



## **2009-10 Royal Academy of Engineering/EPSC Research Fellowships Call for Proposals**

**Closing date: 4pm, Wednesday 28th October 2009**

### **1. Introduction**

The Royal Academy of Engineering (RAEng) and the Engineering and Physical Sciences Research Council (EPSRC) jointly offer Research Fellowships annually to outstanding researchers in **engineering**. The RAEng/EPSC Research Fellowships are designed to promote excellence in engineering by providing support for high-quality engineers to encourage them to develop their interests in academic research as a stepping stone to a successful research career. These are highly prestigious awards aimed at outstanding researchers from all branches of engineering who are about to finish their PhD, or have up to three (3) years postdoctoral research experience.

### **Limit of Applications per Host Organisation**

This year we are limiting the number of applications to two (2) for most of the Host Universities due to an unsustainable number of applications being received in previous years. This is provided for your information only and it is highly recommended that all applicants consult with the Head of Department of their intended Host Organisation as soon as possible to discuss submitting an application.

Further information is available at [www.raeng.org.uk/research](http://www.raeng.org.uk/research).

### **Eligibility Criteria**

- The area of research must be in engineering **and** must fall primarily within the remit of the three EPSRC engineering programmes:  
Information and Communication Technologies  
<http://www.epsrc.ac.uk/ResearchFunding/Programmes/ICT/default.htm>  
Materials Mechanical and Medical Engineering  
<http://www.epsrc.ac.uk/ResearchFunding/Programmes/MMME/default.htm>  
Process Environment and Sustainability  
<http://www.epsrc.ac.uk/ResearchFunding/Programmes/PES/default.htm>
- Applicants should be about to complete their PhD or have up to, but not more than, three (3) years' postdoctoral research experience at the closing date of the applications (**28th October 2009**).

- For those applying who are about to complete their PhD, awards will be conditional on the doctorate being awarded prior to the proposed start of the Fellowship.
- There are no age limits 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 Organisation will be responsible for securing the necessary work permits. It is the responsibility of the applicant to make contact with a Host Organisation and gain acceptance from the relevant Head of Department prior to applying to the scheme.

### **Host Organisation**

Only universities and similar higher education institutions (HEIs) are eligible to host a RAEng/EPSRC Research Fellowship. Your Host Organisation 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 Hosts.

### **Family Friendly Features**

RAEng/EPSRC Research Fellowships can be held part-time, if required. Applicants employed part-time may request to hold their Fellowship part-time (at no less than 50% of time) at the time of application. Alternatively, the Fellowship can be converted to a part-time award (or back to full-time) once during the course of the Fellowship. The Fellow is entitled to maternity or paternity leave under the Host Organisation's normal conditions of employment. EPSRC and the RAEng will extend the duration of the Fellowship to take into account such periods of maternity or paternity leave and any conversion to part-time.

## **2. Application Procedure**

You are strongly advised to discuss your application with your Host Organisation as soon as possible, as you will not be able to submit it without their help.

You should select Council '**RAEng**', document type '**Fellowship Proposal**' and the '**Research Fellowship**' Scheme. On the Project Details page you should select the '**RAEng/EPSRC Research Fellowships 2009-10**' Call.

The link at [http://www.so.stfc.ac.uk/jes/jes1/RODetails\(Web\).pdf](http://www.so.stfc.ac.uk/jes/jes1/RODetails(Web).pdf) shows which research organisations have registered to use Je-S. Please read the guidance on how to apply for a Fellowship through Je-S, which is available on the EPSRC website ([www.epsrc.ac.uk](http://www.epsrc.ac.uk)) and Je-S online help (<https://je-s.rcuk.ac.uk/jesHandBook/jesHelp.aspx>).

Please ensure that in 'My Details' in Je-S you have provided either your current affiliation or an appropriate alternative postal address for correspondence.

Please remember to allow sufficient time for your Host Organisation's submission process between submitting your proposal to them and the Call closing date. EPSRC must receive your complete application from the Host Organization by **4pm on Wednesday 28th October 2009**. Late applications will not be accepted. Queries concerning Je-S should be directed to your Research Office or the Je-S helpdesk.

The EPSRC Funding Guide

(<http://www.epsrc.ac.uk/ResearchFunding/HowToApply/FundingGuide.htm>) contains our standard Research Fellowship regulations. It is strongly recommended that you read all the guidance thoroughly as applications that do not conform to the standard requirements will be rejected. Please note that once you have submitted your application to your Host Organisation you cannot edit it again. It is the Host Organisation that will submit your application to EPSRC.

**Please note:**

- Only one application for an EPSRC Fellowship may be made by an individual in any one application round. If an application is made for both a RAEng/EPSRC Research Fellowship and any other EPSRC Research Fellowship, the applicant will be asked to withdraw one of these applications.
- No resubmission of previous Fellowship applications will be accepted. Proposals judged to be a resubmission will be rejected in line with recent EPSRC guidance  
<http://www.epsrc.ac.uk/ResearchFunding/HowToApply/Resubmissions.htm>

**Completion of the Application Form**

Aspects specific to RAEng/EPSRC Research Fellowships are as follows:

***Title of Research Project***

The essence of the research should be captured in the title and should be as informative as possible and understandable to a non-specialist reader.

***Start Date and Duration***

The proposed start date must fall between 1st April 2010 and 31st March 2011. The duration of a Fellowship is five (5) years full time (pro-rata for part-time awards). You must agree these timescales with the Host Organisation.

***Applicants***

Please note that co-applicants are not permitted.

***Postdoctoral Research Experience***

Applicants should have a maximum of three (3) years' postdoctoral research experience by the closing date of the application (**28th October 2009**). The number of years' postdoctoral research experience should be calculated from the date of your first postdoctoral research position following your PhD to the closing date of the application, taking into account any career breaks. See the above eligibility section for those who can apply.

**Preparation of Costs**

RAEng/EPSRC Research Fellowship applications must be costed on the basis of full economic costs (fEC). **Applicants should consult with the Research Support**

**Office of their intended Host Organisation who will be able to provide advice on the cost elements required in the application form.** If a Fellowship is awarded, the RAEng and EPSRC will jointly provide funding at 80% fEC.

Note: The schedule of costs **should include indexation** over the 5 year period of the Fellowship. Further information on fEC and the fund headings can be found in the EPSRC Funding Guide:

<http://www.epsrc.ac.uk/ResearchFunding/HowToApply/FundingGuide.htm>

Guidance on appropriate costs headings is given below:

## **Directly Incurred Costs**

### *1) Staff*

The Fellow's salary can be requested for a period of five years (pro rata for part-time awards). 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 Fellow's salary must be taken into account and the amount deducted from the total requested value. Full justification of the salary level must be given in the Justification of Resources section.

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 Fellowship should then be extended accordingly. Full justification for requesting a part-time Fellowship must be given in the case for support.

**No other staff salaries can be requested as part of a RAEng/EPSRC Research Fellowship.**

### *2) Travel and Subsistence*

Travel and subsistence for the Fellow which is directly relevant to the proposed research may be applied for over the entire duration of the Fellowship. 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 Organisation.

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

### *3) Equipment*

The RAEng/EPSRC Research Fellowship does **not** provide for any single item of equipment costing more than £3000 (including VAT).

### *4) Other Costs*

Other costs should be specified as far as possible in the Case for Support and justified **in detail** in terms of requirement for the research proposed in the Justification of

Resources. Examples of 'Other Costs' include small items of equipment costing under £3,000 (including VAT), computer software licences, laboratory consumables (specified), purchase of specialist publications or publication/printing costs. **The Fellowship does not provide for any single item of equipment costing more than £3,000 (including VAT).**

## **Directly Allocated Costs**

### *1) Estates Costs*

Estates costs for the Research Fellow may be applied for over the entire duration of the Fellowship. **Please consult with your proposed Host Organisation for guidance as to the costs pertinent to that Organisation.** Estates Costs do not require justification in the Justification for Resources.

### *2) Other Directly Allocated Costs*

Other directly allocated costs can be requested, calculated on the basis of estimates, including 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. An overview of the arrangements and procedures for grants and Fellowships for all of EPSRC's schemes can be found in the EPSRC Funding Guide.

### *3) Indirect Costs*

Indirect costs for the Fellow may be applied for over the entire duration of the Fellowship. **Please consult with your Host Organisation for guidance as to the costs pertinent to that Organisation.** Indirect Costs do not require justification in the Justification for Resources.

## **Facilities**

Facilities costs **cannot** be requested as part of a RAEng/EPSRC Research Fellowship. If Facilities are required for the project, the applicant should contact the Facility in question to determine application requirements. If access to a Facility is essential to the research programme and hence the 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.

## **3. Required Documentation**

**A cover letter from the applicant, Case for Support, Diagrammatic Workplan, Justification of Resources, List of Publications, Impact Plan, CV, and Host Organisation Statement must accompany your Fellowship application.**

### **Case for Support (maximum 8 sides of A4)**

The **Case for Support** is a self-contained description of the proposed research and contains two (2) parts. The proposal must contain an original research project within the remit of the three (3) EPSRC Programme areas identified earlier. Proposals which are simply an extension of your PhD project will be given low priority.

### **Part 1: Previous research track record (maximum two sides of A4).**

This should:

- Provide a summary of results and conclusions of your recent research. Reference should not be limited to EPSRC funded work. Details of any relevant past collaborative work with another research organisation, industry or other beneficiaries should be given;
- Indicate where your previous work has contributed to the UK's competitiveness or to improving the quality of life;
- Outline the specific expertise available for the research at the Host Organisation and that of any associated organisations and beneficiaries;
- Where appropriate, include details of previous visits or collaborations with overseas scientists/engineers;
- Give an estimated award date if you have not yet completed your PhD.

**Part 2: A description of the proposed research and its content (maximum six sides of A4 including diagrams).** It should include the following sections:

***Background***

- Introduce the topic of the research and explain its academic and industrial context;
- Demonstrate a knowledge and understanding of past and current work in the subject area both in the UK and abroad, including referencing to key papers.

***Programme and methodology***

- Identify the overall aims of the research to be undertaken in the period of the Fellowship and the individual measurable objectives against which the outcome of the work should be assessed;
- Detail the methodology to be used in pursuit of the research and justify this choice;
- Explain why the proposed project is of sufficient **timeliness** and **novelty** to warrant consideration for support;
- Describe the programme of work, indicating the research to be undertaken and the milestones that can be used to measure its progress;
- Explain how the project will be managed, particularly if others will be involved.

***Relevance to beneficiaries***

- Identify the potential impact of the proposed work;
- Show who is likely to benefit from the proposed research. 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 – other research workers are legitimate beneficiaries;
- Indicate any collaborations with beneficiaries and explain their role in the project.

***Justification for the Fellowship***

- Indicate how the Fellowship will aid your research career development as an independent researcher;
- If the Fellowship is to be held at the same organisation that you currently work in, please outline the reasons for remaining there;

- If you wish to hold the Fellowship at your current research organisation you should justify why this is an appropriate place to conduct your research;
- Give a summary of how the proposed work differs from that of your PhD/current supervisor.

**Dissemination and exploitation**

- 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 Organisation’s Technology Transfer Office (or equivalent) may be able to assist you in this matter.

The Case for Support should be clear and concise with minimal technical jargon. Font size ten (10) is the minimum font that is acceptable and page margins should be at least two (2) cm. **Applications containing a Case for Support exceeding the page limit, or not adhering to the specified format, will not be considered.**

**Impact Plan (up to two (2) sides A4)**

The economic impact plan is an attachment to the case for Support and describes how the potential impacts of your research will be realised. Full details about how to complete the impact summary and academic beneficiaries sections of the application form and how to write an impact plan are provided on the EPSRC web site at: <http://www.epsrc.ac.uk/ResearchFunding/Changes/default.htm>

**Justification of Resources (maximum one side A4)**

This should be a narrative description of the need for the resources requested. Proposals not providing such a narrative cannot be put to peer review, and may therefore be rejected. Note that Justification of Resources must cover all of the Directly Incurred elements of your proposal, including the effort and cost of the Fellow. Guidance is available at: <http://www.epsrc.ac.uk/ResearchFunding/HowToApply/jor.htm>

**Diagrammatic Workplan (maximum one side A4)**

Significant milestones within the project should be illustrated with a simple diagrammatic workplan, e.g. a PERT or Gantt chart.

**CV (maximum two sides A4)**

You must attach to your application a brief CV (maximum 2 sides A4). Please include information on your academic and employment history. The dates of any degrees obtained and the viva date for your PhD should also be given.

**List of Publications (no page limit)**

Papers should be grouped by:

Journal Papers:	Refereed
Journal Papers:	Not Refereed
Conference Papers:	Refereed
Conference Papers:	Not Refereed
Other Papers etc	

Please place an asterisk beside any papers of which you were the lead author. The most significant papers (up to a max of 10) should be highlighted in italics. Please include the number of times the paper has been cited in other publications, if this is

considered important within your area of research. Any references cited that are not your own must be included within the page limit of the Case for Support.

### **Host Organisation Statement (maximum two (2) sides of A4)**

The relevant Head of Department at the Host Organisation must complete a non-confidential statement in support of the application. The statement should contain information on the following:

*Suitability of the Applicant:* Statement on the promise, aptitude and general suitability of the applicant for original research under a RAEng/EPSRC Research Fellowship.

*Commitment from the Host Organisation:* Statement on the commitment the Host Organisation is making to the development of the research career of the candidate. The Host Organisation 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 individual 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. It may also allocate an experienced researcher who would "mentor" the new Research Fellow, to develop skills in writing research proposals for EPSRC and elsewhere.

*Employment Potential:* 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.

**Please note** that this statement should be on headed paper, signed by the Head of Department. The applicant should obtain the statement from the Head of Department so that you can attach this to your proposal before you submit it to your proposed Host Organisation, for onward submission to EPSRC.

### **Letters of Support (no page limit)**

Letters of Support should be included as attachments from any partner organisations that are making a contribution, either direct or indirect, to the Fellowship. These organisations **must** be named on the application as Project Partners who must not be drawing financial resources from EPSRC: they are designated as contributors to the research, and not financial beneficiaries. Letters of Support should **only** be included from Project Partners named on the application or any research organisations that you intend to visit during the Fellowship. Letters of Support from anyone else will **not** be accepted. The letter from each partner should:

- confirm its support for the research;
- confirm the contributions to be made;
- outline the possible benefits to the organisation.

### **Nominated Reviewers**

Applicants should provide details of three (3) referees, of whom at least one (1) will be approached for assessment of the proposal. **Please note:** Nominees should **not** be current or past collaborators, **nor** come from an applicant's current employer or proposed Host Organisation, **nor** be (or have been) the applicant's PhD Supervisor. They should be independent experts in the research field and/or be able to provide an expert, objective view on the value and benefits of the research.

Applicants may wish to consider nominating reviewers who can not only comment on the above area of research, but also provide an assessment of the applicant's attributes as a researcher (including for example, personal qualities such as communication skills, degree of scientific insight, originality of innovative ideas, ability

to work as an independent researcher, etc.). The Head of Department, who will have provided the Host Organisation Statement, should not be used.

*Please note that nominated reviewers not meeting the above criteria will be considered ineligible and will not be approached for peer review.*

#### **4. Assessment Process**

The assessment of RAEng/EPSRC Research Fellowships is split into various stages:

##### **Postal Peer Review**

The proposal will initially be sent to expert reviewers for comment. EPSRC will send each application to a minimum of three (3) reviewers: one (1) from the EPSRC College, one (1) Royal Academy of Engineering Fellow (REng) who may also be a member of the EPSRC College, and one (1) of the three (3) nominated by the applicant. EPSRC and The Royal Academy of Engineering reserve the right to make the final selection of referees.

Once sufficient reviewers' comments have been received, applications with insufficiently supportive reviewers' comments will be rejected at this point and will not go forward to the Sift Panel stage. Applicants will receive notification of this decision from EPSRC, as well as copies of their reviewers' comments.

Applicants whose applications proceed through this initial process will be sent the reviewers' comments and allowed a maximum of two (2) sides of A4 to respond to any factual inaccuracies, which will be passed on to the Sift Panel. The criteria for assessment of proposals by Sifting and Interview Panels are:

- Quality, originality and potential impact of the research proposed;
- Qualities of the individual as an independent researcher;
- 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;
- Ability to communicate to a generalist audience.

##### **Sift Panel**

The applications will then be considered by a Sift Panel comprised of a range of experts from the engineering research community. The Sift Panel's job is to rank order the applications based on the comments made by the reviewers and the response to those comments by the candidate. Only the top-ranked applicants will be selected for interview. Those applicants not selected for interview will be informed as soon as possible following the Sift Panel meeting.

##### **Interview**

Selected candidates will be given 30 minute interviews by a Panel consisting of a subset of Sift Panel members, as well as additional experts from the engineering research community. Ranking of candidates performed during the Sift will have no bearing at interview, with all interview candidates considered to have equal standing. Following the interview, candidates will be re-prioritised and only those considered of sufficiently high standard to warrant the offer of a RAEng/EPSRC Research Fellowship will be recommended for an award.

In the last round 10 awards were made, with the expectation of awarding a similar number in 2009-10.

### **Estimated Timescales**

<b>Closing date for applications</b>	<b>4pm, 28th October 2009</b>
Proposals sent to reviewers by EPSRC	November 2009 - March 2010
Sift Panel to select candidates for interview	March / April 2010
Interviews and recommendation for award	April 2010
Awards announced	April 2010
Awards started	April 2010 - March 2011

### **5. Enquiries**

Any enquiries related to The Royal Academy of Engineering/EPSRC Research Fellowships should be directed to:

Misty Palmer, Assistant Manager, Research Programmes  
The Royal Academy of Engineering  
([research@raeng.org.uk](mailto:research@raeng.org.uk); Tel: 0207 766 0600).

or

Dr Carmine Ruggiero, Senior Portfolio Manager, EPSRC  
([carmine.ruggiero@epsrc.ac.uk](mailto:carmine.ruggiero@epsrc.ac.uk); Tel: 01793 44 4272).

Dr Duncan Shermer, Portfolio Manager, EPSRC  
([duncan.shermer@epsrc.ac.uk](mailto:duncan.shermer@epsrc.ac.uk); Tel: 01793 44 2572).

Please read the FAQs on The Royal Academy of Engineering's website to see whether these answer your queries at [www.raeng.org.uk/research](http://www.raeng.org.uk/research).