

Reviewer Guidance for Research Fellowships 2024/25

Stage 2: Expert Review

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Introduction

The Royal Academy of Engineering offers [Research Fellowships](#) each year to outstanding early-career researchers to support them to become future research leaders in engineering. Unlike previous rounds, the 2024/25 round would only include the Research Fellowship scheme and the Engineering for Development Research Fellowship (EDRF) scheme has been removed. However, we will continue to accept applications under the EDRF umbrella in the current round and they would be treated no differently to Research Fellowship applications.

The scheme has a three-stage assessment process:

- Stage 1 General Review
- Stage 2 Expert Review
- Stage 3 Interview

The aim of each stage review is to provide comments and scores to help the selection panel decide the most competitive applications to proceed to next stage. Each application will be assessed by three reviewers. The reviews should be submitted online through the Academy's Grants Management System (<https://grants.raeng.org.uk/>).

Each of the three review stages are designed to assess distinct attributes of the quality of the candidate and their application.

- The focus of the **General Review (stage 1)** is to assess the candidate's ability to articulate their vision. It is recognised that general reviewers may not have the technical expertise of the research project being assessed, and therefore, at this stage the assessment is focussed on the quality of the candidate, the vision and the impact (it is not intended to be a technical review).
- In **Expert Review (stage 2)**, the application is sent to reviewers who are experts in the applicant's field and who are also asked to comment on the quality of the research and the candidate's ability to carry out the technical aspects of the projects. Please note that for any **technical** questions raised, there will be the opportunity for these to be answered by the applicant in a written response which will be considered by the panel during short-listing.

Confidentiality

Applications and reviews are submitted to the Academy in confidence and;

- Reviewers should not discuss or share the application with any third party, without prior approval from the Academy.
- Reviewers should not discuss the application or have any contact with the applicant.
- Reviewers should not act upon any of the information they obtain through the applications and should not engage with applicants if approached about their review.
- Reviewers should not retain any copies of application documents once their role as reviewer has been completed.
- Any hard copies of application documents, or any electronic versions of application documents saved locally, must be destroyed/ deleted upon submission of the review.
- The identity of reviewers will not be made known to applicants but may be revealed to other members of the assessment process.

Conflict of Interest

Reviewers should inform the Academy if they believe they have any conflict of interest, or could be perceived by others to have a conflict of interest, which may affect their ability to provide a fair and independent review of an application. The Academy will then decide on the appropriate course of action. Conflicts include, but are not limited to, knowing the applicant outside of or through work, having a working relationship with their organisation or having a commercial interest relevant to the application.

Declaration on Research Assessment (DORA)

The Academy's research programmes are aligned with the Declaration on Research Assessment ([DORA](#)), which is a set of principles aiming to improve the ways in which the output of research is evaluated by funding agencies, academic institutions, and other parties. The outputs from research are many and varied, and as a funder of engineering research the Academy needs to assess the quality and impact of these outputs in order to make awards - it is thus imperative that research output is measured accurately and evaluated wisely.

In the assessment of research output, we would like to emphasise that all outputs are welcome and considered valuable to the Academy. Outputs can include open data sets, software, publications, commercial, entrepreneurial or industrial products, clinical practice developments, educational products, policy publications, evidence synthesis pieces and conference publications. With regard to research articles published in peer-reviewed journals, the scientific content of a paper is much more important than

publication metrics or the identity of the journal in which it was published.

We value and appreciate the time and effort that reviewers give to support our research programmes. A good, helpful review for the Academy is one which assesses research on its own merits rather than by surrogate measures, such as on the basis of the journal in which research is published.

National Security

For the Expert Reviewers

The Academy is the UK's National Academy for engineering and technology and seeks to increase the potential positive benefit that innovations can have for society, whilst reducing the risks of harm. Hence, in all our activities, we seek to minimise the risk that technology developed as part of work that we support could be misused by a foreign state to build a capacity to target UK interests in a hostile fashion or to control or repress their population. There is a risk that for some grant activities, failure to protect IP and a lack of due diligence into collaborators could result in sensitive technology being transferred to and misused by a hostile or repressive foreign state.

National security risks are managed in the first instance by the Academy's steering group and its National Security Research Group, and the Academy does not therefore require expert reviewers to focus on these issues. Any concerns raised by reviewers, however, will be directly passed on into our internal processes.

If you believe there is a security risk, please contact research@raeng.org.uk

For the Panel/steering group reviewer

The Academy is the UK's National Academy for engineering and technology, and seeks to increase the potential positive benefit that innovations can have for society, whilst reducing the risks of harms. Hence, in all our activities, we seek to minimise the risk that technology developed as part of work that we support could be misused by a foreign state to build a capacity to target UK interests in a hostile fashion or to control or repress their population. There is a risk that for some grant activities, failure to protect IP and a lack of due diligence into collaborators could result in sensitive technology being transferred to and misused by a hostile or repressive foreign state.

We ask that you consider for all applications that you are reviewing whether there is a risk of misuse of IP or that due diligence has not been appropriate for some collaborators.

If you are concerned about these risks, please highlight them to the Chair of the assessment group and staff supporting the meeting. Academy staff will then consider (potentially in consultation with UK

government funders and regulators) whether any additional controls should be required on that application before it can be funded or whether the proposal should be declared ineligible for funding.

Use of AI

1. **Exclusion of AI in Evaluation:** Assessors must refrain from using generative AI tools to make judgments or write feedback on grant applications. The Academy's approach relies on the expertise of its Fellows (or other assessors identified by Fellows or Academy staff) in evaluating applications and passing on their knowledge to the next generation. Any reliance on machine intelligence is not in line with our established working methods.
2. **Confidentiality of Application Content:** Assessors are explicitly prohibited from sharing the content of grant applications with any generative AI tool as this can lead to the submitted data being used for other purposes. Maintaining the confidentiality of the application materials ensures the integrity of the assessment process and upholds the trust placed in the Academy's evaluation procedures.
3. **Detection of improper use of AI:** At present the Academy has no formal tools for identifying whether AI has been used in generating content (although it may seek to acquire such tools in future, subject to strict data security requirements), and therefore is primarily relying on honesty and integrity from applicants. However, the use of current tools can generally be identified through close reading, particularly if the applicant has also been interviewed. Exceptionally, assessors may request a short interview with applicants that they would otherwise not have interviewed prior to confirming funding, to build confidence that there has not been improper use of AI tools.

The Scheme

Applicants are early-career researchers who have been awarded their PhD in the last four years. The scheme provides funding for five years and Research Fellowships must be held at a UK higher education institution/university or a UK research organisation that is eligible to receive UKRI funding. Each host institution can only submit up to 4 applications for 2024/25 round, and had an internal selection process for the submission. Each application for Research Fellowships is capped at a maximum contribution from the Academy of **£625,000 over the 5-year period**.

The scheme's objectives are to:

- Support the best early-career researchers in establishing their independence and international reputation.
- Provide long-term support enabling the pursuit of an ambitious programme of engineering research and impact.

- Develop ambassadors for the Academy and advocates for STEM (science, technology, engineering, and mathematics) disciplines.

Online Grants Management System

Applications have been submitted through the Academy's Grants Management System (GMS) at <https://grants.raeng.org.uk> and reviews must also be undertaken on the system.

Reviewers may already have an account with the Academy, e.g., from being the Academy Fellow, previous reviewers, or grant applicants. The same login details should be used. Once logged into the system, reviewers will be presented with the applications that have been allocated to review. Clicking on the application reference number (in the format RF2425-24-xxx) will take reviewers through to the application summary page, where reviewers can view the application and access the review form. A visual step-by-step guide on using the system has been sent to you along with this document.

Please save your reviews as often as you can, making use of the Save buttons beneath each scoring criterion. Furthermore, please avoid having multiple Flexi-Grant windows opened at the same time. **If you do not click the 'Save' buttons at least once within 120 minutes, the system will timeout and you will lose your work.**

Once a review form is completed, the 'submit review' button will become available at the bottom right corner of the form. Please note that the submitted review form cannot be altered and will be read by the selection panel members only.

Common Cases of Unconscious Bias

Before review and assessment, reviewers and the selection panel members are reminded of the following common cases of unconscious bias that should be avoided during the review and assessment process:

- **Recent PhD graduates:** applicants' research profiles should be assessed by their research track record that is adequate for delivering the research proposal, rather than by the year they have obtained PhD
- **Applicant's PhD awarded more than 4 years ago:** all applications assigned for review and assessment have been checked and meet the eligibility criteria. For the applicants, whose PhD were awarded more than 4 years ago, a margin of up to three months more than the four-year limit is acceptable or extenuating circumstances (e.g., maternity/paternity, extended sick leave or national service) have been considered.
- **Staying in the same institution:** Reviewers should recognise that there are a range of factors that determine the choice of host institution, and whether an applicant wishes to relocate. An

applicants' research independency should NOT therefore be assessed by the change of the institution, nor should an applicant be disadvantaged in the review process should they choose not to move institution.

Reviewers and the panel members should only assess the support and resources provided by the host institution and its appropriateness for the research programme proposed (including for example, infrastructure and stakeholder networks). It is important that the quality of the host institution's research facilities and environment should be assessed by the quality that it is adequate for delivering the research proposal, rather than the quality of the research facilities and environment itself.

All applications are assessed on equal terms regardless of the sex, age, ethnicity and/or other characteristics of the applicant.

Please note in previous rounds applicants must not hold a permanent academic position. We removed this eligibility criteria and this is therefore no longer applicable.

Review Form – Expert Review

The aim of the Expert **Review stage (stage 2)** is that application are assessed by reviewers who are experts in their field. The reviewers at this stage are asked to comment on the quality of the research and the candidate's ability to carry out the technical aspects of the projects.

For each application, reviewers should provide:

- **commentary against each assessment criteria** (see below)
- **an overall score out of 7 and comment on the overall quality of the application**
- **a YES or NO recommendation on whether the applicant should proceed to next stage**

The assessment criteria include:

1. Candidate quality (a, b and c are separate questions)

1.a Please comment on the quality of the applicant's research track record

1.b Please comment on the potential of the applicant to become a future leader in their chosen field

1.c Please comment on the potential of the applicant to be an advocate for engineering research

2. Research vision (a, b, c, d and e are separate questions)

2.a Please comment on the quality of the applicant's research vision and their ability to articulate their near, mid, and long-term goals

2.b Please comment on their potential to establish an independent research career in their chosen field

2.c Please comment on the quality of the proposed research project including timeliness and novelty. Please indicate whether you believe that the ambitions and outcomes are achievable within the five-year timeframe

2.d Please comment on both the mechanisms and ambition for how the candidate will develop their team. Please included in this answer, a comment on the candidate's articulation of the importance of equality, diversity and inclusion and how well this aligns to the proposed developmental pathways for their team.

2.e Please comment on the candidate's consideration of equality, diversity and inclusion in their research

3. Research environment

Please provide comments on the following aspects of the research environment:

- The quality of the research environment and resources provided by the host institution
- The quality of the support and commitment of the host institution to the career development of the Research Fellow
- The quality and the level of support and commitment from the collaborators

4. Project and risk management

Please provide comments on the following aspects of the project management and risk mitigations:

- The quality and effectiveness of the proposed planning and management and whether the resources requested are appropriate and fully justified.
- The applicant's ability to articulate the project plan to demonstrate that their vision is achievable (including for example appropriate milestones and deliverables)
- The applicant's ability to identify the main risks and how they will be mitigated (including for example both technical as well as managerial, logistical and collaborative considerations)

5. Beneficiaries and impact

Please comment on the extent to which beneficiaries will benefit from the proposed research and the candidate's planned pathways to translate research outcomes into societal and economic impact. In particular, please consider the following:

- How well the candidate has identified who will benefit from their research
- How well the candidate articulates how these partners and stakeholders will benefit from research outcomes
- The quality of the candidate's planned pathways to translate research outcomes into societal and economic impact.

Overall comment, score (out of 7), and YES or NO recommendation to next stage

The overall score is out of seven and is defined below. **If a YES recommendation is given, the overall score must be above 5.** Additionally, the reviewer will be asked to justify their score by identifying the applicant's strengths and highlight any shortcomings

Rating	Definitions	Recommendation to next stage
7	Outstanding (worthy of a Fellowship)	YES
6	Excellent (worthy of a Fellowship)	
5	Very good (potential for a Fellowship/reserve)	
4	Good (worthy, but uncompetitive for this scheme)	NO
3	Average	
2	Below average	
1	Poor	

At Stage 1 General Review, reviewers will be asked to recommend 3-4 expert reviewers for Stage 2 Expert Review if the applications are within their broad discipline area.

At Stage 2 Expert Review, reviewers will be asked to provide up to three key questions (if any) that the applicant should clarify. Please note that for any **technical** questions raised, there will be the opportunity for these to be answered by the applicant in a detailed written response, which will be considered by the panel during short-listing. They will not be asked any technical questions, directly at the interview stage.

Feedback

Where possible the Academy will provide feedback to applicants. Please ensure that any comments provided are gender-neutral and are both complete and specific enough to allow the Academy to derive useful and constructive feedback for applicants.

Selection Panel

For each stage review, the Programme Manager will collate all reviewers' comments and scores into a summary table, and rank the applications by overall score and the Yes/No recommendations. These are presented to the selection panel for a final decision on which applications should proceed to next stage.

The aim of all selection panel meetings is to agree which applicants should proceed to the next stage of selection and ultimately, who should be awarded funding. Where there is disagreement between selection panel members on an application, the following process should be followed:

- Each member of the panel should be offered the opportunity to give reasons why they agree or disagree with the decision and raise any concerns;
- Following this discussion, the members of the panel will be asked to indicate clearly whether they wish for the application to proceed or not. The consensus will carry the decision;
- If there is no majority, the Chair will make the final decision.

All decisions made at the meeting are final and binding.

Stage 1: Sift Panel Meeting

Only applications which have received 2xYES, 1xNO or have not received the required number of reviews will be moderated and discussed by the selection panel.

Recommendation:	Next steps:
3xYES	Go through to next stage
2xYES and 1xNO	These will be ranked by overall score and require moderation reviews by the selection panel members based on the reviewers' comments. The selection panel then decide which of these applications would be competitive to proceed to next stage.
2 or more NO	These do not go through to next stage

Stage 2: Shortlist Panel Meeting

All applications selected for expert review will be moderated and discussed by the panel to ensure the integrity of the interview shortlisting process, with the exception of applications that have received 3 'No' votes from the expert reviewers, as these will be rejected prior to moderation.

Contact

If you have any further queries on the review process or on using the GMS, please contact research@raeng.org.uk