. if the person interested in operation could endanger himself/herself or the equipment during operation due to inadequate knowledge or experience.

2.12 A researcher at TU Dortmund University may not terminate his/her participation in a joint research project without objective reason. Insofar as the use of his/her contribution is necessary to publish the scientific results, he/she may only refuse to grant consent for serious reasons. This consent can only be effectively refused for a scientific reason if that refusal is presented in writing, with a criticism of data, methods or results that is comprehensible to other scientists or scholars in the field.

3. Scientific misconduct

3.1 Scientific misconduct can be penalized.

3.2 Scientific misconduct is present when a member of TU Dortmund University culpably, i.e. intentionally or gross negligently, violates the rules of good scientific practice.

3.3 Scientific misconduct is also present if a member of TU Dortmund University deliberately incites or aids and abets another person to commit an intentional violation of the rules of good scientific practice.

3.4 A procedure must be initiated if there is a suspicion of a serious violation of the rules of good scientific practice.

3.5 Serious violations of the rules of good scientific practice exist, for example, in the following cases:

Misrepresentations

- Inventing data and presenting it as the result of an empirical investigation
- Falsification of data: selection of data in tables and figures – without disclosing this fact – with the aim, for example, of substantiating a hypothesis
- Ghostwriting: The work is composed in entirety or in part by another person, but this fact is not mentioned when submitting the work.

Infringement of the intellectual property of other scientists

Plagiarism

- Copy-and-paste plagiarism: Parts of the text of an external work are copied without citing the source. This also applies to the copying of texts/data from supervised exam papers
- Translation plagiarism: translations (text, data) are presented as one's own contribution without specification of the source
- Self-plagiarism: Transfer of own extensive texts/data, which were already used in other examination papers or publications, without citing this source.

Idea theft

- Exploitation of research approaches and ideas, especially as a reviewer
- Presumption of authorship or acceptance of co-authorship without any own contribution
- Disclosure of a work, insight, hypothesis or research approach of another person prior to publication without his/her consent

Sabotage or intentional obstruction of research activity

- Damaging, destroying or manipulating experimental setups, equipment, documentation, hardware, or software required by another person to carry out his/her research
- Prohibiting the use of existing equipment without objective justification

Further examples can be found in an appendix to these Rules of Good Scientific Practice.

4. Ensuring good scientific practice

4.1 The deans and/or heads of institutes are responsible for ensuring that those working in the field of science and technology, lecturers, doctoral candidates and students are made familiar with the rules at least once a year during training courses. Such trainings shall be recorded in writing and confirmed by the participants' signatures. The deans shall report annually to the Rectorate on the measures taken. The Rectorate shall make these reports available to the ombudspersons, who shall then discuss them with the dean of the respective faculty.

4.2 Students, postgraduates and doctoral students must be adequately supervised during their final theses at TU Dortmund University. A suitably qualified contact person must be appointed for each of them. The obligation of this contact person to supervise includes discussing the achieved results at regular intervals and providing the

candidate with expert advice. The responsibility for this lies with the university lecturer active at TU Dortmund University who is responsible for the associated examination.

5. Institutions to ensure the rules of good scientific practice

The institutions for ensuring good scientific practice at university level comprise the two ombudspersons and a Commission of Inquiry.

Ombudspersons

5.1 The ombudspersons serve as contact persons for those who seek clarification on questions of good scientific practice, who wish to point out a violation of the rules of good scientific practice, etc. They offer to mediate between those involved in a conflict. The ombudspersons shall follow up every suspicion of violation of the rules of good scientific practice with regard to plausibility, concreteness and importance, but they shall not carry out an investigation that includes a hearing of the participants. Ombudspersons advise the Rectorate in matters of ensuring good scientific practice.

5.2 At the suggestion of the Senate, the Rectorate shall appoint two professors as ombudspersons. The term of office is four years; reappointment is possible.

5.3 In the performance of his/her duties, an ombudsperson is independent and not bound by instructions.

Commission of Inquiry

5.4 TU Dortmund University has set up a permanent commission to investigate cases of suspected scientific misconduct. The Commission of Inquiry shall take appropriate measures for clarification if it is informed by one of the ombudspersons, a university body, members of TU Dortmund University or on the basis of external information about facts that justify the suspicion of scientific misconduct. The Commission shall initiate an investigation procedure only if the grounds for suspicion are sufficiently concrete.

5.5 The members of the Commission of Inquiry are appointed by the Rectorate on the recommendation of the Senate. The commission comprises four professors. Other members are two academic staff members of the university as well as a scientist or a non-member of TU Dortmund University qualified to be a judge. The composition of the Commission shall represent the range of subjects of TU Dortmund University. The term of office of the mem-

bers is four years; reappointment is possible. The Commission of Inquiry elects the chairperson and his/her deputy from the group of professors.

5.6 The Commission of Inquiry may utilize the participation of experts from inside or outside the university if the conduct of the investigation requires additional expertise.

5.7 The members of TU Dortmund University are obliged to support the Commission of Inquiry in its work.

5.8 The ombudspersons and the Commission of Inquiry shall be assisted in their work by a person appointed by the Rectorate.

5.9 The Commission shall report annually on its work.

Rules of Procedure of the Commission of Inquiry for Good Scientific Practice of TU Dortmund University as of 9 January 2019

I. Preliminary Inquiry

1. In the case of specific suspicions of scientific misconduct, the whistle-blower shall, as a rule, immediately inform the ombudsperson – possibly also a member of the Commission of Inquiry – of the suspicion. The notification shall be made in writing; in the case of verbal notification, a written note on the suspicion and the supporting evidence must be recorded.

2. The ombudsperson shall inform the Commission of Inquiry regarding his/her knowledge of suspected scientific misconduct. Both the ombudsperson and the members of the Commission of Inquiry who have been informed of suspicious facts must maintain confidentiality vis-à-vis other persons to protect the whistle-blower and the persons concerned. The Commission shall then investigate the matter.

3. The Commission shall promptly name the incriminating facts and evidence to the person suspected of misconduct and give him/her the opportunity to make a statement. The period for the statement is two to four weeks. During this phase, the name of the whistle-blower shall not be disclosed to the persons concerned without his/her consent.

4. Upon receipt of the statement of the person concerned or after the deadline has expired, the Commission shall decide within four weeks on whether to terminate the preliminary inquiry procedure. If the suspicion has not been adequately confirmed or the alleged misconduct has not been completely substantiated, the Commission will terminate the proceedings and inform the persons concerned and the whistle-blower of the reasons. Otherwise, the Commission will open a formal inquiry procedure.

5. If the whistle-blower does not agree with the termination of the inquiry procedure, within two weeks he/she shall have the right to be heard by the Commission, which shall re-examine its decision.

II. Formal Inquiry

1. The chairperson of the Commission of Inquiry shall inform the Rectorate about the opening of the formal procedure.

2. The Commission of Inquiry may, at its own discretion, call in experts from the field of the scientific matter un-

der scrutiny as well as the ombudsperson in an advisory capacity.

3. The Commission shall deliberate in non-public oral proceedings in the presence of at least five of the seven members of the Commission of Inquiry. In free evaluation of evidence, it shall investigate whether scientific misconduct has occurred. The person against whom such a suspicion exists shall be given an appropriate opportunity to make a statement. He/she must be heard orally at his/ her own request and may call in a person of his/ her trust who is not affected by the proceedings to assist him/her. This also applies to other persons to be heard.

4. The name of the whistle-blower shall in principle not be disclosed, unless special circumstances of the individual case make this mandatory.

5. If the Commission of Inquiry does not consider a misconduct to be proven, the procedure shall be terminated. Otherwise, it shall submit the results of its investigation to the Rectorate, with a proposal for further proceedings – also with regard to the protection of the rights of others – for decision and further action.

6. The person concerned must be informed without delay about the termination of the procedure. If the procedure is forwarded to the Rectorate, the person concerned must be informed in writing of the main reasons for this.

7. There is no internal complaint procedure against the Commission's decision.

8. At the end of the formal inquiry, a member of the Commission of Inquiry or ombudsperson shall advise those persons at their request, in particular junior researchers as well as students involved in scientific misconduct through no fault of their own with regard to ensuring their personal and scientific integrity.

For this purpose, the following measures can be initiated:

- Consultation by the ombudsperson or by a member of the Commission of Inquiry
- Written declaration by the chairperson of the Commission of Inquiry that the person concerned is not guilty of scientific misconduct. The whistle-blower must also be protected against discrimination in a corresponding manner, unless his/her suspicion turns out to be manifestly groundless

9. Affected third parties and/or representatives of the public shall be informed in an appropriate manner of the outcome of the investigation procedure, insofar as it appears necessary for the protection of third parties, the restoration of their scientific reputation or the preservation of confidence in scientific honesty, the prevention of consequential damage or otherwise in the public interest. Scientific publications which show defects due to scientific misconduct shall be withdrawn or corrected if they have already been published.

10. The files on the formal inquiry shall be kept for 30 years.

III. List of Possible Decisions and Sanctions for Scientific Misconduct

In the case of misconduct by students, the further procedure is regulated in detail by the respective examination regulations.

1. Labor law consequences

- Written warning
- Dismissal without notice
- Ordinary dismissal
- Dissolution of contract
- Dismissal from service

2. Civil law consequences

- Ban from the University
- Claims for return against those found guilty of scientific misconduct, for example with regard to purloined scientific material
- Claims for removal and omission arising from copyright law, personality rights, patent law and competition law
- Claims for restitution, for example of scholarships, external funding
- Claims for damages by TU Dortmund University or third parties in the event of personal injury, property damage or similar

3. Academic consequences

These can be initiated with different objectives at different levels:

3.1 Within the University

- Withdrawal of academic degrees, in particular Bachelor's, *Master's*, *Diplom/Magister* or doctoral degrees, if these are based on publications containing falsifications or were otherwise acquired fraudulently.
- Withdrawal of teaching authorization. In order to be able to verify this, the responsible committees are to be informed by the Rectorate if serious scientific misconduct is determined.

3.2 External academic institutions and associations

These scientific institutions are to be informed of a scientific misconduct if they are directly affected or if the scientist concerned has a leading position or – as in the case of funding organizations – participates in decision-making bodies.

3.3 Withdrawal of scientific publications

- If the scientific misconduct consists of false statements or an infringement of intellectual property, the author concerned must be obliged to a corresponding revocation. If the work in question has not yet been published, it must be withdrawn promptly; if it has already been published, it must be rescinded – in any case with regard to the parts concerned.
- The parties concerned are obliged to seek the consent of co-authors to a revocation, even if the co-authors themselves are not accused of scientific misconduct.
- Authors who are (co-)responsible for the publication containing falsifications must report within a predetermined period to the chairperson of the Commission of Inquiry on the measures taken to withdraw the publication and their success. If necessary, the chairperson of the Commission must take the appropriate measures to withdraw the publications concerned.
- Publications which have been identified by the Commission as containing falsifications must be deleted from the list of publications of the author concerned and marked accordingly.

4. Consequences under criminal law

The following consequences come into consideration if there is a suspicion that scientific misconduct also fulfills an offence of the German Criminal Code or other criminal norms or regulatory offences, as in particular

- Copyright infringement
- Falsification of documents, including technical records
- Damage to property, including changes to data
- Offences against property, such as theft, the obtaining of funding under false pretenses or embezzlement
- Breach of privacy and act of obtaining secret or confi-

dential information, e.g. data espionage or utilization of the confidential information of others

- Injury to life or health of study participants due to false data

Whether and to what extent the University must file a criminal complaint in such a case shall be left to the dutiful judgment of the Rectorate.

Appendix to the Rules of Good Scientific Practice at TU Dortmund University

This appendix lists examples of scientific misconduct. In addition to the examples of serious violations of the Rules of Good Scientific Practice, further examples are listed here.

Falsification of data

- Inventing data and presenting these as the result of an empirical investigation
- Falsification of data: selection of data in tables and figures – without disclosing this fact – with the aim, for example, of substantiating a hypothesis
- Incorrect information in application documents or in the case of a grant application, including false statements regarding the publication organ or the works submitted for printing

Infringement of the intellectual property of other researchers

Plagiarism

- Copy-and-paste plagiarism: Parts of the text of another person's work are copied without citing the source. This also applies to the transfer of texts/data from supervised examination papers.
- Paraphrasing: Ideas or parts of the text are taken over

5. Support of other affected persons

At the end of a formal inquiry procedure, it must be ensured that persons who have been involved in scientific misconduct through no fault of their own do not suffer any further damage with regard to their personal and scientific integrity.

with slight rewording without indication of the source.

- Translation plagiarism: Translations (text, data) are presented as one's own contribution without specification of the source.
- Self-plagiarism: Transfer of own extensive texts/data, which were already used in other examination papers or publications, without citing the source.
- Ghostwriting: The work is composed in entirety or in part by another person, but this fact is not mentioned when submitting the work.

Idea theft

- Exploitation of research approaches and ideas, especially as a reviewer
- Presumption of authorship or acceptance of co-authorship without a corresponding own contribution
- Disclosure of a work, insight, hypothesis or research approach of another person prior to its publication

Sabotage or intentional obstruction of research activity

- Damaging, destroying or manipulating experimental setups, equipment, documentation, hardware, or software that another person needs to carry out his/her research
- Prohibiting the use of existing equipment without objective justification

This document is an English translation of the original „Regeln guter wissenschaftlicher Praxis an der TU Dortmund vom 12. Dezember 2017“ and the original „Verfahrensordnung der Untersuchungskommission zur guten wissenschaftlichen Praxis der Technischen Universität Dortmund vom 9. Januar 2019“. In the event of any discrepancies arising between the German and English versions, the German version shall take precedence over the English version.