Research Chair and Senior Research Fellowships

Applicant guidance notes
Deadline 3 March 2021
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Introduction

The Academy’s Research Chairs and Senior Research Fellowships scheme aims to strengthen the links between industry and academia by supporting exceptional academics in UK universities to undertake use-inspired research that meets the needs of the industrial partners.
Awardees are expected to:

- Establish or enhance a world-leading engineering research group.
- Deliver ‘use-inspired’ research that meets the needs of their industrial partners.
- Disseminate the outcomes of their research for appropriate academic impact.
- Become a self-sustaining research group by the end of the award (by securing substantial grant income).

Applicants from UK universities are invited to submit collaborative research projects in any engineering discipline.

Diversity and inclusion

The Royal Academy of Engineering is committed to diversity and inclusion and welcomes applications from all underrepresented groups across engineering. It is the Academy’s policy to ensure that no applicant is disadvantaged or receives less favourable treatment because of age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex or sexual orientation.

Part-time and flexible working

The Academy wants to support applicants to achieve a balance between their personal and work demands, and will consider individual requirements and part-time and other flexible working arrangements.
Eligibility criteria

1. Awards can only be held at UK universities.

2. All such awards made in this round must start on 1 September 2021.

3. Research Chairs are professorial appointments, so applicants should already be a professor or equivalent.

4. Senior Research Fellowships are senior academic appointments, so applicants should already be at reader or lecturer level or equivalent.

5. It is expected that applicants should be able to demonstrate an outstanding research profile including a proven track record in securing external grant income (RCUK, EU, industry, charities, and so on) and developing collaborations.

6. Applications are welcome from any engineering discipline. Engineering is defined in its broadest sense, encompassing a wide range of diverse fields, including computer science and materials. If you are unsure whether your collaborative research project falls within the Academy’s engineering remit area, please contact: research@raeng.org.uk.

7. The duration of an award is five years, on a full-time basis. (The Academy will expect the awardee to contribute no more than four hours per week towards administration/teaching duties.) The industrial sponsor must commit to fund the entire five-year period. Applications for shorter time periods will not be accepted.

8. The industrial sponsor must have a significant base in the UK. Usually no more two industrial sponsors per application is allowed.

9. In special circumstances, the ‘industrial sponsor’ may be another funding body such as a charity or government department. In such cases, the funding body is subject to the same terms and conditions as an industrial sponsor and must also demonstrate suitable pathways to impact in order to exploit research outcomes.

10. The industrial sponsor should contribute at least £250,000 towards this collaborative research project over the five-year period. This can include both cash and in-kind support. The amount of funding the industrial sponsor is willing to contribute is an important assessment criterion, being an indicator of the level of commitment to the post and the level of ambition for the group to be created.

11. The applicant is expected to have already identified an appropriate collaborative research project and secured the support of an industrial partner prior to submitting an application.

12. This research programme will naturally align with the interests of the industrial sponsor and its ‘use-inspired research’ should be underpinned by world-class basic research. This collaborative research proposal must be of mutual benefit to both industry and academic partners. Please note that it is not a contract research or consultancy agreement.
Submission deadline

The submission deadline for this round of applications is 4.00pm Wednesday 3 March 2021. Incomplete applications or applications submitted after this deadline will not be accepted.

Resubmissions
The Academy no longer accepts uninvited resubmissions of Research Chair/Senior Research Fellowship proposals.

Contracts

For successful applications, a bilateral contract will be drawn up between the university and the Academy. Our standard contract template is available here for reference.

An appropriate bilateral agreement between the university and industrial sponsor is also required and needs to be signed as a condition of the Academy/university contract.

Both contracts need to be completed in advance of the 1 September 2021 start date.
The scheme’s programme manager will work with each awarded Research Fellow to identify an Academy Fellow to be their mentor. The mentor will provide independent expert advice and guidance on research-related matters throughout the duration of the award. The mentor will also formally monitor the progress of the awardee to ensure that the Academy’s funds are well spent.

The awardee must submit an annual progress report to the Academy, which will be reviewed and evaluated by the assigned mentor.

At the annual review meeting, the awardee, the university’s head of department/school, a representative of the company, the mentor, and a member of Academy staff will discuss progress and agree future plans.

Annual reports should follow the reporting guidelines available here, and will cover aspects such as: the progress made against the project plan, esteem indicators, size of the team, realised impact and exploitation, and any dissemination activities undertaken.
How to apply

Create an account

All applications must be submitted via the Academy’s online grant management system (GMS) available at https://grants.raeng.org.uk

The application should be submitted by the applicant from the host university. If not already registered, all applicants must first register with the online system and provide some basic login details to create a profile.

Before completing the application form, applicants are asked to complete a Diversity Monitoring Form to help the Academy monitor and assess its equality, diversity and inclusion policy. The information will be treated as strictly confidential, non-attributable and only reported when collated. It is gathered, stored and used in compliance with the Academy’s Privacy Notice in line with the General Data Protection Regulations 2018. The information will only be used for statistical purposes with access restricted to staff involved in processing and monitoring the data. It will not be seen by anyone involved in any selection processes. No information will be published or used in any way that identifies individuals. The Academy will retain personal information for six years from close of award.

The application form has eight sections and the form itself could take approximately seven to eight hours to complete. A summary of the guidance notes is embedded within the system itself. However, the guidance given below is more detailed so it is recommended that you keep this document to hand.

Many of the questions have prescribed word limits, which are designed to keep your answers focused and to give you an indication of the level of detail we require. In such cases, the number of words you have used will be displayed beneath the question and updated in real time.

Applicants can download a PDF of their applications after submission, which is recommend for reference. There is only one application stage and those meeting the eligibility criteria will enter the assessment stages.
Completing the application form

After registering and logging in to the online grants system, select the ‘RAENG Portal’ tab on the top left-hand side of your screen. Here you will be presented with a list of all Academy schemes that are currently accepting applications.

Find the Research Chair and Senior Research Fellowships scheme and click on ‘Start an application’; here you should be presented with the ‘Instructions’ screen, where you will see general instructions on how to use the system, and links to the seven sections of the application form given below:

1. Contact details and application grade
2. Applicant details/person specification
3. Project details
4. Case for support
5. Potential impact
6. Funding requested
7. Letters of support and declaration

You can save your work at any stage in the application process and return to it later. You can answer the questions in any order you like so you may freely skip some sections to return to later if you so wish. It is therefore worth viewing the application early on for an indication of what is required.

Also, you should ensure that you have all the necessary documentation when you start completing the application, such as a copy of your CV and letters of support.
1. Contact details and application grade

Q – Application grade
Select from the options from the dropdown menu to indicate the grade of application you are making, for example Research Chair (professor) or Senior Research Fellow (reader/lecturer).

Q – Applicant contact details
Please provide your name, current job title and contact details including postal address and a telephone number. Some of your details and those of your institution should be automatically generated by the system, as you provided these at registration.

Q – Contact details of the host university and industrial sponsor
Please provide the name and contact details for both your host university and industrial sponsor in this section. Please mark the university as the lead.

Q - Industrial company size
Please indicate the size of the industrial company that you will be collaborating with by selecting one of the options below. Please use the table below as reference for completing this section. The industrial company’s size is primarily determined by its annual turnover, shown in the table below. This is to avoid any confusion with overlapping criteria.

<table>
<thead>
<tr>
<th>Company</th>
<th>Category</th>
<th>Annual turnover</th>
<th>Employee number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td></td>
<td>£0 to £1.9 million</td>
<td>0 to 9</td>
</tr>
<tr>
<td>SME</td>
<td></td>
<td>£2 million to £24.9 million</td>
<td>10 to 49</td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td>£25 million to £499.9 million</td>
<td>50 to 249</td>
</tr>
<tr>
<td>Large</td>
<td></td>
<td>£500 million +</td>
<td>250 +</td>
</tr>
</tbody>
</table>

These are SME sub-categories as defined:
These company size categories have been based on definitions found here:
2. Applicant details/person specification

This section requests details about the quality and suitability of the candidate and requests you upload your CV.

**Q – Candidate’s CV**
The format and content of your CV is left to your discretion. You do not need to include contact details here again as these are included earlier in the application. As a minimum, please include the following in your CV: your research track record, details of external grant income secured, list of key publications and conference presentations, PhD students supervised, and awards/prizes received (if any). The CV should be uploaded as a PDF but the file size should be less than 5MB.

**Q – Candidate’s track record**
Outline how your professional experience and academic track record makes you suitable for this award. Include details of any relevant experience you believe demonstrates this and a summary of results and outcomes of your recent research. You have up to 500 words to answer this question. You may also wish to include:

- Any relevant previous collaborative work/partnerships with other researchers, research organisations, industries or other beneficiaries, both nationally and internationally.
- The economic and/or societal impact of your research
- Details of any external grant income secured (funder, value, PI/CoI).
- Any other information regarding your research track record.
3. Project details

**Q – Project title**
The project title should not be longer than six words and should be understandable to a non-specialist reader. The essence of the research should be captured in the title and should be as informative as possible.

Please note that the position will be known as the ‘Industry Sponsor/Royal Academy of Engineering Research Chair (or Senior Research Fellow) in project title’. A succinct title will be beneficial for media/outreach activities.

**Q – Abstract**
Describe the research and expected outcomes 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. You have up to 250 words to answer this question.

**Q – Project start date**
Awards made in this round must start on 1 September 2021.

**Q - Please provide keywords relating to the project**
List 10 keywords to help us identify suitable reviewers for this application.

**Q - Subject category**
Select the broad engineering category that best describes your research area. This will be used to guide the reviewers. If your research fits into several categories, please pick the category that is most applicable to your proposal.
4. Case for support

Q - Goals and objectives
Please state the goals and objectives for the project, in order of priority. Please note that if awarded, the awardee’s performance will be assessed against these objectives. 250 words maximum.

Q - Timeliness and novelty
Outline why the proposed project is of sufficient novelty to warrant consideration for this prestigious Research Chair/Senior Research Fellowship scheme. Describe why this research is important and why this is an opportune time to pursue it. 250 words maximum.

Q - Programme, methodology and key deliverables
Describe the five-year work programme, indicating the research to be undertaken and the methodology to be used in pursuit of the research. Outline specific deliverables anticipated. Also include details on how novel, realistic/ambitious the project is, and include milestones by which to measure progress. 2,000 words maximum.

Q - Images and picture (optional)
Use this section to upload any pictures related to your project, as a single PDF document with the images in the order you would like them viewed, and reference them in your response to the methodology questions.

Q - Gantt chart
Use this section to upload a Gantt chart detailing the plan and timeline for the project.

Q - References (optional)
Use this section to upload a list of the reference material referred to in your application. Where possible include web-links to any open access articles.

Q - Choice of industry sponsor and host institution
Provide justification for the choice of industrial sponsor including the strategic importance of this relationship to your institution. Outline what would be the expected benefits for the company by co-funding this appointment. Provide details of what has been achieved so far through any existing collaborations and what is the overall perceived vision in the long term. Provide justification for the choice of your host institution and background to the research group/centre of excellence, including comparison with other centres in the UK and its scale (how large it is, staff numbers, funding, research facilities). 300 words maximum.

Q - Why the Academy should support this collaboration
A statement outlining the added value that would accrue from the Academy funding, for example why should the Academy support this application? How will the support from the Academy benefit your research programme, the awardee, the industrial sponsor, the centre at the university and the UK? 400 words maximum.

Q - Team development
Identify routes for expanding the awardee’s research team and career. What training/skills will be provided and how will they be obtained? What will be the anticipated make-up of the team created (such as numbers of PhDs, postdocs)? 200 words maximum.

Q - Risk management
Identify and assess any risks that may jeopardise the success of the project. Outline any contingency plans designed to mitigate these risks. 200 words maximum.
5. Potential impact

Q - Strategic collaborations
Describe any existing and future collaborations, in addition to your industrial sponsor on this project, and how these will contribute to or enhance the project. 200 words maximum.

Q - Beneficiaries and impact
What are the benefits of this research? Quantify the extent of the benefits and identify potential beneficiaries. 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. Also indicate when these impacts are likely to accrue.
Beneficiaries should extend to a wider community than those of the applicant’s immediate professional circle and the industry sponsor. 300 words maximum.

Q - Academy’s strategic goals
How do you align with our strategic priorities? Note this is not an assessment criterion and is for staff use only. We want to understand the extent to which our programmes as a whole meet our strategic aims, but your answer will not influence the decision and applications are judged purely on merit. The strategic plan is available on our website here. Select the answer that best describes the strategic aims your research will address:
Sustainable society
Inclusive economy
Both
Neither
Please give a short explanation for the answer you have selected (100 words).

Q - Diversity and inclusion
The Royal Academy of Engineering strives to create cultures in which everyone can thrive, and we believe that diverse perspectives enrich our collective performance.
What does diversity and inclusion mean to you, and what are you and your team doing to address it? Consider your team, collaborators and universities, the implications on your research design and topic and the overall contribution this will have on your success (250 words).

Q - Exploitation
How will the results be exploited, both in general terms and more specifically by the industry sponsor? In the previous question, you explained what the benefits of the research are. Here you should explain how the benefits and impacts mentioned above will be achieved.
Identify what mechanisms are in place for identification, protection and subsequent exploitation of any deliverable that may arise from the research (including details of any specific collaborative agreement, where relevant). You should also indicate when these routes to exploitation are likely to be implemented, including your plans beyond the period of the award. 300 words maximum.

Q - Intellectual property rights
State the intellectual property rights arrangement agreed between the university and industrial sponsor. 200 words maximum.
6. Funding requested

One of the assessment criteria will be the level of support that the university and industrial sponsor is willing to contribute towards the appointment.

Table A: Total cost (fEC) of Research Chair/Senior Research Fellowship

You will be asked to provide a full cost breakdown (fEC) in terms of gross salary, indirect and estates costs. Applicants should consult with their university research support office regarding the completion of the required costings table (see below).

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
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<tbody>
<tr>
<td>Salary costs</td>
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<td>Indirect costs</td>
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<tr>
<td>Estates costs</td>
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**Table B: Contribution from the Royal Academy of Engineering**

The Academy will fund up to one-third \((1/3)\)* of 80% of the full economic costs (fEC). The allowed costs are gross salary, indirect costs and estates costs.

Salary increments over the period of the project should be taken into account, but possible future pay awards should not be anticipated, and inflation should not be applied. The Academy is not able to cover the costs of the apprenticeship levy on research grants.

* In this round, the Academy’s contribution will be capped at a maximum of £45,000 per annum, which equates to a total of £225,000 over five years.

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<thead>
<tr>
<th>Salary costs</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
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<tbody>
<tr>
<td>Indirect costs</td>
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<td>Estates costs</td>
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<td>Total</td>
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**Table C: Contribution from the industry sponsor**

The industrial sponsor should contribute at least £250,000 towards this collaborative research project over the five-year period.

This can be used flexibly to support the project and may include both cash and in-kind contributions (for example access to facilities, technical staff, equipment, data, consumables). In-kind support should be fully costed.

<table>
<thead>
<tr>
<th>Cash contribution</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-kind support</td>
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<tr>
<td>Total</td>
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Table D: Contribution from the university

The university should match the Academy’s contribution.

This can be used flexibly to support the project and may include both cash and in-kind contributions (for example provision of PhD studentships, PDRAs, equipment, consumables). In-kind support should be fully costed.

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash contribution</strong></td>
<td></td>
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<tr>
<td><strong>In-kind support</strong></td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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**Q - Provide details of in-kind support from the industry sponsor**
Include any in-kind support that the industry sponsor is willing to provide. This can include, for example, access to facilities, technical staff, equipment, data, consumables. 200 word maximum.

**Q - Provide details of in-kind support from the university**
Include any in-kind support that the university is willing to provide. This can include, for example provision of PhD studentships, PDRAs, equipment, consumables. 200 words maximum.
This section seeks confirmation for the support that both the industry sponsor and the university will provide. A declaration of support is also required from the applicant’s university grants/research office or equivalent.

Q - Letter of support from the university
A pro-vice-chancellor, dean or equivalent at the host university should write this letter of support. It should be on headed paper, signed by the author and uploaded by the applicant as a PDF. The letter should address the following points:

1. Details of how the candidate’s current teaching (and related) duties will be covered during the award. (Note: contractually, the Academy will expect the awardee to contribute no more than four hours per week towards administration/teaching duties as this is a full-time award).

2. The institution’s commitment to the proposed collaborative research project and partnership with the chosen industry sponsor. The strategic alignment with university strategy and research priorities including details of previous and planned investment and support to facilitate the development of this research group.

3. Detail how the university intends to reinvest any salary savings back into the research project (provision of PhD studentships, postdoctoral research associates, teaching replacement).

If these areas are not clearly addressed, the letter will be returned for revision prior to review.

Q - Letter of support from industry sponsor
A letter of support should be included from the industrial sponsor that outlines their commitment and contribution to the award. The letter should be on headed paper, signed by the author and uploaded by the applicant as a PDF. The letter should address the points given below.

Referring to the numbers will aid identification:

1. Outline the industry sponsor’s commitment and support for the collaborative research project and how this aligns with their research and development strategy.

2. Explain why the industry sponsor decided to partner with the host university and the Academy.

3. Outline how the candidate will contribute to your company’s operational objectives.
4. Outline the expected outcomes and deliverables during and beyond the five-year period.
5. Provide a brief background about the industry sponsor, its turnover and staff numbers.
6. Confirm the financial contributions and any in-kind support that the industry sponsor will make to this research collaboration over the five-year period of the award.
7. Outline other possible benefits to the industry sponsor, such as industrial strategy, policy and access to graduates.

**Q - University declaration (mandatory requirement)**

The declaration from the applicant’s university should be completed by the head of the university’s central research office or equivalent (the body that administers grant applications). The letter should be on headed paper and should carry the signatory’s name, position and the university’s official stamp (if available). The letter must confirm the application has been approved by the university, and must contain the exact wording given below, as well as any additional remarks that the university wishes to make.

On behalf of the university, I can confirm that I have read and accept the application guidance and other information regarding this award scheme, which is provided on the Royal Academy of Engineering’s website, and I also confirm that:

- The costs provided in this application are correct and sufficient to complete the award as envisioned
- Any shortfall in funding discovered after the award has been made will be covered by the university
- If awarded, the applicant will be given full access to the facilities, equipment, personnel and funding as required by the application
- The applicant will be employed by the university for the duration of the award
- The applicant’s teaching and administrative duties will be restricted to a maximum of four hours per week for the duration of the award
- I am authorised to approve the submission of applications for funding and this application has successfully met all of our internal approval procedures
- The university will have an appropriate bilateral agreement or equivalent in place with the industrial sponsor by the proposed start date as stated in the application and agrees to share this with the Academy.

**Q - Applicant declaration**

This section will ask the applicant to confirm that all the information they have submitted in their application is accurate and that they will update the Academy of any changes that may affect the project.

This section will also ask the applicant to acknowledge that the Academy will disclose the information contained within this application to external parties for the purpose of assessing the case.
Assessment process

Review
The full application will receive a minimum of three expert reviews (usually Fellows of the Academy). Expert reviewers will provide comments against each of the following assessment criteria, the overall quality of the application and a recommendation on whether they should proceed to interview. Full reviewer guidance notes are available here.
Assessment process

Quality of the candidate
• Quality of the applicant’s research track record and the academic quality of the underpinning basic research.
• Quality of the applicant’s research vision and their potential to establish or enhance a world-leading research group at the host university in their chosen field of engineering.

Quality of the collaborative research programme
• The quality and significance of the proposed ‘use-inspired’ collaborative research programme (including timeliness, novelty, vision and ambition).
• Quality and effectiveness of the proposed planning and management and whether the requested resources are appropriate and have been fully justified.

Strength of the strategic partnership
• The strength and long-term sustainability of the strategic partnership between the company and the university.
• The commitment and level of support from both the host university and the industry sponsor.

Beneficiaries and impact
• Extent to which the industry sponsor and other beneficiaries will benefit from the proposed collaborative research programme.
• The potential to translate research outcomes into societal and economic impact.

Sift panel
Applications will then be considered by the sift panel, consisting of Academy Fellows, who will rank the applications and select candidates for interview. Each applicant will be considered by two panel members, one with expertise in your area and one without. Those applicants not asked to attend an interview will be informed of this decision as soon as possible following the sift panel’s decision.

Interview
The interviews (50 minutes) will be conducted by a generalist panel consisting of three Academy Fellows. Panellists will provide comments against the assessment criteria outlined above.

The ranking of candidates during the preceding sift panels will have no bearing at interview, with all interview candidates considered to have equal standing.

Following the interviews, the panel will rank the applications and select the top ranked candidates for awards.

Interviews will take place at the Academy in June 2021. Interview dates will be updated in due course.

Please ensure that these dates are added to the diaries of: the candidate, their pro-vice chancellor (Research) and/or dean as well as a representative from the industry sponsor (all three parties are required to attend the interview).
Assessment process

March 2021
Submission deadline is Wednesday 3 March

March to May 2021
Applicants sent to peer review

June 2021
All applicants informed of the outcome of their application and interviews arranged

June 2021
Interviews

July 2021
All applicants informed of interview outcomes

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