

**Summary of reviewer feedback in the
Academy's September 2019 call: natural
sciences and engineering research pro-
posals**



ACADEMY OF FINLAND

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1. Overview

Majority of the proposals submitted in the September 2019 call to the Research Council for Natural Sciences and Engineering were reviewed in international review panels. This time 30 review panels were organised to evaluate the applications in the fields of natural sciences and engineering. In the following is presented these panels' feedback for the benefit of the applicants.

2. Scientific quality

Majority of the review panels identified excellent or outstanding proposals (i.e. overall grade 5 or 6), which were competitive in an international comparison. However, the quality of the proposals varied significantly within the panels and among the fields of research.

To improve the quality of the proposals, many panels highlighted the importance of **including sufficient scientific details in the proposal**. This is particularly important for receiving a high grade in scientific quality and innovativeness (item 1.1) and in implementation of research plan (item 1.2) in the review form. **A clear description of the novelty and innovativeness of the proposed research** was a prerequisite for receiving a high grade in the review item 1.1. Notably, **the description of the implementation of the work was often insufficiently detailed**, and this was reflected in the grade. Both the facilities and how the project can carry out the experiments or measurements should be presented with sufficient detail. This is important especially when the project relies on collaboration to achieve the goals of the project.

3. Competence, collaboration, and mobility

Several panels were impressed by the many highly networked and internationally-oriented applicants. However, the panelists often raised the concern regarding **non-specific description of research team and/or collaborators and their roles in the research work**, and pointed out that simply providing a list of collaborators is not sufficient.

Many panels encouraged the applicants for the Academy Research Fellow and Postdoctoral Researcher posts to address in the proposal their level of independence and how the post would advance their career. Especially **in case of the Academy Research Fellow applicants, it should be clearly stated how distinct the planned research is from that of their current/former group leader(s)**.

Many panels pointed out that international mobility consisting of longer research periods in world-class and well-justified teams is important especially for early-career researchers but also for senior researchers. **The planned mobility should always be described clearly and in sufficient details accompanied with invitation letters from the mobility hosts as appendices. The mobility plan should support the research plan and it should be tightly connected to the schedule of the project.**

4. Other feedback

- The applicants should prepare the research plan, CV, publication list and other appendices according to the Academy's guidelines so as to facilitate systematic panel review.
- In some cases it was hard to find necessary information (such as supervisory experience) from the CV.
- The applicants should include only published and accepted papers – not submitted ones – in the publication list.
- The applicants should place emphasis on describing clearly and properly the state-of-the-art, risk assessment, management and organisational aspects, research methods, research hypotheses and objectives in the proposal.
- The applicants are encouraged to discuss the proposal with colleagues before submission. Receiving some mentoring in preparation of application is particularly important for younger applicants with limited experience in applying for research funding. This would be helpful also to applicants who change their research area.
- The applicants should state out possible connections between different proposals (e.g. postdoctoral applicant is planned to be hired in an Academy project) in the proposal.
- The applicants coming from the same research group should not be using same pictures and text in their proposals, as this makes it hard to assess the originality of their ideas.
- Depending on the nature of the project, ethical aspects and open science can be of pronounced significance. In those cases, the panelists encouraged the applicants to pay more attention to these issues.
- Some applications were clearly hastily and poorly prepared and would have benefited from proof-reading.
- If a proposal concerns sustainability, a Life Cycle Assessment would be highly beneficial.
- The applicants should note that researcher training is part of the scientific review and as such, it is important to include researcher training aspects into the proposal.
- The funding applied for (the project costs) should be carefully justified.
- A societal impact plan should be realistic with a credible pathway and time scale.