

This document is an English translation of the original “Regeln guter wissenschaftlicher Praxis an der TU Dortmund vom 12. Dezember 2019”. In the event of any discrepancies between the German and English versions, the German version takes precedence over the English version.

Rules of Good Scientific Practice at TU Dortmund University as of 12 December 2019

I. Standards

1. General Principles

- a. TU Dortmund University is committed to **upholding the principles of good scientific practice** and sets down the corresponding rules as described below, which are herewith made known to and binding for the members of TU Dortmund University.
- b. All researchers and scholars are responsible for ensuring the compliance of their own conduct with the standards of good scientific practice, e., they practice and advocate the fundamental values and norms of scientific practice in their actions. Teaching the principles of good scientific practice begins at the earliest possible point of time in academic teaching and scientific training.

This includes working *lege artis*, that is, according to the **accepted methods** in the respective discipline. Researchers must consistently challenge their own results. A **critical discourse** in the scientific community is to be permitted and fostered.

The members of TU Dortmund University are committed to **truth and honesty** with regard to their own work and that of third parties, in particular in the context of publications, dissertations and theses, lectures, appraisals and reviews, grant applications, job applications and statements to the public. The **intellectual property** of others is to be respected. The research activities of others must not be compromised. Using the intellectual property of others which has not yet been published is only possible with the owner's consent.

The **tasks and responsibilities** of the researchers involved in a research project as well as of technical staff must be **clear** throughout the whole course of the project. In the case of funding applications for research projects, the **consent** of all the participants foreseen and responsible for the project to their **participation in the project** must be obtained prior to submitting the application. Researchers may not terminate their **participation in a research project** without good cause. When publishing scientific results, participants may only **refuse their consent** to the use of their contributions for important reasons, for example, in the case of qualified and comprehensible criticism of the data, methods or results presented. Such refusal to give consent must be justified in writing.

When planning a project, researchers take into account and acknowledge the **current state of research** to the fullest possible extent. The identification of pertinent research questions presupposes a thorough search for research results already made publicly accessible. The university and associated non-university research facilities provide the infrastructure necessary for this.

To answer research questions, researchers use **established and comprehensible methods**. When developing and applying new methods, they attach particular importance to quality assurance and establishing standards.

2. Management of research institutions

The management of TU Dortmund University and of each non-university research institution is responsible for an appropriate **organizational structure** at the respective institution. It ensures that tasks concerning management, supervision, quality assurance and conflict settlement are clearly assigned, depending on the size of the individual organizational research unit, e. research group, chairs, institutes, or faculties. This is communicated to the respective members and associates in a suitable manner. The overall framework includes clear written procedures and principles for personnel selection and development as well as for the support of early-stage researchers and the safeguarding of equal opportunities.

3. Management of research units

When heading a research unit, the respective principle investigators are **responsible for the entire unit**. Within this unit, the participants work together in such a way that the unit as a whole can fulfil its tasks, the necessary cooperation and coordination are facilitated, and all members are aware of their roles, rights and obligations. The leadership task includes ensuring appropriate individual supervision for early-stage researchers and the career advancement of academic and technical personnel. The management of the whole research institution as well as that of a research unit is obliged to prevent the abuse of power and the exploitation of dependent relationships through appropriate organizational measures.

4. Performance indicators and assessment criteria

For the assessment of researchers' **performance**, a **multi-dimensional approach** applies: In addition to academic performance, further aspects can be taken into consideration. Performance assessment primarily follows qualitative standards, whereby quantitative indicators are only taken into account in the overall assessment in a differentiated and reflected manner.

5. Confidentiality and impartiality in review and consultation procedures

Fair conduct is a basis for a legitimate judgment process. Researchers as well as members of scientific advisory and decision-making bodies are obliged to maintain **strict confidentiality**, in particular when deciding on a person's suitability or reviewing submitted manuscripts or funding applications. They are obliged to disclose all facts that raise concerns regarding bias.

6. Framework conditions, agreement on rights of use

Researchers deal responsibly with the freedom of research guaranteed by the constitution. They take into account rights and obligations – especially those based on statutory requirements but also those based on contracts with third parties. If necessary, they obtain and present **approvals and ethics committee votes**.

With regard to research projects, the consequences of research work should be thoroughly assessed and the respective ethical aspects judged. The legal framework of a research project also includes documented agreements on the rights of use to the respective research data and results.

7. Public access to research results

As a matter of principle, researchers contribute **all their results to the scientific discourse**. In individual cases, however, there may be reasons for not making results publicly available. This decision may not depend significantly on third parties. Researchers decide on their own responsibility whether, how and where they publish their results, taking into consideration common practices in the subject area concerned.

If a positive decision on the publication of the results has been reached, these are described in full and in a comprehensible manner. This also includes, as far as this is possible and reasonable, making available the research data, materials and information on which the results are based as well as the methods applied and the software used, and expounding on work processes. Self-programmed software is made public, indicating the source code. Researchers provide evidence of their own preliminary work and the preliminary work of others correctly and in full.

If the publication does not meet these requirements, the constraints and reasons for this are to be explained.

8. Documentation

To be able to verify and evaluate the result, researchers document all information pertinent to the generation of a research result in a comprehensible manner, such as is necessary and appropriate in the subject area concerned. As a matter of principle, they therefore also document **individual results that do not support the research hypotheses**. No selection of individual results is permitted in this context.

Insofar as specific, subject-related recommendations exist for the verification and evaluation of results, researchers document their results in line with the respective rules. If the documentation does not meet these requirements, the constraints and reasons for this are to be explained in a comprehensible manner. Documentation and research results **may not be manipulated**; they are to be protected against manipulation as effectively as possible.

9. Quality assurance

When scientific findings are made publicly accessible (in the form of publications but also via other communication channels), the **quality assurance** mechanisms applied are to be presented in all cases. This particularly applies when new methods are developed.

10. Authorship

An author is a person who has made a **genuine and comprehensible contribution** to the content of a scientific text, data or software publication. All authors agree on the final version of a joint work intended for publication. They hold **joint responsibility** for the publication unless a restriction is explicitly declared. As far as possible, authors take steps to ensure that their research contributions are marked by publishers or infrastructure providers in such a way that users can cite them correctly. As a matter of principle, each person who has made a significant contribution to a publication must be named as an author. A list showing the contribution made by the authors should be included with the documents to be kept in conjunction with a publication. **Honorary authorship is prohibited.**

11. Publication media

Authors select the publication medium carefully, taking into consideration its **quality and visibility in the respective field of discourse**. Researchers who assume the role of editor check carefully for which publication media they perform this task. The scientific quality of a contribution does not depend on the publication medium in which it is made publicly accessible.

12. Archiving

In an adequate manner as measured against the standards of the subject area concerned, researchers **secure research data made publicly accessible** or research results and the main materials on which they are based as well as the research software used, if applicable. They store the data for an appropriate period and for at least ten years. Insofar as understandable reasons exist for not keeping specific data, researchers must explain them. Universities and non-university research institutions ensure that the infrastructure needed for archiving is available.

II. Non-compliance with good scientific practice

1. Scientific misconduct

a. Scientific misconduct exists if members of TU Dortmund University culpably, that is, intentionally or with gross negligence, violate the rules of good scientific practice or incite or aid and abet others to do so. Serious violations of the rules of good scientific practice include, in particular:

aa. Misrepresentation through

(1) The inventing or falsification of data or the results of trials, especially by

- Suppressing or disposing of data obtained in the research process without disclosing this
- Incorrectly asserting that data or results are the outcome of empirical studies
- Manipulating a diagram or illustration

- Knowingly exaggerating – beyond what is covered by data or evidence – the significance of research results (g., towards the media) in contradiction of the principles of truthful communication within science
- Concealing important uncertainties regarding the results, such as data gaps, methodical problems as well as justified objections or other circumstances according to which the results must be classed as uncertain

(2) Incongruent presentation of an illustration and the corresponding statement

(3) Incorrect information in funding applications or in the framework of reporting obligations (including false information about the publication medium and works submitted for printing), insofar as this is research-related

(4) Claiming the (co)authorship of others in publications and funding applications without their consent

(5) Presenting a work under one's own name, which in contradiction with the rules was compiled as a whole or in connected parts by another person

bb. Unauthorized appropriation of the research accomplishments of others through

(1) Unmarked reproduction of text content of third parties without citing the source as required ("plagiarism") as well as the unmarked reproduction of own texts/data on a larger scale which have already been used in publications or examination papers ("self-plagiarism")

(2) Reproduction of ideas or text passages with slight rewording and without citing the source ("paraphrasing")

(3) Reproduction of a translated foreign-language text without citing the original source ("translation plagiarism")

(4) Exploitation of the research ideas and approaches of others, especially as a reviewer ("theft of ideas")

(5) Unauthorized disclosure of data, theories and findings to third parties

(6) Unauthorized assumption or unjustified acceptance of authorship, especially without having made a genuine, comprehensible contribution to the scientific content of the publication

(7) Unauthorized publication and unauthorized disclosure towards third parties prior to publication of the work, finding, hypothesis, teaching or research approach

cc. Interference with the research activities of others through

(1) Sabotage of research work (including damaging, destroying or manipulating experimental setups, equipment, documents, hardware, software, chemicals or other items that other persons require for research purposes)

(2) Prohibiting the use of existing equipment or auxiliary aids without good cause

(3) Falsification or unauthorized disposal of research data or documentation

b. Scientific misconduct also results – in cases where this is intentional or grossly negligent – from

aa. The **co-authorship** of a publication that contains false information or scientific accomplishments of others appropriated without justification

bb. The neglect of **supervision duties** if another person is objectively incriminated of scientific misconduct and this would have been prevented or rendered considerably more difficult had the necessary and reasonable supervision taken place.

2. Procedures in cases of suspected scientific misconduct

a. Rules of procedure

If a serious violation of the rules of good scientific practice is suspected, TU Dortmund University instigates proceedings against the person concerned.

To this purpose, TU Dortmund University has set down the **"Rules of Procedure for the Commission of Inquiry for Good Scientific Practice"**. These contain procedural rules and measures for the sanctioning of misconduct if this has been established.

b. Ombudspersons

TU Dortmund University has established the office of at least one independent ombudsperson, to whom its members and associates can turn with **questions related to good scientific practice and in cases of presumed scientific misconduct**. At the suggestion of the Senate, the Rectorate appoints two professors as ombudspersons, whose term of office is four years. Reappointment is possible.

The university takes sufficient care that the ombudspersons are known at the institution. A representative is foreseen for each ombudsperson for cases where there is an apprehension of bias or the ombudsperson is incapacitated.

The ombudspersons offer to **mediate** between the parties involved in a conflict.

They examine, in terms of plausibility, concreteness and significance, every suspected violation of the rules of good scientific practice referred to them and advise the Rectorate in matters pertaining to the safeguarding of good scientific practice. They **do not** conduct **inquiry proceedings** with a hearing of the parties involved. This is incumbent upon the Commission of Inquiry. In the fulfilment of their duties, ombudspersons are **independent and not bound by instructions**.

c. Commission of Inquiry

To clarify suspected cases of scientific misconduct, TU Dortmund University has established a Commission of Inquiry.

For the purpose of such clarification, the Commission of Inquiry takes **appropriate measures** if it is notified 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. Only if the allegations are sufficiently concrete does the Commission initiate an inquiry.

The **Commission of Inquiry members** are appointed by the Rectorate at the suggestion of the Senate. The commission comprises four professors. Further members are two academic members of staff of the university as well as a researcher or a non-member of TU Dortmund University qualified for judicial office. The composition of the Commission should reflect the range of subjects at TU Dortmund University. The term of office of the members is four years; reappointment is possible. The Commission of Inquiry elects the chairperson and a deputy from the group of professors.

It may call on experts from inside or outside the university to participate if conducting the inquiry requires additional expertise.

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

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

The Commission **reports annually** on its work.

d. Whistleblowers and parties affected by allegations

The bodies responsible for investigating suspected cases of scientific misconduct – the ombudspersons and the Commission of Inquiry – act in an appropriate manner to **protect** both the **whistleblower** and the **person affected** by the allegations.

When investigating allegations of scientific misconduct, confidentiality and the underlying principle of the **presumption of innocence** that applies vis-à-vis outsiders are to be respected.

The whistleblower's **complaint** must be made **in good faith**. Allegations raised which are knowingly false may constitute scientific misconduct on the part of the whistleblower.

No disadvantages for their own academic or professional advancement should arise either for the whistleblower or the person concerned solely because a complaint has been lodged.

Dortmund, 4 March 2020

The Rector of TU Dortmund University

Professor Ursula Gather

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 under 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 ap-

pears 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

3. Ban from the University
4. Claims for return against those found guilty of scientific misconduct, for example with regard to purloined scientific material
5. Claims for removal and omission arising from copyright law, personality rights, patent law and competition law
6. Claims for restitution, for example of scholarships, external funding
7. 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
- Offenses against property, such as theft, the obtaining of funding under false pretenses or embezzlement

- Breach of privacy and act of obtaining secret or confidential 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.

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.

Dortmund, 9 January 2019 The Rector

of TU Dortmund University University Professor

Dr. Dr. h.c. Ursula Gather

This document is an English translation of 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.

I. 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 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

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