



Rules for Safeguarding Good Research Practice and Procedures for Investigating Scientific Misconduct at DESY

Preamble

The new Guidelines for Safeguarding Good Research Practice¹ published by the German Research Foundation (DFG) in July 2019 (Code of Conduct) and the “Guidelines for Safeguarding Good Scientific Practice (GSP) and Procedures for Scientific Misconduct”² of 30 July 2022 adopted by the HGF, have been implemented at DESY in its new Rules for Safeguarding Good Research Practice presented here. In particular, these implement Levels 1 and 2 of the DFG Code of Conduct. The Code is aimed at researchers and the leadership of universities and non-university research institutions. It applies in its current form in addition to the following rules and, like the HGF rules, is directly binding for all DESY employees and all guests using the DESY facilities. They come into force by resolution of the Directorate and are published on the Administration website under “Rules and Standards”³ and in the DESY publication database⁴. They replace the previous Rules to Ensure Good Scientific Practice at DESY.

General principles⁵

Rule 1: Commitment to the general principles

Every researcher is responsible for ensuring that their own behaviour complies with the standards of good research practice.

In particular, the standards of good research practice include

- working in accordance with the current state of the art in science and technology,
- maintaining strict honesty in attributing one’s own contributions and those of others,
- communicating the standards of good research practice to future generations (see Rule 2),
- rigorously questioning all findings oneself, and permitting and promoting critical discourse within the research community,

¹ Guidelines for Safeguarding Good Research Practice (Code of Conduct)
https://www.dfg.de/foerderung/grundlagen_rahmenbedingungen/gwp/ (accessed 26 June 2020)

² https://www.helmholtz.de/assets/helmholtz_gemeinschaft/Bilder/Cover/22_Helmholtz_Rahmenleitlinie_gwP_Stand300722.pdf

³ https://www.desy.de/verwaltung/regelwerke/index_ger.html

⁴ <http://dx.doi.org/10.3204/PUBDB-yyy-nnn>

⁵ The numbering of the DESY rules follows that of the guidelines in the DFG Code of Conduct.

Rules for Safeguarding Good Research Practice and
Procedures for Investigating Research Misconduct at DESY
(entered into force on 26 October 2023 by resolution of the DESY Directorate)

- carrying out or ensuring cross-phase quality assurance and documentation of the research process, and the corresponding archiving of all information necessary for the repetition of the process leading to the findings (see Rule 7, Rule 12 and Rule 17),
- as a rule, providing public access to research results (see Rule 13),
- carefully selecting publication media – taking into account the quality and visibility in the respective field of research (see Rule 15).

The principles of good research practice are explained in more detail in the following rules.

Rule 2: Professional ethics

Researchers are responsible for putting the fundamental values and norms of research into practice and advocating for them. Education in the principles of good research begins at the earliest possible stage in academic teaching and research training. Researchers at all career levels are obliged to regularly update their knowledge about the standards of good research practice and the current state of the art. They do so by exchanging ideas, supporting each other and standing up for the fundamental values of scientific work. The career levels also include early career researchers, in particular postgraduates and postdocs in DESY working groups.

Rule 3: Organisational responsibility of heads of research institutions

The leadership of DESY is responsible for ensuring that an appropriate organisational structure is in place and for ensuring adherence to and the promotion of good research practice, and for appropriate career support for all researchers. It guarantees the necessary conditions to enable researchers to comply with legal and ethical standards. Situations may arise in which researchers have to make decisions and answer ethical questions in the area of conflict between academic freedom and other values and legal interests. DESY has set up an Ethics Commission with the aim of facilitating the appropriate process of weighing these up in such cases, at the end of which it makes a recommendation for action. The Ethics Commission serves to handle ethically-related matters in a structured manner and to set common standards for responsible conduct⁶.

Suitable supervisory structures and policies are established for researchers in the early phases of their career⁷. The procedures and principles that apply at DESY for staff selection and development as well as for the promotion of early career researchers and equal opportunities are transparent and avoid unconscious bias as much as possible. Advice is offered on careers and other career paths as well as further professional development opportunities and mentoring for academic and research support staff. Details can be found on the websites of the Human Resources department⁸, the interdivisional departments for HR Development⁹ and Equal Opportunities¹⁰, as well as in the works agreements on HR development¹¹.

Rule 4: Responsibility of the heads of research work units

The head of a research work unit is responsible for the entire unit. The leadership role includes, in particular, ensuring adequate individual supervision of early career researchers – integrated in the

⁶ Statutes of the DESY Commission for Ethics in Research
https://ethik.desy.de/sites/sites_desygroups/sites_extern/site_ethik/content/e129301/e129302/181018_SatzungDESY-KommissionfrEthikinderForschung_ger.pdf (accessed 13 September 2021)

⁷ <https://www.desy.de/karriere/karriereprogramme/> (including Fellowship, HGF funding programmes, PIER)

⁸ <https://v2.desy.de/>

⁹ <https://pe.desy.de>

¹⁰ <https://gleichstellung.desy.de/>

¹¹ <https://www.desy.de/verwaltung/regelwerke/betriebsvereinbarungen/>

overall institutional policy – as well as career development for researchers and research support¹² staff.

DESY's organisational structures clearly allocate the tasks of leadership, supervision, conflict management and quality assurance to the individual research work units and ensure that they are implemented. Suitable organisational measures are in place at the level of the individual unit and of the leadership of the institution to prevent the abuse of power and exploitation of dependent relationships. Details are set out in the Statutes, in the rules of procedure for individual bodies, commissions and committees, in works agreements and in other relevant documents.

Rule 5: Dimensions of performance and assessment criteria

At DESY, qualitative standards and the criterion of scientific originality take precedence over quantity when it comes to promotions, recruitment, appointments and allocating funds. Assessing the performance of researchers follows a multidimensional approach. In addition to academic and scientific achievements, which are an important component, other aspects may be taken into consideration. Performance is assessed primarily on the basis of qualitative measures, while quantitative indicators may be incorporated into the overall assessment only with appropriate differentiation and reflection. Where provided voluntarily, individual circumstances stated in curricula vitae – as well as the categories specified in the German General Equal Treatment Act (*Allgemeines Gleichbehandlungsgesetz*) – are taken into account when forming a judgement.

These principles are observed by the Directorate and the Scientific Council, the Scientific Committee and other bodies, as well as committees and commissions.

Rule 6: Ombudspersons

The Board of Directors appoints two ombudspersons each for the Hamburg and Zeuthen sites for a period of three years. A one-time reappointment is permitted. The ombudspersons are confirmed by the Scientific Committee and the Scientific Council and then announced¹³. The four ombudspersons act as substitutes for one another if there are concerns about conflicts of interest or in case an ombudsperson is unable to carry out their duties. If there is any doubt about an ombudsperson having a conflict of interest, the "Commission for Safeguarding Good Research Practice at DESY" decides whether such concerns exist (see Rule 19). Researchers who are persons of integrity and who have management experience may be appointed as ombudspersons. In making the appointment, the specialist disciplines represented at DESY should also be taken into account. The ombudspersons must not be members of the "Commission for Safeguarding Good Research Practice at DESY" or of a central governing body of DESY¹⁴ while serving in this role. DESY's leadership gives ombudspersons the support and acceptance they need to carry out their duties.

The ombudspersons provide advice and support to all researchers on issues relating to good research practice and allegations of inappropriate conduct.

The ombudspersons' advice is based on the DESY guidelines and the DFG Code of Conduct. As a matter of principle, all enquiries are treated neutrally, fairly and in strict confidence.

¹² "research support staff" according to the DFG Code of Conduct

¹³ https://www.desy.de/ueber_desy/organisation/vertretungen/index_ger.html

¹⁴ The central governing body of DESY is the DESY Directorate.

Research process

Rule 7: Cross-phase quality assurance

Researchers carry out each step of the research process in accordance with the state of the art in science and technology (*lege artis*). Continuous quality assurance is carried out across all phases of the research process. The origin of the data, organisms, materials and software used in the research process is disclosed, citing the original sources, and the requirements that apply for their reuse are documented. The source code of publicly available software must be persistent, citable and documented, citing the source code, insofar as this is possible and reasonable. The nature and the scope of research data generated during the research process are described. It is an essential part of quality assurance that results or findings can be replicated by other researchers. When research findings are made publicly available (in the narrower sense of publication, but also in a broader sense through other communication channels), the quality assurance mechanisms used are always explained. This applies especially when new methods are developed. If inconsistencies or errors relating to such findings are subsequently found or brought to the researchers' attention, they make the necessary corrections.

DESY provides the "RDMO¹⁵" tool for the structured planning of this research data management and for the text output of a data management plan.

Rule 8: Stakeholders, responsibilities and roles

The roles and responsibilities of the researchers and research support staff participating in a research project must be clear at each stage of the project.

The participants in a research project engage in regular dialogue. They define their roles and responsibilities in a suitable way and adapt them where necessary.

Rule 9: Research design

Researchers take into account and acknowledge the current state of research when planning a project. To identify relevant and suitable research questions, they familiarise themselves with existing research in the public domain. The services of the DESY library¹⁶ are available to researchers for this purpose. Methods to avoid (unconscious) distortions in the interpretation of findings are used where possible and reasonable. Researchers examine whether and to what extent gender and diversity dimensions may be advantageous to the research project (with regard to methods, work programme, objectives, etc.).

Rule 10: Legal and ethical frameworks, usage rights

Researchers adopt a responsible approach to the constitutionally guaranteed freedom of research. They comply with rights and obligations, particularly those arising from legal requirements and contracts with third parties, and where necessary seek approvals and ethics statements and present these to the authorities in charge. With regard to research projects, the potential consequences of the research should be considered in detail and the ethical aspects should be assessed. The legal framework of a research project includes documented agreements on usage rights relating to data and results generated by the project. These are concluded at the earliest possible point in a research

¹⁵ <https://rdmo.desy.de> (currently under construction)

¹⁶ <https://library.desy.de>

project. Those entitled to use the data collected or generated by them decide whether third parties should have access to the data. Those who collected the data are (at least also) entitled to actually use them. The leadership of DESY is responsible for ensuring that its members' and employees' actions comply with regulations and promotes this through suitable organisational structures.

Researchers maintain a continual awareness of the risks associated with the misuse of research results, especially in security-relevant research. The consequences of research are evaluated in detail and the ethical implications of the research are assessed.

Rule 11: Methods and standards

To answer research questions, researchers use scientifically sound and appropriate methods. When developing and applying new methods, they attach particular importance to quality assurance and the establishment of standards.

Rule 12: Documentation

Researchers document all information relevant to the production of a research result as clearly as is required by and is appropriate for the relevant subject area to allow the result to be reviewed and assessed. In general, this also includes documenting individual results that do not support the research hypothesis. The selection of results must be avoided. Where subject-specific recommendations exist for review and assessment, researchers create documentation in accordance with these guidelines. If the documentation does not satisfy these requirements, the constraints and the reasons for them are clearly explained. Documentation and research results must not be manipulated; they are protected as effectively as possible against manipulation.

For the following Rules 13 to 15, the “Publication Guidelines¹⁷” must be observed. These apply whenever DESY employees are involved as authors of a scientific publication, so that DESY appears as an institutional author.

Rule 13: Providing public access to research results

As a rule, researchers make all results available as part of scientific/academic discourse. In specific cases, however, (e.g. in connection with patents, technology transfer, industrial collaboration) there may be reasons not to make results publicly available (in the narrower sense of publication, but also in a broader sense through other communication channels) or to do so at a later time. This decision must not depend on third parties. Researchers decide autonomously – with due regard for the conventions of the relevant subject area – whether, how and where to disseminate their results. If it has been decided to make results available in the public domain, researchers describe them clearly and in full. Where possible and reasonable, this includes making the research data, materials and information on which the results are based, as well as the methods and software used, available and fully explaining the work processes. This is done in accordance with the FAIR principles: Findable, Accessible, Interoperable, Reusable. Restrictions may apply in the case of patent applications. Software programmed by researchers themselves is generally made publicly available along with the source code. Researchers provide full and correct information about their own preliminary work and that of others, unless, in exceptional cases, this is deemed unnecessary by the general conventions of the specific discipline when their own results are already publicly available. At the same time, they limit the repetition of content from publications of which they were (co-)authors to that which is necessary to enable the reader to understand the context, and they avoid splitting research into inappropriately small publications.

¹⁷ http://www.desy.de/verwaltung/regelwerke/localsfsExplorer_read?currentPath=/afs/desy.de/group/v/www/Richtlinien/L/Richtlinie_Veroeffentlichungen.pdf

Rule 14: Authorship

Collaborating researchers agree on authorship of a publication. The decision as to the order in which authors are named is made in good time, normally no later than when the manuscript is drafted, and in accordance with clear criteria that reflect the practices within the relevant subject area. An author is an individual who has made a genuine, identifiable contribution to the content of a research publication of text, data or software. A leadership or supervisory function does not itself constitute co-authorship. All authors agree on the final version of the work to be published. Researchers may not refuse to give their consent to publication of the results without sufficient grounds. Refusal of consent must be justified with verifiable criticism of data, methods or results. Unless explicitly stated otherwise, all authors share responsibility for the publication. Authors seek to ensure that, as far as possible, their contributions are identified by publishers or infrastructure providers such that they can be correctly cited by users. Each author bears full responsibility for the content of the respective publication and cannot subsequently distance themselves from the content of the publication. Where separate agreements on publications exist, in the case of collaborations, such rules are to be applied. “Honorary authorship” is not permissible.

Rule 15: Publication medium

Authors select the publication medium carefully, with due regard for its quality and visibility in the relevant subject area. Researchers who assume the role of editor carefully select for which publication media they will carry out this activity. The bona fides of a new publication medium are scrutinised. The scientific/academic quality of a contribution does not depend on the medium in which it is published.

Rule 16: Confidentiality and neutrality of review processes and discussions

Fair behaviour is the basis for the legitimacy of any judgement-forming process. Researchers who evaluate submitted manuscripts, funding proposals or personal qualifications are obliged to maintain strict confidentiality with regard to this process. They disclose all facts that could give rise to the appearance of a conflict of interest. Confidentiality precludes sharing the material to which access is gained while acting in a certain function with third parties or making personal use of it. The duty of confidentiality and disclosure of facts that could give rise to the appearance of a conflict of interest also applies to members of research advisory and decision-making bodies.

Rule 17: Archiving

Researchers back up research data and results¹⁸ made publicly available, as well as the central materials on which they are based and the research software used, on durable and secure media and retain them for an appropriate period of time, in accordance with DESY’s policy on research data. This period is usually 10 years. The archiving period begins on the date when the results are made publicly available. In justified cases, shorter archiving periods may be appropriate; the reasons for this must be described. Where justifiable reasons exist for not archiving particular data, researchers explain these reasons.

This also applies to the research data on which a scientific publication is based.

DESY ensures that the infrastructure necessary to enable archiving is in place. For practical reasons, this can only be applied to scientific data stored at DESY. If data is stored at institutes outside DESY, the corresponding principles of the respective institute apply to this and to the storage of data.

¹⁸ e.g. in publications, lectures, websites, blogs.

Non-compliance with good research practice

Research at DESY is subject to the rules of good research practice. While conducting research projects, situations may arise in which researchers are uncertain as to how to follow these rules. Conceivably, these regulations could also be intentionally circumvented in favour of other goals. The ombudspersons (see Rule 6) have been appointed at DESY and the “Commission for Safeguarding Good Research Practice at DESY¹⁹” has been established in order to ensure clarity in the implementation of the rules for safeguarding good research practice at DESY and to be able to undertake appropriate investigations in cases when these rules have been intentionally or unintentionally breached. The responsibilities of researchers and their superiors when carrying out research projects remains unaffected by this.

Definition of research misconduct

Not every violation of the rules of good research practice constitutes research misconduct. Only wilful or grossly negligent infringements of these rules are considered as such. In particular, research misconduct includes:

- Fabricating or falsifying data,
- Misrepresentations in applications, grant applications, publications, etc.,
- Infringing upon intellectual property through
 - unauthorised use with appropriation of authorship (plagiarism) as well as appropriation or unfounded assumption of scientific authorship or co-authorship,
 - exploitation of unpublished scientific ideas or research approaches of others (theft of ideas),
 - publishing work or making it available without the consent of the authorised party;
- Damaging, destroying or manipulating scientific experimental set-ups,
- Breaching the duty of supervision (see Rule 4).

Depending on the circumstances of the particular case, the consequences of research misconduct may include but not be limited to the following:

- Retraction of scientific publications,
- Consequences under labour law, such as a warning or dismissal,
- Consequences under civil law, such as a ban on entering the premises and claims for restitution or damages,
- Consequences under criminal law,
- Informing the public / co-operation partners,
- Academic consequences in the form of revoking academic degrees with the involvement of the relevant authorities.

DESY’s employment contracts state that a proven violation of the principles of good research practice may provide possible grounds for extraordinary termination.

Rule 18: Complainants and respondents

The ombudspersons and the Commission for Safeguarding Good Research Practice at DESY are responsible for investigating suspected research misconduct at DESY. Both bodies take appropriate measures to protect both the complainant and the respondent and adhere to the principle of the presumption of innocence. The disclosure should not disadvantage the research or professional

¹⁹ Link to the statutes once these have been published

career prospects of either the complainant or the respondent. Should misconduct not be proven, the complainant must continue to be protected, unless the allegations are shown to have been made against his or her better knowledge.

The information disclosed by the complainant must be provided in good faith. Knowingly false or malicious allegations may themselves constitute misconduct.

The respondent must be informed of the suspicion against them and given the opportunity to be heard.

The identity of the person voicing the suspicion will not be disclosed to the respondent without their consent.

Rule 19: Procedures in cases of alleged research misconduct

Accusatory report

At DESY, every person is free to contact an ombudsperson they trust in the event of suspected research misconduct. This can be the DESY ombudspersons, the ombudspersons of the DESY partners, the Central Ombudsperson of the Helmholtz Association or the German Research Ombudsman²⁰ of the DFG.

Two DESY ombudspersons are available as contacts at the Hamburg site and two at the Zeuthen site (see Rule 6).

An anonymous report is possible, but can only be reviewed in proceedings if the report contains solid and concrete facts.

Preliminary review by the ombudspersons

If a suspected case of research misconduct is brought to the attention of a DESY ombudsperson, they shall inform the other ombudspersons immediately. The ombudspersons then decide jointly, if possible, what steps they deem appropriate in order to clarify the facts of the case. Each of the ombudspersons must be informed about and in agreement with the essentials of the progress of the investigations.

The ombudspersons take the steps they deem appropriate in order to clarify the facts of the case, thereby carrying out a preliminary review.

If the ombudspersons are of the opinion that the conflict can be resolved and brought to a peaceful conclusion through dialogue ("correctable conflict"), the DESY ombudspersons will make a binding attempt at mediation.

If an attempt at mediation fails, the DESY ombudspersons will appeal to the Commission for Safeguarding Good Research Practice at DESY. The DESY ombudspersons must then inform the Commission of the details of the specific case in the form of a report. Once the Commission is involved, the ombudspersons are prevented from taking further action in the specific case.

²⁰ <https://ombudsman-fuer-die-wissenschaft.de/>

Opening of proceedings

A request for the opening of proceedings to investigate suspected cases of research misconduct may only be made by the DESY ombudspersons or by the DESY Directorate or by the Chair of the Commission itself.

The Commission reaches its decision according to the principle of free consideration of evidence. It first decides in a closed session whether to open proceedings and, if necessary, opens the investigation. The Chair of the Directorate shall be informed of this by the Chair of the Commission.

Conducting the proceedings

The Commission for Safeguarding Good Research Practice at DESY investigates the suspected case and discusses it orally in non-public meetings; telephone and video conferences are permitted; the applicable data protection regulations must be observed. Minutes are kept of each meeting, summarising the main results.

Once the facts of the suspected case have been clarified, the Commission draws up a confidential report for the Directorate with recommendations for action.

Conclusion of proceedings

The DESY Directorate makes a decision about the Commission's recommendations and, if necessary, decides on appropriate measures. The proceedings are thereby closed.

Reopening of proceedings

The Directorate may ask the Commission to reopen a case.

Principle of objectivity

All parties involved in the proceedings are required to give equal consideration to both exculpatory and incriminating evidence in their investigations. In particular, they must follow up on information that helps to clarify the facts of the case, unless it is obvious that this information is being presented merely to delay the clarification process.

Further details are set out in the Commission's Statutes.