

# **Guidelines for Safeguarding Good Scientific Practice, Avoiding Scientific Misconduct and Dealing with Violations**

## **- English Version -**

From 5 March 2014

adopted by a decision of the Rectorate from 25 February 2014 after consultation with the  
Senate

### **Please note:**

Only the German version of these guidelines is legally binding.  
The English version is for information purposes only.

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Technische Universität Dresden has agreed the following guidelines, taking into account the recommendations passed by the German Research Foundation (DFG) for safeguarding good scientific practice in the current version of 3rd July 2013.

### **Preamble**

Scientific work rests on fundamental principles that apply to all scientific disciplines. The guiding principle is truthfulness to oneself and others. It is both ethical standard and foundation for the rules of scientific professionalism that apply to the individual disciplines.

All members and employees of TU Dresden shall be bound to make these guidelines to safeguard good scientific practice the basis of their scientific work and to contribute actively to avoiding scientific misconduct in their sphere of responsibility. All reasonable grounds for suspecting scientific misconduct within the University shall be investigated with the utmost attention while respecting the rights of those involved. If the suspicion is confirmed, measures appropriate to the individual case shall be taken.

### **Part I. Good Scientific Practice**

#### **§ 1 Fundamental principles of good scientific practice**

In particular, good scientific practice includes the following fundamental principles:

- working in accordance with the recognised rules of the discipline ("lege artis"),
- documenting results so that they are comprehensible, verifiable and complete,
- consistently and critically questioning all results,
- maintaining strict integrity with regard to contributions from collaboration partners, colleagues, competitors and predecessors, and
- maintaining ethical standards when carrying out surveys and studies.

#### **§ 2 Co-operation and management responsibilities in working groups**

(1) Every head of a working group shall conduct themselves in an exemplary manner with regard to their scientific work, and bears the responsibility for organising matters in a way that management tasks, supervision, conflict resolution and quality assurance are clearly assigned, and that guarantees that these are indeed carried out.

(2) In working groups, co-operation shall be conducted in an atmosphere conducive to reliability and trust where

- the results obtained through the division of labour can be mutually discussed, criticised and integrated into a common level of knowledge,
- ideas, hypotheses and theories are reciprocally verified and discussed and
- the quality assurance of one's own work and of results is safeguarded.

(3) The support necessary for this shall be provided by the Rectorate to those responsible. Appropriate measures for training courses and continuing education shall be carried out by the Rectorate, or if this appears expedient, by the Schools.

### **§ 3 Supervision of junior researchers**

(1) The supervision of junior researchers by the academic staff of the University shall be carried out in such a way that junior researchers are made aware of the rules of good scientific practice in teaching, training and research, both as a scientific and as an ethical fundamental principle.

(2) For this purpose, it must be ensured that in every teaching and research unit, there is a contact person who is able to communicate the principles for safeguarding good scientific practice, and to contribute to avoiding any misconduct by members.

(3) The application for acceptance as a doctoral candidate shall be made to the Faculty at the beginning of the dissertation project. A binding supervision agreement regarding the form and scope of the supervision is to be signed promptly with all doctoral candidates. The duty of care for junior researchers includes promoting the completion of the work within an appropriate period of time. The supervision concept should also contain measures to support the candidate's future career planning.

(4) The supervision of doctoral candidates shall be organised in such a way that the supervisor has an overview of ongoing research activities and the significant stages of development of the work.

(5) The supervisor's dissertation assessment report shall contain, among other things, statements concerning compliance with the guidelines for good scientific practice and, in the case of the experimental and empirical parts of a dissertation, statements on the quality of the data and how it was obtained.

### **§ 4 Performance and evaluation criteria**

(1) Originality and quality are always to be given priority over quantity in terms of performance and as evaluation criteria for exams, awarding academic degrees, promotion, recruitment, professorial appointments and allocating funds.

(2) Regarding applications for academic appointments, a maximum number of publications for evaluating scientific merit can be specified.

### **§ 5 Safeguarding and storing primary data**

(1) Primary data as the basis of publications is to be kept securely for ten years on durable storage media in the teaching and research units of its origin. Measurement results, collections, surveys, cell cultures, material samples, archaeological finds, questionnaires, audio and film recordings are also considered to be primary data.

(2) As a rule, primary data must remain accessible for ten years. For data that cannot be stored securely on durable media, shorter storage periods can be specified in justified cases. Generally, the original data and documents remain at the place of origin; however, duplicates can be made or access rights determined.

(3) The responsibility for the creation of data carriers lies with the respective scientist, on whom the burden of proof rests for the proper recording of the data.

(4) In the absence of any specification at the Schools level, the individual teaching and research units specify what is to be regarded as primary data. Moreover, they establish binding rules concerning the record and storage of primary data, as well as the access to the original data and data carriers; they also make provisions for the event that the scientist

responsible for the origin of the data changes his/her place of work. Moreover, they can specify shorter storage periods in accordance with paragraph 2, sentence 2.

(5) If the primary data contains personal data – details of personal or material circumstances of an identified or identifiable natural person –, then the features enabling that person to be traced are to be stored separately; the features are to be deleted as soon as the research purpose allows. Accordingly, this data shall be removed from the primary data to be archived.

## **§ 6 Scientific publications**

(1) Only those who have made a significant contribution to designing studies or experiments, to carrying out the research project, to developing, analysing and interpreting the data or to the phrasing of the manuscript itself and have consented to its publication may be referred to as authors of a scientific publication.

(2) Co-authorship is not established by:

- acquiring funding,
- providing standard investigating materials,
- instructing colleagues in standard methods,
- only technical participation in data collection,
- technical support only (e.g. merely providing equipment, laboratory animals),
- merely allowing the use of data,
- merely reading the manuscript without making a substantial contribution to the contents, or
- leading the department or working group in which the publication has originated.

Equally, work relations between the participants are immaterial for the justification of co-authorship. A so-called "honorary authorship" is also excluded.

(3) It is an infringement of the rules of good scientific practice to end the collaboration on a publication without due cause, or as co-author upon whose consent the publication depends, to prevent the publication of the results without good cause. Refusal to publish must be justified with verifiable criticism of data, methods or results.

(4) Publications which are intended as reports on new scientific results must describe the methods and results in a verifiable manner – where applicable, with reference to additional literature.

(5) In scientific publications, significant findings which support results and hypotheses, but also any which contradict these, must be disclosed. Preliminary work of one's own and of others, and relevant publications of other authors upon which the work builds directly must be named completely and correctly.

(6) Should the publication be intended to contain traceable personal data – details of personal or material circumstances of an identified or identifiable natural person –, then this is only permitted if those affected have given their explicit consent or if it is essential for the presentation of research results on events of contemporary history and if the person's overriding interests worthy of protection do not constitute an obstacle to this.

## **§ 7 Commitment to and information about the guidelines for good scientific practice**

(1) All those involved in scientific activities at the University, junior researchers and all students shall commit themselves to comply with the guidelines for good scientific practice pursuant to §§ 1 to 6.

(2) This commitment shall occur either through a commitment to the "Kodex guten wissenschaftlichen Arbeitens für Studierende" (code of good academic work for students) of TU Dresden or through the written assurance that these guidelines have been taken note of.

(3) Among employees, the commitment shall occur immediately upon recruitment. Junior researchers shall commit themselves to these guidelines at the earliest possible time after starting their doctorate or habilitation, and students at the time of enrolment.

(4) The guidelines for good scientific practice are to be integrated as a binding component into academic teaching and into the training of junior researchers.

(5) The university commits itself to creating and developing continually the necessary organisational and personnel structures for safeguarding good scientific practice and preventing scientific misconduct.

(6) On this basis, the Schools are called upon to develop principles of scientific work specific to each discipline and to make these known in a suitable manner.

## **Part II. Scientific Misconduct**

### **§ 8 Establishing scientific misconduct**

Scientific misconduct is deemed to have occurred if, in a scientific context, intentionally or with gross negligence, ethical standards are violated, false information is submitted, the intellectual property of others is violated or their research activity otherwise impeded. The particular circumstances of each individual case are crucial, taking into account the respective disciplinary cultures.

### **§ 9 Forms of scientific misconduct**

A case of scientific misconduct is to be considered particularly in the following situations

(1)

- providing incorrect information regarding authorship (ghost-writing),
- fabricating data,
- falsifying data and sources, e.g. the incomplete use of data and sources, disregarding undesired results without disclosing this, as well as manipulating sources, representations and images,
- provision of incorrect information in a letter of application for employment or in an application for funding (including inaccurate information relating to forms of publication and to publications presently in the process of being printed,
- providing incorrect information regarding the scientific achievements of candidates in selection committees and review panels;

(2) in cases of violation infringement of intellectual property relating to another person's work protected by copyright, or to major scientific insights, hypotheses, theories or research approaches of others by

- the unauthorised use under the pretence of authorship (plagiarism),
- the exploitation of research approaches and ideas of another, in particular as reviewer (theft of ideas),
- pretending scientific authorship or co-authorship,
- the falsification of contents
- the unauthorised publication or the unauthorised provision of access to third parties before the work, insight, hypothesis, theory or research approach have been published,
- assuming (co-)authorship with another without their permission,
- arbitrary delay of the publication of a scientific work, in particular as editor, reviewer or co-author;

(3) in cases of impairment of the research activity of others by

a) sabotaging the research projects of others, for example by

- damaging, destroying or manipulating literature, archive and source material, designs of experiments, equipment, documents, hardware, software, chemicals or other objects that another person needs for carrying out a research project,
- moving or stealing books, archive materials, manuscripts, sets of data,
- rendering relevant information media such as books, documents or other data scientifically unusable ;

b) disposing of primary data, inasmuch as this violates legal regulations or principles of scientific work recognised in the specific field;

c) expressing an incorrect suspicion of scientific misconduct in public.

### **§10 Co-responsibility for scientific misconduct**

A co-responsibility for misconduct can result from, among other things, active participation in the misconduct of others, complicity in the falsification by others, co-authorship while knowing of falsified publications, as well as gross negligence with regard to duties of supervision.

## **Part III. Committees and Representatives**

### **§ 11 Arbiter (Ombudsperson)**

(1) Following the recommendation of the Rectorate, an arbiter (ombudsperson), and a deputy shall be appointed by the Senate. The deputy takes the place of the ombudsperson if he or she is prevented from being present, or in case of bias. The appointment of the ombudsperson and their deputy is for a period of three years. Reappointment is possible.

(2) Persons of proven personal integrity are to be selected for these offices. They shall perform this function independently. To avoid conflicts of interest, no one holding a leading position shall be selected for this function.

(3) The ombudsperson is contact partner, advisor and mediator in all cases of suspected scientific misconduct. If required, they shall be supported by the investigating body for dealing with scientific misconduct.

(4) The ombudsperson shall submit an annual report on their activities to the Senate. This can contain recommendations for dealing with scientific misconduct.

## **Part IV. Procedure in Cases of Suspected Scientific Misconduct**

### **§ 12 Investigation committee**

(1) The Rectorate shall, in consultation with the Senate, set up an investigation committee to resolve cases of scientific misconduct. This committee shall consist of a chairperson as well as four further members. The Rectorate shall appoint the chairperson as well as the other members of the investigation committee for a period of three years; reappointment is possible. The chairperson should not be a member of TU Dresden and should preferably be qualified to hold judicial office. The additional members of the investigation committee must be members or employees of TU Dresden and come from various disciplines.

(2) The investigation committee can at any time call on the advice of persons who have special expertise in the scientific area to be evaluated or who have relevant experience in dealing with similar proceedings. It shall be supported by the investigation body for dealing with scientific misconduct when this is required.

(3) Meetings of the investigation committee are not public and are strictly confidential. The decisions of the investigation committee shall be taken by simple majority vote, unless provided otherwise. The investigation committee reaches its decisions based on the ascertained facts and the evidence it has gathered, and according to its own independent conviction.

### **§13 Regular Examination Boards**

(1) If the suspected misconduct affects academic examinations (e.g. Bachelor, Master and Diploma examinations) or post-graduate degrees (doctoral degrees and habilitations), then the committee specified by the respective examination or graduation regulations (Prüfungs- oder Graduierungsordnung) is responsible for the investigation ("regular examination committee").

(2) A regular examination committee can hand over a case to the investigation committee or call on its expertise in processing a case. The investigation committee may decide at any time that it wishes to deal with a case itself.

(3) As long as the investigation committee is processing a case, this prevents other bodies from becoming active in the same matter.

### **§ 14 Investigating body for dealing with scientific misconduct**

(1) The TU Dresden is setting up an investigating body for dealing with scientific misconduct, which can be called upon for support in cases of substantiated suspicion. This includes technical services for detecting plagiarism.

(2) In suspected cases, it shall support the work of the ombudsperson, the investigation committee and the regular examination committee.

(3) The investigating body for dealing with scientific misconduct shall support all members of the academic teaching staff in preventing scientific misconduct, carry out training and make a contribution to sensitising for scientific probity.

## **Part IV. Procedure in cases of suspected scientific misconduct**

### **§ 15 Suspected cases and reporting suspected cases**

(1) If scientific misconduct is suspected, members of the TU Dresden shall contact the ombudsperson. External persons can also contact him/her, provided that the suspected cases involve scientists at TU Dresden.

(2) Every charge must be made in "good faith" that the accusation is correct.

(3) If the suspicion of scientific misconduct is reported to a body other than the ombudsperson, then the latter is to be informed. If this body is not a regular examination committee which will itself investigate the suspicion, then the reported suspicion is to be forwarded to the ombudsperson.

(4) The suspicion shall be reported in writing and the report shall disclose the incriminating facts and evidence. In the case of an oral report, a written note is to be made regarding the suspicion, and the supporting facts and evidence. The ombudsperson can also take up reported suspected cases if this occurs without revealing the identity of the complainant. The prerequisite for this is that the accusations are sufficiently credible.

(5) The ombudsperson, while ensuring that the legitimate interests of the person affected are protected, shall gather the information and statements necessary for establishing the facts, and in individual cases, also consult experts.

(6) If from the ombudsperson's point of view there are grounds for suspecting scientific misconduct, then the investigation committee can inform the responsible regular examination committee about the facts. If from the ombudsperson's point of view, a serious case of scientific misconduct is suspected, he or she must inform the investigation committee or the responsible regular examination committee.

### **§ 16 Assisting and protecting parties involved in the procedure**

(1) The person affected shall be informed of the incriminating facts and, where applicable, evidence, together with the request that he/she make a statement, insofar as establishing the facts is not jeopardised by this. The time allowed for making a statement is generally four weeks. The complainant and the person affected shall be instructed about their rights and obligations and also about the possible consequences of not fulfilling these obligations.

(2) No disadvantages must arise for the continuation of their own scientific and professional progress for persons who supply palpable evidence of a suspicion of scientific misconduct (whistleblowers). The ombudsperson, the investigation body for dealing with scientific misconduct, the investigation committee and the regular examination committees must provide them with appropriate protection. To this end, the ombudsperson and also the members of the afore-mentioned committees are obliged to maintain confidentiality about the identity of the persons who turned to them with the palpable evidence for the suspicion of scientific misconduct, as well as about circumstances which might lead to the identity of the reporter. This is not applicable if this person has released them from their obligation to confidentiality.

(3) Charges shall be treated as confidential by all those involved. Confidentiality serves to protect the whistleblower and the person against whom the suspicion is raised. Before the investigation of a suspicion is concluded, prejudging the person affected is to be strictly avoided.

(4) The person affected, the complainant and the ombudsperson shall be informed about the decision of the particular committee. At the same time, the main reasons leading to the decision are also to be communicated.

(5) At the end of an investigation, care must be taken that persons who were innocently involved in processes of scientific misconduct suffer no further damage with regard to their personal and academic integrity. Suitable measures can be consultation by the ombudsperson or a written, and where appropriate, public statement from the University that no scientific misconduct is to be attributed to the person affected.

### **§ 17 Preliminary investigation**

(1) As soon as the investigation committee or a regular examination committee learns of specific reasons to suspect scientific misconduct, proceedings shall be initiated or the case handed over to the ombudsperson in compliance with the principles of § 16.

(2) All incriminatory and exonerating facts and evidence shall be documented in writing.

(3) On receipt of the statement of the person affected, and following the end of the deadline according to § 16 (1), the investigation committee or the regular examination committee shall decide within four weeks whether the investigation procedure - after communication of the reasons to the persons affected and the complainants - shall be concluded because the suspicion has not been confirmed, or whether a formal investigation shall be instigated.

(4) If the complainant disagrees with the termination of the procedure, they then have two weeks in which they can raise their objections in writing or orally to the investigation committee or to the regular examination committee. The investigation committee or the regular examination committee shall consult and decide on the objections in compliance with ownership and property rights pursuant to § 16.

### **§ 18 Formal investigation procedure**

(1) The opening of the formal investigation procedure shall be communicated to the Rector and the ombudsperson by the chair of the investigation committee or the regular examination committee.

(2) The investigation committee or the regular examination committee shall document the proceedings and write a report about the result of the investigation, containing the underlying reasons for the result.

(3) The main reasons are to be communicated in writing to the person affected, the complainant and the ombudsperson before the conclusion of the procedure. These can then make a statement on the report. If the investigation committee or the regular examination committee deems misconduct to have been proved, the report, including the statements and documents, shall be presented to the Rector. In these cases, the report shall also contain a recommendation on how to proceed further, in particular regarding possible academic repercussions for the person affected. The Rector shall also forward the documents, if appropriate, to the responsible authority, and this authority or the Rector shall take appropriate action. In other cases, the procedure shall be terminated.

(4) The Rector can request a new investigation of the results in justified cases.

### **§ 19 Duration of the overall process and obligation to keep records**

(1) Generally, the overall process should not last longer than six months.

(2) The records of the investigation procedure are to be kept for 30 years.

## **Part V. Possible decisions and sanctions in cases of scientific misconduct**

### **§ 20 Measures to be taken in cases of scientific misconduct**

As every case of scientific misconduct is different, and the seriousness of the scientific misconduct also plays a central role in each decision, there are no uniform guidelines for adequate individual consequences. The decision concerning measures to be taken for scientific misconduct is determined by the circumstances of the individual case. The following measures can be taken into consideration:

(1) In less serious cases, a reprimand or an exemplary reprimand can be issued.

(2) Consequences under employment law can be, in particular, a warning, an extraordinary notice of dismissal, contractual notice of dismissal, termination of a contract or removal from one's post.

(3) Consequences under civil law can be, in particular, issuing a ban on entering the premises, legal rights to recover possession vis-à-vis the persons affected, for example, with regard to misappropriated scientific material, claims for removal and for injunctive relief arising from copyright law, personal rights, patent and competition law, claims to repayment (for example of scholarships, third-party funds or similar) or claims for damages by the University.

(4) Academic consequences may have to be initiated on various levels and with different objectives.

- Internal university level: revocation of the academic degree if it has been awarded on the basis of falsified publications or obtained otherwise maliciously, or revocation of the right to teach at the University.
- Non-university scientific institutions and associations: such institutions are in any event to be informed about scientific misconduct if they are directly affected by this, or if the scientist concerned holds a leading position, or, as in the case of funding organisations, participates in decision-making bodies.
- Withdrawal of scientific publications.

(5) Consequences under criminal law are to be considered if it is suspected that scientific misconduct at the same time constitutes an offence in terms of the criminal code or other criminal provisions, or a misdemeanour, such as, in particular, copyright infringements, (including falsification of technical drawings), criminal damage (including changing data), offences against property and assets (as in the case of theft, fraudulent acquisition of funding or embezzlement), violation of personal details or private matters (such as through data espionage or use of another person's secrets), injury to life or physical injury (for example to test persons as a consequence of false data).

(6) Whether and to what extent charges are to be brought by the University in such a case is reserved for the due consideration of the Rector.

(7) The relevant applicable provisions of the different examination and doctoral degree regulations remain unaffected by this.

## **§ 21 Coming into force/expiry**

These guidelines come into force after the publication in the official announcements of Technische Universität Dresden. At the same time, the "Principles for Good Scientific Practice at Technische Universität Dresden and Regulations for Dealing with Scientific Misconduct" from 12 January 2000, last altered on 6 March 2011, cease to be in force.

Dresden, 5 March 2014

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Hans Müller-Steinhagen

Rector of Technische Universität Dresden