

Guidelines

for the Written Review in the Programme New Instrumentation for Research



I What Are We Asking You to Do?

We are asking you to provide a written review that will serve as a basis for the funding decision regarding the attached proposal that has been submitted to the DFG.

- **First, please make sure that you feel you have the necessary expertise.**
If you do not feel that you have the expertise required to evaluate the subject matter, please notify us promptly. In this case, we would be grateful if you would assist us by suggesting other possible reviewers.
- **Please examine whether circumstances exist that could be interpreted as your having a conflict of interest.**
For more information on apparent conflicts of interest, see IV.3.
- **Please treat the documentation confidentially and do not make it available to third parties.**
- **Please base your assessment of the research project on the text of the proposal you have received.**
You may also refer to the publications cited in the proposal; however, the bibliography of cited works and the manuscripts are not per se the subject of the review.

The proposal also includes two lists of publications:

- a list of up to ten of the applicant's most important publications in the curriculum vitae, and
- an overview of a maximum of ten of the applicant's most important project-specific publications.

Please consider both lists of publications in your assessment¹.

- **If you have any questions about the proposal, please contact the DFG Head Office exclusively.**

¹ The DFG provides clear instructions on how the lists of publications should be structured. In particular, the number of publications that can be listed is limited. This measure has two main objectives: first, to place emphasis on the content of the most important project-relevant publications without regard to numerical indicators; second, to reduce the pressure for excessive publication.

- **Please limit your review to two pages or less.**
- **Please provide a clear recommendation as to whether you believe the project should be funded.**

II What Criteria Should You Use?

The DFG provides funding in the fields of Scientific Instrumentation and Information Technology for instrumentation and instrumentation-related projects at research institutions. In the New Instrumentation for Research programme, projects are funded with the aim of developing and testing technically and methodologically novel types of research instrumentation.

The funds awarded for a project should initially be used to set up a functional model in the laboratory with which the new technology can be tested and ultimately the key experiment can be carried out that proves the effectiveness of the new method for use in research (i.e. the "proof-of-principle"). If this is successful, funds for a follow-up project can be requested to set up a practical demonstrator and to carry out a pilot project to obtain initial research results using the new device technology. If a working demonstrator has already been developed, a project for the practical testing of this new device technology for use in research can also be applied for directly.

One focus of the programme is on interdisciplinary projects that cannot be readily assigned to the DFG's subject classification system. Through the development and construction of a research instrument in one field for use in another research field, it is intended to test novel approaches across disciplines and thus find exploratory ways to answer open questions in research.

The proposal must convincingly show what new research approaches will be possible in the future with the research instrument to be developed and how new knowledge can be gained in science through its use. Ideas for new research devices should therefore be clearly distinct from device technologies already available on the market. Mere improvements to existing technologies and instrumentation, e.g. in terms of accuracy, sensitivity, resolution, energy efficiency, user-friendliness or similar, or the updating of already known approaches or the gradual improvement of existing device technology generally does not meet this requirement.

1 Quality of the Project

- Assess the research quality of previous work and the results achieved. Evaluate how the scientific expertise will be integrated into the development project. What makes

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the applicants especially suited to carry out the project? To what extent are the applicant teams specifically qualified for this project? Has preliminary research already been carried out or have patents been issued as part of the development of the instrumentation?

- Does the project fit into the New Instrumentation for Research programme? To what extent can the key experiment validate the potential of the new method or new technology for use in research? Is the new method or technology expected to lead to new research approaches? Could a new practical instrument, which might be developed as a result, be used by other groups and advance scientific knowledge elsewhere?
- How would you evaluate the innovativeness or novelty of the technology (in particular as distinct from a mere improvement of known methods)? How do you assess the potential research/knowledge gain through the use of the instrument to be developed? How high would you assess the demand for such an instrument in research? Please evaluate the importance of the development from a technical and scientific perspective, also in relation to the costs.

2 Objectives and Work Programme

- How realistic do the objectives described in the proposal appear to you? Are these objectives and the success criteria defined throughout the project appropriate and assessable?
- Does the work programme seem suited to achieve the stated objectives?
- Does it appear possible to develop a usable demonstrator within the project duration, which can possibly be used in a research project together with potential users as part of a subsequent proposal?
- Do the work programme and duration of the project seem sufficient for adequate testing and validation of the novel technique or method?

3 Setting/Environment

- Evaluate the requirements for successfully carrying out the project in terms of staff, institutional requirements, space and equipment.

- Evaluate the opportunities for the participating research staff to acquire scientific and/or professional qualifications.

4 Recommendation Concerning the Extent of Funding

- Do the envisaged development and the potential gain in knowledge to be achieved justify the requested funds?
- Does the work programme justify the requested staff?
- Is the requested equipment necessary as supplementary support for the specific project, or should it be available as core support?
- To what extent are the consumables, travel expenses and other costs necessary for carrying out the project?

5 Diversity and Equal Opportunities in German Research

Proposal reviews should not disadvantage applicants due to extra-scientific reasons, such as age, gender or disability. Consider the applicant's scientific career development rather than his/her age. You may compensate for certain extra-scientific disadvantages; unavoidable delays in the applicant's scientific career (for example childcare responsibilities causing longer periods of qualification, gaps in publication, or less time spent abroad) should be taken into consideration. Additional information can be found at

www.dfg.de/diversity/en

III What Happens with Your Review?

As a rule, at least two reviewers evaluate each proposal independently. Based on these reviews, the DFG Head Office prepares a recommendation for the Committee on Scientific Instrumentation and Information Technology.

The Committee on Scientific Instrumentation and Information Technology, as the subcommittee of the DFG's Joint Committee responsible for instrumentation, evaluates the result of reviews of instrumentation-related proposals, including those that come under general research funding as well as the Major Research Instrumentation, State-Funded Major Instrumentation and Major Instrumentation in Research Buildings programmes, and forwards its recommendation to the Joint

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Committee. All reviewers participating in the review process will be informed of the Joint Committee's final funding decision.

The DFG will anonymise reviewer comments and share them with the applicants. These anonymised comments will also be made available to the other reviewers taking part in the review process. Please note that the DFG Head Office may shorten reviews as necessary.

IV What Else Is Important?

1 Confidentiality

Proposals submitted to the DFG, correspondence with reviewers, reviews, and the identity of the reviewers and members of the Committee on Scientific Instrumentation and Information Technology participating in the evaluation must be treated confidentially. We ask that you not identify yourself as a reviewer to the applicant or to any third party. This entails that the responsibilities of a reviewer may only be undertaken personally and may not be delegated to third parties and also that the DFG will only share the reviewers' comments and arguments with the applicants in fully anonymised, and if necessary edited, form. The scientific content of the proposal may not be exploited for personal and/or other scientific purposes.

2 Obligation to Follow Principles of Good Scientific Practice

The [principles of good research practice](#) must also be observed during the review process. A violation of these principles can result in a charge of scientific misconduct. In particular, any infringement against the principle of confidentiality as per IV.1. is considered research misconduct. In cases of suspected scientific misconduct the proceedings of the DFG's [Rules of Procedure for Dealing with Scientific Misconduct](#) (Verfahrensordnung der DFG zum Umgang mit wissenschaftlichem Fehlverhalten – VerfOWF) are applied.

3 Conflicts of Interest

The DFG Head Office is not able to investigate all circumstances that could be interpreted as a conflict of interest. Therefore, the DFG relies on your assistance so that, if necessary, another reviewer may be found at an early stage to participate in the written review process. Should circumstances exist that may be interpreted as a conflict of interest, please inform us before submitting your written review. If you submit a written review to the DFG without

first having contacted the DFG about a possible conflict of interest, the DFG Head Office assumes that, to the best of your knowledge, no apparent conflict of interest exists. If, after submitting a written review, or during or following a meeting, you realise that there may be – or may have been – an apparent conflict of interest, you should also contact the DFG Head Office immediately. The DFG's full guidelines on conflicts of interest can be found in the Guidelines for Avoiding Conflicts of Interest (DFG form 10.201).

www.dfg.de/formulare/10_201

V Further Information

For further information, please contact the Scientific Instrumentation and Information Technology Division staff. An overview of contact details, responsibilities and funding opportunities in this area can be found on the DFG website under the link below.

www.dfg.de/wgi