



The Royal Academy
of Engineering

Royal Academy of Engineering Research Fellowships Guidance Notes

Closing date for Stage One: 16:00, Monday 31 October 2011

Introduction

The Royal Academy of Engineering (RAEng) offers Research Fellowships annually to outstanding researchers in engineering. These Fellowships are designed to promote excellence in engineering by providing support for high-quality engineers who are developing their interests in academic research as a stepping stone to a successful research career. These highly prestigious Fellowships are aimed at outstanding researchers from all branches of engineering who are about to complete their PhD or who have up to three (3) years postdoctoral research experience.

Eligibility

- Applicants should be about to complete their PhD or have up to, but not more than, three (3) years' postdoctoral research experience at the application closing date (31 October 2011). In calculating this time, begin on the first day of your first post doctoral appointment, if this began prior to your PhD being awarded then use the date of your viva as the first day.
- For applicants who have not yet completed their PhD at the time of applying, the offer of a Fellowship will be conditional upon the PhD being completed and awarded prior to commencing the Fellowship – Fellowships must commence before 1.4.13.
- There is no age limit but applicants should have a substantial academic career ahead of them.
- Applications are welcomed from those wishing to re-establish themselves in research after a career break or other period of absence from active research.
- The Fellowship must be your only source of employment.
- There are no nationality restrictions, but posts must be held in UK universities. In the case of applicants from outside of the EU, the Host Institution will be responsible for securing the necessary work permits. It is the responsibility of the applicant to make contact with the Host Institution and gain the formal approval from the relevant Head of Department prior to submitting an application.

Host Institution

Only universities and similar higher education institutions (HEIs) are eligible to host a RAEng Research Fellowship. Your Host Institution must be a UK HEI eligible to apply for research grants. HEIs are defined as those organisations that are funded by the Funding Councils. Research organisations such as the Science and Technology Facilities Council (STFC), the Research Councils, Research Council institutes, Government research establishments and “not-for-profit” research organisations are not eligible Host Institutions.

Host Institution Application Limit

Please be aware that there is a limit on the number of applications that each Host Institution can submit. Applications for most* Host Institutions has been limited to two (2) per round due to the unsustainable number of applications submitted relative to the number of Fellowships available. **It is essential for all potential applicants to consult with the Head of Department of their intended Host Institution as soon as possible to discuss submitting an application, because there may be an internal selection procedure.**

*For a list of the exceptions, please visit:

www.raeng.org.uk/research/researcher/postdoc/application_limits.htm

Family Friendly Features

RAEng Research Fellowships can be held part-time if necessary. Applicants that are employed part-time may request at the point of application to hold their Fellowship part-time, at no less than 50% of full time equivalent. Alternatively, the Fellowship can be converted to part-time (or back to full-time) once during the course of the Fellowship. Fellowship holders are entitled to maternity or paternity leave under the Host Institution's normal conditions of employment and RAEng will extend the duration of the Fellowship pro-rata to take into account such periods of maternity or paternity leave and any conversions to part time.

Application Procedure

You are strongly advised to discuss your application with your Host Institution as soon as possible, as you are **not able to submit an application without their formal endorsement.**

Please note that the resubmission of a previous application will not be accepted and any proposal judged to be a resubmission will be rejected.

The application process will involve three (3) stages; The first stage is the submission of a Stage One Application Form which will be assessed by an expert Sift Panel, and then if successful you will be asked to submit a Stage Two Application Form. The Stage 1 and Stage 2 application forms will be subjected to peer-review, and a second Sift Panel will select applicants to invite for interview.

The Stage One Application will contain:

- the application form,
- three (3) page Case for Support containing the following headings:
 - o Abstract
 - o Objectives
 - o Programme and Methodology
 - o Timeliness and Novelty of Research
 - o Beneficiaries and Impact
 - o Exploitation
- one (1) page 'reference list' detailing those publications which you have referred to in your case for support.
- two (2) page CV
- a list of your publications and conference presentations (no page limit)
- a letter of support from the intended Host Institution's Head of Department
- the 'Application Summary Table' Excel document.

The Stage Two Application will contain:

- the application form,
- a five (5) page Case for Support addressing the following headings:
 - o Choice of Host Institution
 - o Dissemination
 - o Public Engagement
 - o Collaborations
 - o Team Development
 - o Project Management
 - o Resources Requested
 - o Justification of Resources
 - o Recent Publications (optional)
- Any letters of support from collaborators, each with its own cover sheet.

Stage 3 is a 30 minute interview, held at the Academy.

STAGE ONE

The Stage One application form can be downloaded from:

www.raeng.org.uk/research/researcher/postdoc/default.htm

Project Title

The essence of the research should be captured in the title and should be as informative as possible. Please use ten (10) words or less and ensure that it is understandable to a non-specialist reader.

Anticipated Start Date and Duration

The proposed start date must fall between 1 April 2012 and 31 March 2013. The duration of a Fellowship is five (5) years full time (pro-rata for part-time awards). You must agree these timescales with your proposed Host Institution.

Category

Please select one of the five (5) broad engineering categories that best describes your research. This will be used to guide in the selection of Panel members and reviewers. If your research fits into several categories, please pick the main category only. The categories are:

1. Mechanical (which includes materials, medical, aerodynamics, acoustics and biomedical engineering)
2. Civil
3. Electrical and Electronic
4. Chemical
5. ICT (which includes telecommunications, networks and systems, computing and information, photonics and computer vision)

Period of Post-Doctoral Research Experience

Show the numbers of months that you have spent employed as a post-doctoral researcher. In calculating this time, begin on the first day of your first post-doctoral appointment, if this began prior to your PhD being awarded then use the date of your viva as the first day. Note that to be eligible to apply for this scheme, this cannot be more than three (3) years. Career breaks, for example maternity leave, do not count towards the three (3) years.

Profile of Applicant

Under the heading Track Record in Research, provide a summary of results and conclusions of your recent research. You may also wish to include:

- any relevant past collaborative work with other research organisations, industries or other beneficiaries,
- any contributions of your previous research to the competitiveness of 'UK Plc' or to improving the quality of life,
- any previous visits or collaborations with overseas researchers,
- any successful grant applications and their values,
- an estimated award date if you have not yet completed your PhD,
- any other information that demonstrates your track record as a researcher.

The Esteem Indicators table lists some of the Performance Indicators by which progress of Research Fellows are monitored. It is not expected that early-stage researchers will be able to complete all fields but please complete as many as possible.

Case for Support

The Case for Support is a self-contained description of the proposed research. The proposal must contain an original research project within the remit of the five (5) broad engineering categories given above. Proposals which are simply an extension of your PhD project are unlikely to be viewed favorably.

The Case for Support should not be longer than three (3) pages (the formatting has been preset in the document to the correct specifications so please do not alter the below settings

Font – Arial
Font Size – 11pt
Margins – 1cm

There are six (6) specific headings which you should address in the Case for Support. You may use as much space for each heading as you like, but must stay within the three (3) page limit:

- Abstract
Describe the research in terms that can be understood by a non-specialist reader. Demonstrate a knowledge and understanding of past and current work in the subject area both in the UK and abroad.
- Objectives
List the main objectives/aims in order of priority.
- Programme and Methodology
Describe the programme of work, indicating the research to be undertaken and the milestones that can be used to measure its progress. Detail the methodology to be used in pursuit of the research and justify this choice.
- Timeliness and Novelty of the Research
Describe why this research is important and why it should be conducted now.
- Beneficiaries and Impact
Identify the groups in society that will benefit from the research and the social and economic impacts it will have on these groups. If the benefits do not directly relate to wealth creation and/or to improving the quality of life, give details of other beneficiaries and explain their importance.
- Exploitation
Describe the ways you plan to exploit your research and the industry partners that you will seek collaborations with to achieve this.

Curriculum Vitae

The format and content of your C.V. is left to your discretion. However it must be in Arial font, font size 11pt with 1cm margins. You do not need to include contact details as these are included earlier in the application. The maximum length of the C.V. is two (2) pages.

Publications and Conference Presentations

List your Publications and Conference presentations. There is no page limit. You should indicate with an asterisk (*) a maximum of four (4) publications which you regard to be the most significant.

Letter of Support from the Head of Department

The Head of Department at the Host Institution must complete a non-confidential statement in support of the application. The statement should address the following areas:

- Suitability of the Applicant
A statement on the promise, aptitude and general suitability of the applicant for original research under a RAEng Research Fellowship.
- Commitment from the Host Organisation
A statement on the commitment the Host Institution is making to the development of the research career of the applicant. The Host Institution may decide to provide direct funding in the form of a travel grant, or equipment, or access to a studentship award, or laboratory and research facilities to get the applicant started in their research career. It could also provide training and staff development opportunities in, for example, good supervisory practice, project management or presentational skills.
- Employment Potential
A statement on the applicant's suitability for eventual employment. This information should only be given where the applicant does not hold an academic post at the time of application.
- Career Development and Public Engagement (optional)
The Academy is a signatory to both the *The Concordat to Support the Career Development of Researchers* and *The Concordat for Engaging the Public with Research*. The Head of Department may wish to comment on Host Institutions' commitment to the concordats, or the general principles contained within.

NOTE: the letter of support should be on headed paper and signed by the Head of Department. The applicant should obtain the letter from the Head of Department and submit it together with the other Stage One Application documents.

Application Summary Table

This table does not form part of the formal application but is essential for the internal administration of your application. Please complete the table with the same information as provided in the Stage One application.

SUBMITTING A STAGE ONE APPLICATION FORM

Completed stage one applications will contain:

- the application form,
- CV
- list of publications and presentations,
- a letter of support from the intended Host Institution's Head of Department, and
- the application summary table.

Once these documents have been completed, compile them into one (1) PDF document, less than 10MB in size – in the order given above - and submit it, together with the Application Summary Table to research@raeng.org.uk with your name in the subject line.

All Stage One applications must be received by 16:00 on Monday 31 October 2011.

If the Stage One Application is supported by the Sift Panel, you will be contacted regarding the submission of a Stage Two Application.

Do not submit a Stage Two application unless asked to do so.

STAGE TWO

If the Stage One Application is supported by the Sift Panel, then you will be asked to submit a Stage Two Application form and then both application forms will be subjected to peer-review. The Stage Two Application form can be downloaded from:

www.raeng.org.uk/research/researcher/postdoc/default.htm

Case for Support (part two)

This Case for Support should not be longer than five (6) pages in total, including the cover page. There are specific page limits for each section. The formatting has been preset in the document to Arial font, font size 11pt, and 1cm margins – do not alter this.

There are six (6) specific headings for you to address and you may use as much space for each heading as you like, whilst staying within the two (2) page limit, plus one (1) page Gantt Chart (or equivalent):

- Choice of Host Institution
Provide justification for your choice of Host Institution e.g. facilities available etc
- Dissemination
Indicate the proposed dissemination and technology transfer routes and explain how the transfer of knowledge will take place to both beneficiaries and the general public. Identify what mechanisms are in place for identification, protection and subsequent exploitation of any significant exploitable results which may arise from the research (including details of any specific collaborative agreement, where relevant). The Host Institution's Technology Transfer Office (or equivalent) may be able to assist you in this matter.
- Public Engagement
Explain how you will engage with audiences beyond the research and engineering 'worlds'. Participation in public outreach activities is important.
- Collaborations
Describe any existing collaborations, how you will build upon these and also develop new collaborations and how these will enhance your research.
- Team Development
Identify routes for expanding your team and your career plans at the end of the Fellowship.
- Project Management
Describe how the research programme will be managed and include a Gantt chart (or equivalent). Space is provided for this chart on page four (4).

Resources Requested

RAEng Research Fellowship applications must be costed using the full economic costs (fEC) methodology. Applicants will need to consult with the Research Support Office of their intended Host Institution who will be able to provide advice on the cost elements that are required. RAEng provides 80% of the fEC of each Research Fellowship. There is no limit to how much funds can be requested, but there are constraints placed on what can be requested, see below. Please ensure that you allow plenty of time for your Research Office to prepare costings.

NOTE: The schedule of costs should include indexation over the five (5) years and this should include an inflation element not exceeding 1.5% per annum.

Guidance on the costs headings shown in the table on page five (5) of the full application form is given below.

Directly Incurred Costs

1) Staff

The Research Fellow's salary can be requested for a period of five (5) years. Funds should be requested at the anticipated salary level for the position. Any current or recently awarded fEC research grants that include a contribution to the Research Fellow's salary must be taken into account and the amount deducted from the total requested value. Salary costs do not need to be justified in the Justification of Resources section.

Research Fellowships may be held on a part-time basis if the applicant is to be employed part-time (minimum 50%). Applicants wishing to hold the award on a part-time basis must state the % time (between 50% and 100%). The duration of the Research Fellowship should then be extended accordingly and the costs table adjusted as appropriate. Full justification for requesting a part-time Research Fellowship must be given in the Justification for Resources section.

NOTE: No other staff salaries can be requested as part of a RAEng Research Fellowship.

2) Travel and Subsistence

Travel and subsistence for the Research Fellow that is directly relevant to the proposed research programme may be applied for over the entire duration of the Research Fellowship. You may not request travel and subsistence costs for anyone other than the Research Fellow. Travel costs should be based on the most suitable and economical form of travel. Subsistence costs should reflect the normal rates that apply in the Host Institution.

Costs for attending national and international conferences may also be included where such attendance will be of direct benefit to the research programme. Conferences should, as far as possible, be individually identified in the proposal and attendance costs, fees, etc., fully justified in the Justification of Resources section.

3) Other Costs

Other costs should be specified and justified in the Justification of Resources, with details provided in terms of their requirement for the research programme. Examples include small items of equipment, computer software licences, laboratory consumables, the purchase of specialist publications or publication/printing costs. Unless a need for significant computing power can be justified, no computer should cost more than £1,500.

NOTE: The Research Fellowship does not provide for any single item of equipment costing more than £3,000 (including VAT).

Any item of equipment sought should be fully functional as a standalone piece of equipment rather than require combination with other items of equipment in order to work. For example, a £2,000 computer monitor cannot be combined with a £2,000 computer – neither will work by themselves and combined they exceed the £3,000 limit.

Directly Allocated Costs

1) Estates

Estates costs for the Research Fellowship may be applied for over the entire duration of the Research Fellowship. Please consult with your proposed Host Institution for guidance as to these costs. Estates costs do not require justification in the Justification for Resources section. Where the Research Fellow will be away from the Host Institution for a period of 6 months or more, estates should not be requested for that period. In such situations this should be confirmed in the Justification of Resources section.

2) Other Directly Allocated

Other directly allocated costs can be requested, calculated on the basis of estimates. Potential costs include research/technical staff whose time is shared across several projects and charge out costs for existing equipment e.g. access to departmental SEMs, analytical facilities, etc. You cannot request salary costs of specific technicians, but rather you may only request pool technician time.

Costs for Major Facilities, such as those supported by STFC, cannot be requested as part of a RAEng Research Fellowship. If such Facilities are required for the project, the applicant should contact the Facility in question to determine access requirements. If access to a Facility is essential to the research programme and hence the Research Fellowship, both access to and external funding for the cost of the Facility must be secured within one (1) year of the proposed start date of the Research Fellowship.

Indirect Costs

1) Indirect

Please consult with your Host Institution for guidance as to these costs. Indirect costs for the Research Fellowship may be applied for over the entire duration of the Research Fellowship. Indirect Costs do not require justification in the Justification for Resources section.

Justification of Resources

This should be a narrative description of the need for the resources requested and include:

- how the Fellowship will aid your research career development as an independent researcher,
- all necessary justifications for costs included in the Resources Requested table.

Letters of Support

Letters of support should only be included from external collaborators that are making a specific contribution to the Research Fellowship, either direct or in kind. These collaborators must be named, cannot be working at the Host University and the contribution they will make to the Research Fellowship must be clearly identified in the summary table on the cover sheet. Letters of support will only be accepted if the details given in the letter match those in the summary table, which the applicant should complete and attach as a coversheet. There is no limit to the number of Letters of Support and they should each come with their own coversheet.

As a minimum, the letter from each collaborator must:

- confirm the collaborator's support for the research,
- confirm the contributions the collaborator will make to the research,
- outline the possible benefits to the collaborator.

NOTE: Letters of support will be rejected if they do not clearly identify what the collaborator will contribute to the research.

SUBMITTING A STAGE TWO APPLICATION

Completed Stage Two applications will contain:

- the Stage Two application form,
- letters of support from collaborators.

Once these documents have been completed, compile them into one (1) PDF document – in the order given - and email it to research@raeng.org.uk with your name in the subject line.

Assessment Process

Stage One

Stage One Applications will be considered by the Stage One Sift Panel comprising a range of experts from the engineering research community. The Sift Panel will rank order the applications and only the top-ranked applicants will be asked to submit a Stage Two Application. Those applicants not asked to submit a Stage Two Application will be informed of this decision as soon as possible following the Sift Panels' decision.

Stage Two

This will involve anonymous peer review. Each application, containing both the Stage One and Stage Two Application documents, will receive a minimum of two (2) reviews. All Stage Two applications will then be forwarded to the Stage Two Sift Panel for Consideration.

The criteria for assessment of applications by the Sift Panel will include:

- quality, originality and potential impact of the research programme,
- quality of the applicant as an independent researcher,
- intellectual ability of the applicant,
- timeliness of the research and how it will aid the applicant's career development, and the applicant's ability to plan and manage resources.

Interview

Selected candidates will be invited to attend a thirty (30) minute interview conducted by a Four (4) member Panel consisting of a sub-set of Sift Panel members, as well as additional experts from the engineering research community. The ranking of candidates during the Sift Panel will have no bearing at interview, with all interview candidates considered to have equal standing. Following the interviews, candidates will be re-ranked and only those considered of sufficiently high standard to warrant the offer of a RAEng Research Fellowship will be recommended by the Panel.

The criteria for assessment of applications by the Interview Panel include:

- Quality, originality and potential impact of the research proposed,
- Qualities of the individual as an independent researcher, including vision and ambition,
- Intellectual ability of the applicant,
- Awareness of the broader context surrounding the proposed research,
- Timeliness of the Fellowship and how it will aid the Fellow's career development,
- The applicant's ability to plan and manage resources, and
- Ability to communicate to a generalist audience.
-

It is anticipated that eight (8) Fellowships will be offered.

Indicative Timescales

Closing date for Stage One applications	16:00, Monday 31 October 2011
Sift Panel to select Sage Two applications	December 2011
Stage Two Applications Submitted	January 2012
Applications sent to reviewers	January 2012 – March 2012
Sift Panel to select candidates for interview	April 2012
Interviews and recommendation for award	May 2012
Awards announced	May 2012
Awards started	June 2012 - March 2013

Further Information

For further information please see the following pages of our Website:

<http://www.raeng.org.uk/research/researcher/postdoc/faqs.htm> - For frequently asked questions.

<http://www.raeng.org.uk/research/researcher/postdoc/terms.htm> - For the terms and conditions of the award.

<http://www.raeng.org.uk/research/researcher/postdoc/current.htm> - A list of current Awardees.

This should give an indication of the level of expertise the scheme is aimed at, and if they are at your institution they may be willing and able to advise you on the scheme.

Enquiries

For further information please see the FAQs and Terms and Conditions pages of the website. If these do not answer your queries then please contact the Research team, details below.

All enquiries should be directed to:

Research Programmes Team
The Royal Academy of Engineering
3 Carlton House Terrace
London
SW1Y 5DG

e: research@raeng.org.uk

p: +44 (0) 207 766 0600

Please read the FAQs on the website first to see whether these answer your queries

www.raeng.org.uk/research/researcher/postdoc/faqs.htm