Royal Academy
of Engineering

Research Fellowships 2024/25
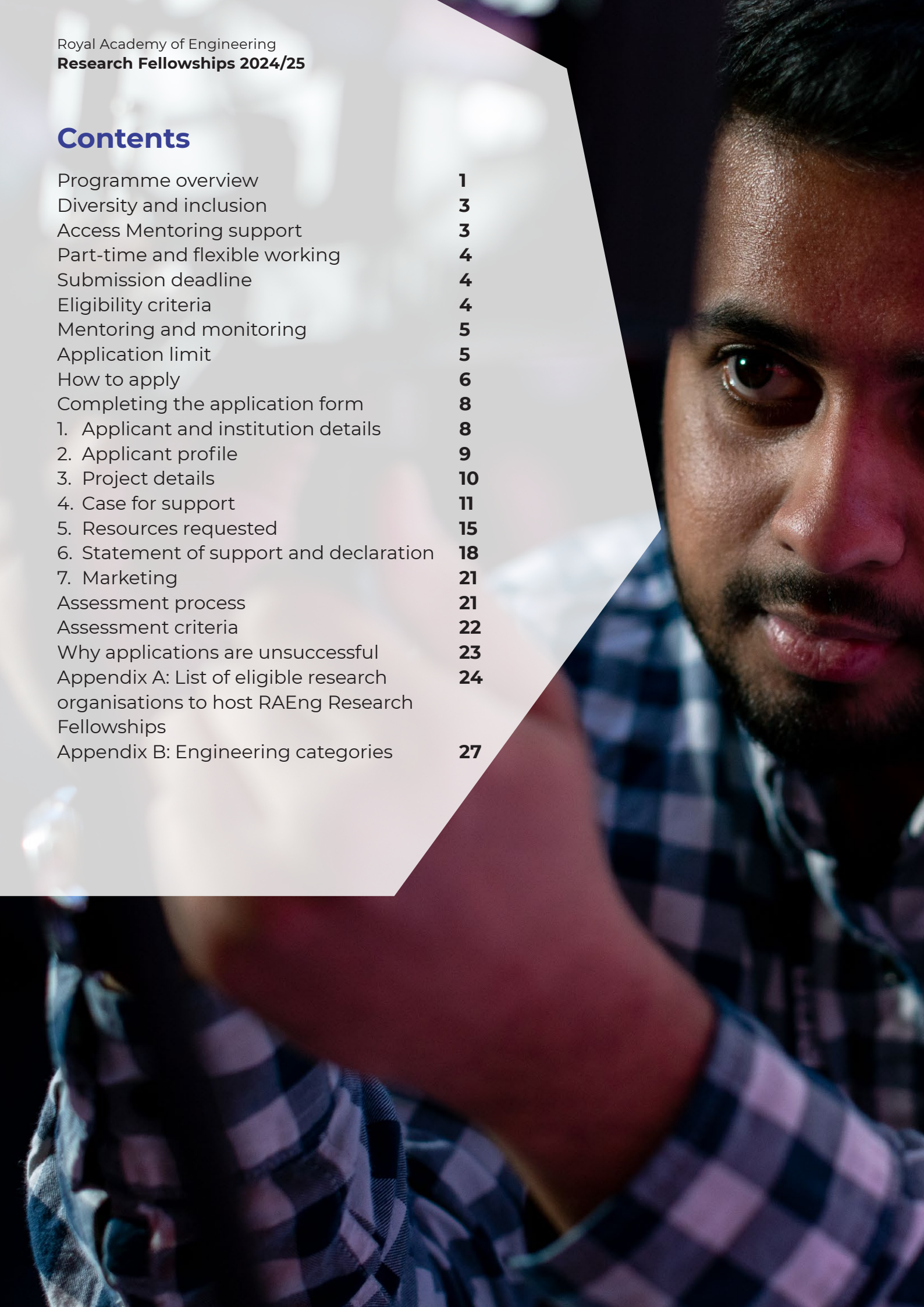
Applicant guidance notes
Deadline 18 September 2024

Royal Academy of Engineering
Research Fellowships 2024/25

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Research Fellowship

The Royal Academy of Engineering (the Academy) offers Research Fellowships each year to outstanding early-career researchers to support them to become future research leaders in engineering. 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.

The Academy welcomes applications from early-career researchers worldwide who have been awarded their PhD in the last four years. The scheme provides funding for five years. Each application is capped at a maximum contribution from the Academy of **£625,000 over the five-year period**, at 80% of the full economic costs (fEC). Research Fellowships must be held at a UK higher education institution/university or at a UK research organisation that is <u>eligible</u> to receive UK Research and Innovation (UKRI) funding.

In addition to the direct financial support, the scheme benefits include:
- Mentoring support from an Academy Fellow to offer advice on research and career development.
- Reduction of teaching and administrative duties to dedicate time to research.
- Training and additional funding opportunities.
- Networking opportunities with other Research Fellows and Academy Fellows.
- An opportunity to establish a strong research track record which will improve the chances of securing additional funding and expanding their own research teams.
- Be part of the [RAEng Awardee Excellence Community.](#)

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 schemes are funded by the **Department from Science, Innovation and Technology (DSIT).**

The Academy is in discussions with UK based medical charities to co-fund medical engineering research that improves the health and well-being of society. Applicants that are in the remit of these charities will be contacted at interview stage to confirm their interest in being co-funded. Please note that co-funded research fellowships will be required to sign both Academy and medical charity terms and conditions. All information in this document applies to Research Fellowships Scheme.

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.

Before you commence your application, you will be asked a few diversity monitoring questions to help the Academy monitor and assess our diversity and inclusion policy. It will only be used for statistical purposes with access restricted to staff involved in processing and monitoring the data. No information will be published or used in any way that identifies individuals. The Academy will retain personal information as per our Data Retention Policy in line with the General Data Protection Regulations 2018.

The information will be treated as strictly confidential, nonattributable and will not be seen by anyone involved in any selection processes. You will need to complete the diversity monitoring section before you can see the grant application form but can choose "prefer not to say" as responses.

The Academy is committed to making reasonable adjustments to remove barriers that hinder applicants from applying.

Access Mentoring support

The Academy aims to provide additional support to applicants from groups that are persistently underrepresented within UK engineering through the grant application process. This positive action will contribute to improving diversity in the talent pipeline and widening the diversity of applicants and awardees within the Academy's research grant schemes.

To be eligible for Access Mentoring support, applicants must meet the eligibility criteria for the Research Fellowships scheme and must be either:

- **Women**
- **Black people, including those with any mixed ethnicity with Black ethnic background(s)**
- **Disabled people**

The Academy accepts applicants' self-declaration on the above identified underrepresented groups.

Access Mentoring is a resource-limited opportunity. Applicants do not need to wait until the deadline to submit their application and can be matched with a mentor as soon as the application is approved. Early submission is encouraged. Mentors will be assigned on a first come first served basis. For more information on Access Mentoring please see guidance and how to apply

Part-time and flexible working

The Academy wants to support applicants to achieve a balance between their personal and work demands and is happy to discuss individual requirements and consider part-time and other flexible working arrangements.

Research Fellowships can be held part time but **must be the only form of employment**. The request for a part-time Research Fellowship (at no less than 50% of full-time equivalent) must be clearly stated within the application. Alternatively, the Research Fellowship can be converted from full time to part time, or from part time to full time, during the fellowship, assuming the host institution supports the request.

Research Fellows are entitled to maternity, paternity and adoption leave under the host institution's normal conditions of employment. The Academy will extend the duration of the Research Fellowship pro-rata to take into account such periods of leave and any conversions to part-time working. Research Fellows with caring responsibilities should liaise directly with the host institution if they wish to apply for part-time or flexible working.

Submission deadline

There is one application round each year. The online application system for 2024/25 round will open in February 2024. The submission deadline for 2024/25 round will be **4pm on Wednesday 18 September 2024**. Applicants will be informed of the result in June 2025.

Eligibility criteria

1. Research Fellowships must be held at one of the following eligible institutions that can show it is capable of fully supporting an engineering-focused research project and researcher:
    - a UK higher education institution/university or
    - a UK research organisation that is eligible to receive UKRI funding. A list of eligible research organisations is included in Appendix A.
2. The host institution must agree to provide the Research Fellow all the support normal for a permanent employee.
3. The proposed research project must be in an engineering subject area. Engineering is defined in its broadest sense, encompassing a wide range of diverse fields.

4. Research Fellowships are aimed at early-career researchers. Applicants must have a PhD, which was awarded (or the PhD has been unconditionally approved) no more than four years before the submission deadline: Wednesday **18 September 2024**. This period includes applicants' work experience in academia or/and in industry in the UK or/and worldwide. A margin of up to three months more than the four-year limit is acceptable. If applicants have had maternity/paternity leave or other extenuating circumstances (e.g. extended sick leave, national service, or caring responsibilities), this will be taken into consideration if the relevant dates and details are provided in the application form.

5. Research Fellows will be employed by the host institution and are required to devote all their working time to the Research Fellowship programme of work. The Research Fellowship must be the Research Fellow's only source of employment. The Research Fellow should be based at the host institution for more than 50% of the Research Fellowship. If the Research Fellow needs to work more than 50% of the Research Fellowship outside the host institution, justification must be provided in the application form (choice of host institution).

6. There are no nationality and age restrictions for applicants. The host institution is responsible for securing all necessary work permits and related costs for the Research Fellows.

7. Applicants who have applied to this scheme before and were unsuccessful are eligible to reapply. These applications will be considered as new applications.

8. Research Fellowships must begin between **1 August 2025** and **31 October 2025**. The duration of a Research Fellowship is five years full time, calculated on a pro-rata basis for part-time awards. Requests for a shorter Research Fellowship are not accepted.

9. There is a limit on the number of applications each host institution can submit (see Application limit).

Please note in previous rounds applicants must not hold a permanent academic position. This eligibility criterion is no longer applicable.

We remind you also that:
- Research Fellowships cannot be jointly hosted by multiple institutions.
- It is the applicant's responsibility to contact the host institution to gain their formal approval before applying.
- Any applications that are incomplete or do not adhere to the guidance will be rejected.

Mentoring and monitoring

Awarded Research Fellows will work with the Academy to identify an Academy Fellow to be their mentor. The mentor will provide expert, independent advice, and support for the duration of the Research Fellowship and will also formally monitor the Research Fellow's progress for the Academy.

Research Fellows must submit an annual progress report and expenditure statement to the Academy. At the annual review meeting the Research Fellow, mentor and Academy staff will discuss the report, progress made and future plans. Research Fellows will also be asked to provide some key data on their annual performance (e.g. publications and additional research funding) for the purpose of auditing and reporting to the Academy's funders.

Application limit

The application limit applies to the host institution, where the Research Fellowship will be held. This may or may not be the applicant's current employer but must be a UK higher education institution/university or an eligible UK research organisation. If a host institution submits more than the permitted number of applications, they will be asked to withdraw any applications exceeding this limit. Due to the application limit, host institutions are likely to have an internal selection process and it is the applicant's responsibility to find out about this.

The standard application limit for each host institution is two applications, but the host institution can submit up to four applications as part of our positive action initiative with the following conditions:

- If the submission is four applications, at least two of the four applications must be submitted by candidates from the identified underrepresented groups.
- If the submission is three applications, at least one of the three applications must be submitted by a candidate from the identified underrepresented groups.
- If the submission is one or two applications, the application or applications do not need to be submitted by candidates from the identified underrepresented groups. However, the expectations of host institutions still apply.

Host institutions are expected to:

- Adopt appropriate mechanisms to ensure only the highest calibre of candidates are submitted to the scheme in line with the principle of the Declaration on Research Assessment (DORA).
- Adopt a proactive approach in encouraging and supporting researchers from groups underrepresented within UK engineering research to apply and succeed in their applications.
- Evidence their commitment to equality and diversity if requested by the Academy. They must be able to demonstrate that their selection criteria do not unlawfully discriminate or disadvantage candidates because of their personal characteristics or background.

How to apply

All applications must be submitted via the Academy's online grants system available here: https://grants.raeng.org.uk. All applicants must first register and provide some basic login details to create a profile.

The application should be submitted by the applicant. We recommend leaving plenty of time to complete the application form ahead of the deadline and thoroughly going through your application prior to submission. While the guidance notes are embedded within the system itself, we recommend you keep this document to hand when completing the application form.

The application form has seven sections and should take approximately two hours to complete, assuming you have answered the questions offline and merely need to enter the information, rather than compose it. To compose the application in its entirety will take significantly longer.

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

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

Policy on National Security-Related Risks

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. As such all applicants should ensure they are familiar with the Academy's Policy on National Security-Related Risks.

Use of generative AI tools in funding applications and assessment

The Academy has aligned with other UK funders around the use of generative AI tools in funding applications through the Research Funders Policy Group joint statement.

Regarding the use of AI, applicants are fully responsible for all the content presented in their grant applications. The grant process does not penalise the use of generative AI tools, but it is imperative to ensure that the application reflects the applicant's own voice and ideas. It is not acceptable to solely rely on generative AI tools to write the entire grant application from start to finish. While these tools may be used to assist in various aspects, the application must primarily represent the applicant's own work.

Applicants must provide clear acknowledgement if they have used generative AI tools in the process of writing their grant applications. This includes disclosing the name of the tool used and describing how it was utilized. The following style should be employed for referencing:

I acknowledge the use of [insert AI system(s), version number and link] to generate materials for background research, styling, proofreading, etc.

Or,

I acknowledge the use of [insert AI system(s), version number and link] to generate materials that were included within my final assessment in modified form.

Animals in research

Where the Academy fund research involving the use of animals it maintains that a high regard for animal welfare should be adhered to in all research. Our expectations for any research funded by the Academy mirror those set out by the National Centre for the Replacement, Refinement and Reduction of Animals in Research (NC3Rs) in their documents on responsibility in the use of animals in bioscience research and the non-human primate accommodation, care, and use.

Applicants are expected to detail how the number of animals to be used was decided, plans to minimise experimental bias, and provide information on statistical aspects of the study including statistical power and appropriate statistical analysis. Applicants must use the NC3Rs Experimental Design Assistant when designing their experiments, and the ARRIVE guidelines for improving the reproducibility and reporting of research involving animals.

Research involving human participants or tissue

Research involving human participants is governed by principles outlined in the Declaration of Helsinki, the Nuremberg Code, and the Council for International Organizations of Medical Sciences (CIOMS), all of which set out requirements regarding the rights and safety of research participants and standards for research design and conduct.

The Academy requires researchers to have the relevant regulatory and ethical approvals in place before the relevant research begins, although you may apply for funding before this. In the event of an award being made, commencement of any research involving human participants or tissue will be subject to these approvals being in place and sent to the Academy.

Completing the application form

After logging into the GMS and selecting 'Research Fellowships', you should be presented with the 'Instructions' window. Here you will see some general instructions on how to use GMS, as well as the seven sections of the application form listed below:

1. Applicant and institution details
2. Applicant profile
3. Project details
4. Case for support
5. Resources requested
6. Statement of support and declaration
7. Marketing

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 can freely skip some sections and return to them later. **Please read the guidance provided in this document in detail before starting an application.** You should also ensure that you have all the necessary documentation to complete the application, such as a copy of your CV and supporting letters.

1. Applicant and institution details

Q. **Applicant name and contact details (This question is not visible to reviewers)**
Please provide your name and preferred contact details.

Q. **Host institution details**
Please provide the details of the host institution where the Research Fellowship will be held and confirm that this is the 'lead organisation'. if you are not currently employed by the host institution, you should also add your current employer.

2. Applicant profile

This section requests details about your suitability and eligibility for the Research Fellowship. You will need to answer some general questions on your experience and upload your CV.

Q. What date was your PhD Certificate awarded?

Applicants must have a PhD, which was awarded no more than four years before the submission deadline (18 September 2024). Please enter the date your PhD Certificate was awarded or the date your PhD was unconditionally approved by the university.

Q. Extenuating circumstance (Optional question. This question is not visible to reviewers)

If your PhD Certificate was awarded more than four years before the submission deadline (18 September 2024), please provide details of extenuating circumstances. Please cover any periods of maternity/paternity leave, extended sick leave, national service, part-time employment for caring responsibilities or any other activity that you feel should be considered when assessing your eligibility for this Research Fellowship. The Academy's decision on eligibility is final.

200 words maximum

Q. Applicant's CV

The format and content of your CV is left to your discretion but should include a list of publications. You may wish to indicate which publications you deem most significant and include a link to any that are open access. You do not need to include contact details as these are included earlier in the application form. **Please do not include personal information (e.g. gender, date of birth, and nationality) in the CV. The CV must be uploaded as a single PDF and the file size should be less than 5MB.**

Q. Profile of applicant

Outline how your skills, experience and track record would enable you to successfully complete the five-year Research Fellowship and become a future research leader in your chosen field. You may also wish to include:

- Any relevant collaborative work and visits with other researchers, research organisations, industries, or other beneficiaries, both nationally and internationally.
- Impact of your research on improving the quality of life.
- Any successful grant applications and their values.
- Any other information that demonstrates your independence and your track record as a researcher.
- Career goals resulting from the fellowship.

600 words maximum

Q. Applicant's most significant achievements
Please describe three to five of your most significant achievements in your research career. We would like to emphasise that all achievements and outputs are welcome and considered valuable to the Academy, not just peer-reviewed publications. Outputs also include, and are not limited to code, patents, spin-out companies, events, public engagement, and policy impact. Please briefly explain the significance of the achievement in a way that will explain it to a researcher from your discipline who may not be familiar with the latest work in the particular field.
500 words maximum

The Academy's research programmes are aligned with the principles of [DORA](). If research articles published in peer-reviewed journals are to be included in an application, we would therefore like to emphasise that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.

Q. Impact of COVID-19 (optional question)
The Academy understands that the impact of the coronavirus pandemic on researchers and their work is varied. If you wish, please provide a summary of how the pandemic has affected your research activities that reviewers and panel members should consider. Reviewers and panel members will be advised to take into consideration the unequal impacts that COVID-19 related disruptions might have had on individuals.

The impact can include, but is not limited to, the following examples: pause on experiments/research plans, reduced ability to work due to additional caring responsibilities, delays in publishing/submitting a key paper(s) (please note pre-prints can be included in your publications list).
500 words maximum

3. Project details

Q. Project title
Applicants must have a PhD, which was awarded no more than four years before the submission The essence of the research should be captured in the title and should be as informative as possible. Please use **no more than 10 words** and ensure that it is **understandable to a non-specialist reader.**

Q. Abstract
Describe the research in terms that can be understood by a non-specialist reader. What similar research is being/has been undertaken nationally and internationally, and how does your project differ?
300 words maximum

Q.   What is the start date of the proposed project?
Research Fellowships must begin between **1 August 2025** and **31 October 2025**. The duration of a Research Fellowship is five years full time, calculated on a pro-rata basis for part-time awards. You must agree these timescales with the host institution. Requests for a shorter Research Fellowship are not accepted.

Q.   What is the end date of the proposed project?
Example, if your project starts on 1 September 2025, it will need to finish five years later (on 31 August 2030).

Q.   Subject category
Select one single broad engineering category that best describes your research proposal. **The category selected will be used to help identify reviewers and panel members.** If your research proposal fits into several categories, please pick the category that is most applicable to your proposal. See Appendix B.

Q.   Please provide keywords relating to the project
The keywords provided help the Academy identify suitable reviewers.
10 words maximum

Q.   List all external organisations that you will collaborate with as part of the project.
Please list any collaborators from universities and industry in the UK or worldwide. This will help avoid any conflicts of interest during the assessment process. **You should not explain the extent or nature of the collaboration here, as that is covered later.**
50 words maximum

4. Case for support

This is the main part of your application. Here you must demonstrate that your proposal contains an original and independent research project within the remit of the ten broad engineering categories given in the previous section. Proposals that are simply an extension of your PhD project or are closely aligned to the work of your PhD supervisor are unlikely to be viewed favourably.

Q.   Goals and objectives
Please state the goals and objectives for your research project. You should include details on how novel, realistic, and ambitious the project is. Please note that if awarded your performance will be assessed against these objectives.
200 words maximum

Q.   Timeliness and novelty
Describe why this research is important and why it should be conducted now.
250 words maximum

Q. **Methodology**

Please provide a detailed description of the exact work to be completed. Describe the programme of work, indicating the research to be undertaken and the milestones that can be used to measure progress. Detail the methodology to be used and justify this choice. What similar research is being/ has been undertaken nationally and internationally and how does your project differ?
1,500 words maximum

Q. **Images and diagrams**

Upload any images and/or diagrams related to your project that add value to your application. Any images/diagrams uploaded must be referenced in the application form. **The images/diagrams must be collated and uploaded as a single PDF** in the order you wish them to be viewed.

Q. **Reference list**

List the reference material referred to in your application. Where possible include web links to any open access articles to help reviewers locate the articles. You may want to highlight the most relevant ones. **Upload the list as a single PDF of two pages maximum.**

Q. **Project timeline**

You must upload a Gantt chart or equivalent to show the schedule of activities for the duration of the Research Fellowship. Please ensure major milestones are clearly plotted. You may wish to include a diagram showing how the work packages and your collaborations will interact. **The chart/diagram must be collated and uploaded as a single PDF.**

Q. **Project management**

Describe how your research proposal will be managed. You may wish to refer to the Gantt chart. You should include suitable milestones and identifiable deliverables. Your progress will be reviewed against this plan.
200 words maximum

Q. **Risks: identify and assess any risks that may jeopardise the project's success**

Risks will not necessarily be perceived as weaknesses. You should use this opportunity to demonstrate your management skills and awareness of potential problems.
200 words maximum

Q. Collaborations

Provide details of any collaborations you intend to create and/ or maintain during the Research Fellowship. Use this opportunity to show how you are connected to a wider network than just the host institution, to access appropriate skills and expertise to enhance your research and its impact. Explain who you will/ want to work with and why.

Collaborations can take many forms, including financial contributions, access to facilities and equipment, provision of equipment/ materials/ supplies/ services, access to data and results, provision of staff (e.g. a secondment), advice, mentoring, participation in a steering group, expertise, networking/ introductions. This covers both internal and external collaborations.
500 words maximum

Q. Letters of support (optional section, but this is your opportunity to demonstrate wider support for you and your project)
Each letter of support must:
- Be on headed paper and clearly state who they are from.
- Be from external collaborators i.e., people and organisations NOT working at the host institution and its affiliates.
- Be signed.
- Confirm that the author knows the applicant.
- Explain why they are interested in the project.
- Provide details on what form the collaboration will take.
- Clearly demonstrate the nature of the collaboration and how it will be beneficial to the applicant and the project.
- **Be no more than two pages.**

Aim for quality over quantity. Shorter, more concise letters better enable the reviewers to identify the salient information. A bullet-point list of contributions can be an effective way to present the information. **The letters of support must be collated and uploaded as a single PDF.**

Q. Beneficiaries and impact
Identify the groups in society that will benefit from the research, as well as any positive societal and economic impacts it will have. What are the benefits of this research and for who? Can you quantify the extent of the benefits/ number of likely or potential beneficiaries? Can you identify specific groups in society?
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.
200 words maximum

Q. Academy's strategic goals (This question is not visible to reviewers)

How do you align with the Academy's 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 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 maximum

Q. Diversity and inclusion

The Academy 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 maximum

Q. Exploitation

Describe the ways you plan to exploit your research, including the industry/ public sector partners that you will collaborate with to achieve this. Here you should explain how you will ensure the benefits and impacts will be delivered. You should also indicate when these routes to exploitation are likely to be implemented, including if this will be after the Research Fellowship has ended.
200 words maximum

Q. Dissemination and public engagement

Indicate the proposed methods of dissemination and public engagement. How will the results and outputs be shared? How will you engage with audiences beyond the research and engineering communities? Participation in public outreach activities is an important element of a Research Fellowship.
200 words maximum

Q. Choice of host institution

Explain your choice of host institution. You may wish to comment on the facilities and expertise that will be available to you. You should also cover what experience you have had and/ or plan to gain from other institutions and alternative working practices. For example, any time spent on secondment or on extended visits.
200 words maximum

Q. Ambitions and future plans

Describe your future career plans and ambitions, including the anticipated size of your team, your reputation and employment status. How will you progress through the Research Fellowship? How are your future career plans and ambitions associated with the proposed research goals and objectives?
200 words maximum

5. Resources requested

Applicants must consult with the host institution for support in completing the costs table. Please ensure that you allow plenty of time for the host institution to prepare the costings. The below categories explain what costs should be included in your application. You must be able to demonstrate that the resources requested are justified and appropriate for delivering the proposed research. **Each application is capped at a maximum contribution from the Academy of £625,000 over the five-year period, at 80% full economic costs (fEC)**. The host institution is expected to provide any shortfall from its own funds or other grants.

Q. Costs table

When completing the costs table, some of the cells are auto-calculated and all values submitted should be rounded up to the nearest pound. **Please do not show actual fEC in the cost table**. In the costs table, the total funding requested from the Academy cannot exceed £625,000 at 80% fEC (the actual costs at 100% fEC cannot exceed £781,250.00).

Directly incurred costs
Staff

The Research Fellowship's aim is to support researchers at an early stage of their research career. Salary should be at a level commensurate with skills, responsibilities, expertise, and experience. It is expected that requested salary will be comparable to postdoctoral researcher or early-stage lecturer salary scale points. The Academy reserves the right to provide support at a different level if it is considered appropriate.

The Research Fellow's salary can be requested for a period of five years full-time equivalent. Salary increments over the period of the Research Fellowship should be considered in the costs, but possible future pay awards should not be anticipated. **Please note that the Academy does not pay inflation, and inflation should not be applied to the costs.** In addition, the Academy is not able to cover the costs of the apprenticeship levy on research grants. Salary costs do not need to be justified in the 'Justification of costs' section.

Research Fellowships may be held on a part-time basis if the applicant is employed part time (minimum 50%). Applicants wishing to hold the award on a part-time basis must state the % time in the 'Justification of costs' section and explain why part-time working is requested. The costs table should be completed as if for a full-time fellowship and costs will be adjusted accordingly if the award is offered.

PLEASE NOTE:

- No other staff salaries can be requested as part of a Research Fellowship.
- The Research Fellowship must be the Research Fellow's only source of employment. Research Fellows are required to devote all their working time to the Research Fellowship programme of work. Research Fellows are encouraged to apply for further funding. However, any additional funding must not result in a reduction in the Research Fellow's time working on the Research Fellowship and cause a delay in the completion of the Research Fellowship.

Travel and subsistence

Travel and subsistence costs can only be requested for the Research Fellow and must be for activities directly related to the research project. Travel costs should be based on the most suitable, cost-effective, and environmentally friendly form of travel. Subsistence costs should reflect the normal rates that apply in the host institution. Commuting costs for working at the host institution cannot be requested.

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

Other costs

Other costs should be specified and justified in the 'Justification of costs' with details provided in terms of their requirement for the research project. Examples include purchase or hire of small items of equipment, computer software licences, cloud computing/ computing time at external facilities, laboratory consumables, purchase of specialist publications, open access costs, publication/ printing costs, professional membership subscription fees or training costs.

Unless the need for significant computing power can be justified, the costs requested from the Academy for the purchase of a computer should not exceed £3,000 (including VAT), and no more than two computers should be requested over the duration of the Research Fellowship.

The cost of any single item of equipment, software, cloud computing/ computing time fees, database subscription or upgrade to existing equipment requested from the Academy should not exceed £10,000 (including VAT). Should any piece of equipment include multiple separate items that are purchased individually and then combined to make a single functioning system, the cost of the entire system requested from the Academy should not exceed the £10,000 limit.

Costs for major facilities not owned by the host institution, such as those supported by STFC, cannot be requested. If such facilities are required for the project, the applicant should contact the specific facility to determine access requirements. If access to a facility is essential to the research project, both access to and external funding for the cost of the facility must be secured within one year of the proposed start date of the Research Fellowship.

Research Fellows are expected to make full use of any equipment that is available at the host institution and should therefore only request funding for equipment that is necessary and not currently available.

Directly allocated costs
Estates

Research Fellows may apply for estates costs for the duration of the Research Fellowship. Estates costs do not require justification in the 'Justification of costs' section. Where the Research Fellow will be away from the host institution for six months or more in total, estates costs should not be requested for that period. In such situations, this should be confirmed in the 'Justification of costs' section.

Other directly allocated

Other directly allocated costs can be requested, calculated based on estimates and should be justified in the 'Justification of costs' section. Potential costs include the host institution's research/ technical staff whose time is shared across several projects and charge out costs for existing equipment owned by the host institution, for example access to departmental SEMs and analytical facilities. Salary costs for specific technicians cannot be requested, but costs for pool technician time for the use of facilities/equipment at the host institution can be requested.

Indirect costs
Indirect

Please consult with the host institution for guidance on these costs. Research Fellows may apply for indirect costs for the duration of the Research Fellowship. Indirect costs do not require justification in the 'Justification of costs' section. Please refer to the efficiency savings published by RCUK in March 2011 when submitting figures for indirect costs.

Q. Total funding requested

Please state the total value of the funding you are requesting from the Academy. This is the value of the five years at 80% fEC, up to a maximum of £625,000.

Q. **Justification of costs**

Please provide a narrative description of what resources are being requested and why. Ensure you have adhered to the guidance provided for allowable costs as detailed above. The justification should include:

- All necessary justifications for costs included in the costs table.
- To what extent the equipment requested will be used by other researchers and what equipment you are not requesting funding for (or for which you are r equesting funding at a reduced rate) because suitable equipment is already available to you.
- What costs will be covered by other sources, for example industry or existing grants, so are not being requested as part of the application.
- If relevant, an explanation of why you wish to work part time and at what rate.

400 words maximum

6. Statement of support and declaration

This section seeks confirmation that the applicant has provided accurate information and will update the Academy of any material changes that may affect the award. It should also confirm that the host institution will support the Research Fellowship. You must upload your host institution's letter of support, as explained below, and tick the box confirming the information provided is correct. **The submission deadline will not be extended due to an individual's unavailability.**

Q. **Host institution letter of support**

The Head of Department or School, Pro-Vice-Chancellor, Dean or Director at the host institution must provide a statement in support of the application.
The statement must be on headed paper, signed, and should clearly state the date, applicant's name, and host institution name. The statement should be **a maximum of two pages**, and address the following areas:

Suitability of the applicant:

- Quality of the applicant's research track record.
- Potential of the applicant to become a future leader in their chosen field.
- Potential to act as an ambassador and advocate for engineering research.
- Details of the host institution's mechanisms to ensure only the highest calibre of candidates are submitted to this scheme.

Support and commitment from the host institution:

- Alignment of the proposed Research Fellowship with the host institution's research strategy and priorities.

- Details of mentoring, resources and support that will be provided to the applicant should the application be successful.

- Other activities the applicant will be expected to undertake.

- Details of the career development support that the applicant will be offered.

- Details of how the host institution adopts a proactive approach in encouraging   researchers from underrepresented groups to apply.

- Evidence of the host institution's commitment to equality and diversity.

Impact of COVID-19 on the host institution's support

The host institution can use this letter of support to highlight the impact of the coronavirus pandemic on their support for the Research Fellowship if they wish. Reviewers and panel members will be advised to take into consideration the unequal impacts that COVID-19 related disruptions might have on the host institution's support for the Research Fellowship.

The Academy expects the host institutions to be committed to, and provide support that aligns with, principles set out in The Concordat to Support the Career Development of Researchers, The Concordat for Engaging the Public with Research, and DORA.

Q. Host institution declaration letter

The host institution's declaration letter must be completed by an appropriate individual from the institution's research support office or equivalent. **The letter must be on headed paper and should carry the signatory's name, position, contact details**, date, scheme name, applicant's name, and the institution's official stamp (if available). The purpose is to check that the host institution is in principle willing to host a Research Fellow, subject to contract. The letter must confirm the application has been approved by the institution and **must contain the wording given in the box below**, as well as any further remarks the host institution wishes to make. **Please note that the wording provided in the box below is specific to the Research Fellowships scheme, and the wording is updated and different to previous rounds.**

On behalf of the host institution, 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. I also confirm that:

- The costs submitted in the application are correct and sufficient to complete the project as envisaged. Any shortfall in funding discovered after the award has been made will be covered by the institution, potentially through other grants.
- The applicant will be employed by the institution for the duration of the award.
- If awarded, the applicant will be given full access to the facilities, equipment, personnel, and funding as required by the application.
- The applicant's teaching, administrative, and non-research duties will be restricted to enable them to dedicate their time to research.
- The applicant will be provided with all the support normal for a permanent employee.
- I am authorised to approve the submission of applications for funding and confirm this application has successfully met the eligibility criteria, including adherence to the application limit and all our internal approval procedures.

Please delete the following statement if not applicable:

- I agree that the Academy may share this application with UK-based medical charities for the purposes of assessing the suitability of the research project for co-funding.

Q. **Applicant declaration**

Please tick the checkbox once you have read and understood the declaration included in the application form.

A grey **'submit application'** button will become available once the application form is completed.

7. Marketing

Q. **How did you hear about the scheme?**

This question is optional but helps the Academy to understand which marketing materials are most successful at reaching the academic community to improve future communications work.

Please note that once submitted the application cannot be edited and updated, but you may view it from your GMS account.

Assessment process

Stage one: general review
Each eligible application will be assessed by general reviewers (Academy Fellows or former Research Fellows). The application therefore should be written to help non-expert reviewers understand the research content. Based on the reviewers' comments and scores, the sift panel (consisting of Academy Fellows) will conduct moderation reviews and select the applications to proceed to stage two: expert review. Applicants will be informed of the stage one outcome after **Mid-December 2024.**

Stage two: expert review
Each application selected for stage two will be assessed by three expert reviewers. The expert reviewers will be asked to provide comments, score, and key technical questions (if any) that the applicant should clarify. Applicants will be given the opportunity to respond to the technical questions in late March 2025. The shortlist panel will then moderate the expert reviewers' comments and scores along with the applicants' response to the technical questions to select strong candidates for stage three: interview. Applicants will be informed of the stage two outcome in early May 2025.

Stage three: interview
Interviews will take place either online or at the Academy in London between **14-16 May 2025**. Each interview will be conducted by a panel of four Academy Fellows and will last 30 minutes. This includes a five-minute presentation from the candidate. All shortlisted applicants must be available to attend, as alternative dates cannot be arranged. Please reserve these dates at the time of application.

The ranking of candidates at the preceding shortlist panel will have no bearing at the interview stage. All interview candidates are considered to have equal standing. Following the interviews, the panel will rank the applications and select the top ranked candidates for awards.

Associate Research Fellowships

During the assessment process, if an applicant accepts a Research Fellowship with another institution, they are no longer eligible to receive the financial support associated with a Research Fellowship. However, they are eligible to be considered for an Associate Research Fellowship. To be eligible for an Associate Research Fellowship, the applicant must be shortlisted for, and be successful at, interview. An Associate Research Fellowship is provided in-kind support, such as mentoring by an Academy Fellow, being part of the Awardee Excellence Community, training, additional funding, and networking opportunities.

Assessment criteria

At each assessment stage, reviewers will be asked to provide comments against the following assessment criteria, a score of the overall quality of the application, and a recommendation on whether the application should proceed to the next assessment stage. The panel will moderate the reviewers' comments and scores and select the applications that will proceed to the next assessment stage.

Candidate
- Quality of the applicant's research track record.
- Potential of the applicant to become a future leader in their chosen field.
- Potential to act as an ambassador and advocate for engineering research.

Research quality and vision
- Quality of the applicant's research vision and their potential to establish an independent research career in their chosen field.
- Quality of the proposed research project including timeliness, novelty, vision, and ambition that are achievable within the five-year research timeline.
- Consideration of diversity and inclusion in research and team development.

Research environment
- Quality of the research environment and resources provided by the host institution.
- Quality, level of support and commitment of the host institution to the career development of the research fellow.
- Quality, level of support and commitment from collaborators.

Resource and management
- Quality and effectiveness of the proposed planning and management and on whether the requested resources are appropriate and have been fully justified.

Beneficiaries and impact
- Extent to which beneficiaries will benefit from the proposed research and the potential to translate research outcomes into societal and economic impact.

Declaration on Research Assessment (DORA)

The Academy's research programmes are aligned with 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 to make awards. It is 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 that assesses research on its own merits rather than by surrogate measures, such as based on the journal in which research is published.

Why applications are unsuccessful

The most common reasons applications are unsuccessful:

- Lack of novelty in research.
- Lack of independence in research.
- Poor communication skills, both written and verbal.
- Unrealistic research proposal (for example, overstating the potential for impact of the research and the applicant's reputation).
- Lack of ambition and vision that shows great potential to become future research leaders.
- Weak letters of support from the host institution or important collaborators
- No industrial/clinical collaborations planned.
- Inconsistent information provided in the application form.

For all queries, please contact the Royal Academy of Engineering's research programmes team at research@raeng.org.uk

Appendix A:
List of eligible research organisations to host RAEng Research Fellowships

Please note that these lists are accurate at the time of publishing. An updated list of eligible research organisations can be found on the UKRI website.

Eligible research institutes funded by the UK research councils

1. The Alan Turing Institute
2. Babraham Institute
3. Culham Centre for Fusion Energy (part of UK Atomic Energy Authority)
4. Diamond Light Source
5. Earlham Institute
6. The Faraday Institution
7. The Francis Crick Institute
8. Health Data Research UK
9. Isaac Newton Group
10. John Innes Centre
11. Joint Astronomy Centre
12. MRC Harwell Institute
13. MRC Laboratory of Molecular Biology
14. MRC London Institute of Medical Sciences
15. NERC British Antarctic Survey
16. NERC British Geological Survey
17. The Pirbright Institute
18. Plymouth Marine Laboratory
19. Quadram Institute Bioscience
20. Rosalind Franklin Institute
21. Rothamsted Research
22. Scottish Association for Marine Sciences
23. STFC laboratories
24. UK Astronomy Technology Centre
25. UK Dementia Research Institute.

Eligible public sector research establishments

1. Animal and Plant Health Agency
2. Centre for Environment, Fisheries and Aquaculture Science
3. Defence Science and Technology Laboratory
4. Environment Agency
5. Fera Ltd
6. Forest Research
7. Health and Safety Executive PSRE
8. Joint Nature Conservation Committee (JNCC)
9. Marine Scotland Science

10. Medicines and Healthcare products Regulatory Agency (MHRA)
11. National Nuclear Laboratory
12. National Physical Laboratory
13. Natural England
14. Office for National Statistics
15. Public Health England
16. Science and Advice for Scottish Agriculture
17. UK Health Security Agency.

Eligible independent research organisations

1. All NHS Trusts, hospitals, boards, primary care trusts and GP practices
2. Anthony Nolan
3. Armagh Observatory
4. BirdLife International
5. British Film Institute
6. British Institute of International and Comparative Law
7. British Library
8. British Museum
9. British Trust for Ornithology
10. Butterfly Conservation
11. CABI (Centre for Agriculture and Bioscience International)
12. Cambridge Arctic Shelf Programme
13. Cambridge Crystallographic Data Centre
14. Chatham House (Royal Institute of International Affairs)
15. CERN
16. Earthwatch Institute
17. European Bioinformatics Institute
18. European Synchrotron Radiation Facility
19. Historic Buildings and Monuments Commission for England
20. Historic Environment Scotland
21. Historic Royal Palaces
22. HR Wallingford Group
23. Imperial War Museum
24. Institute for Fiscal Studies
25. Institute of Development Studies
26. Institute of Occupational Medicine
27. International Institute for Environment and Development
28. London Institute for Mathematical Sciences
29. Malaria Consortium (UK)
30. Marine Biological Association
31. Moredun Research Institute
32. Museum of London Archaeology
33. National Archives
34. National Centre for Social Research
35. National Foundation for Educational Research

36. National Gallery 37. National Institute of Agricultural Botany
38. National Institute of Economic and Social Research
39. National Maritime Museum
40. National Museum Wales
41. National Museums Liverpool
42. National Museums of Scotland
43. National Oceanography Centre
44. National Portrait Gallery
45. Natural History Museum
46. Nesta
47. Overseas Development Institute
48. RAND Europe Community Interest Company
49. Royal Botanic Gardens – Edinburgh
50. Royal Botanic Gardens – Kew
51. Royal Society for the Protection of Birds
52. Royal United Services Institute for Defence and Security Studies
53. SCI Foundation
54. Science Museum Group
55. Sightsavers
56. Tate
57. Tavistock Institute of Human Relations
58. The James Hutton Institute
59. The Manufacturing Technology Centre Ltd
60. The National Trust
61. The Office of the Health Economics
62. The Resolution Foundation
63. The Royal Shakespeare Company
64. The Welding Institute
65. Transport Research Laboratory
66. UK Centre for Ecology and Hydrology
67. UK Health Security Agency
68. Victoria and Albert Museum
69. Wellcome Trust Sanger Institute
70. World Conservation Monitoring Centre
71. Young Foundation
72. Zoological Society of London, Institute of Zoology.

Eligible Catapult centres

1. Cell and Gene Therapy Catapult (Cell Therapy Catapult Limited)
2. Compound Semiconductor Applications Catapult
3. Energy Systems Catapult
4. Manufacturing Technology Centre
5. Medicines Discovery Catapult
6. Offshore Renewable Energy Catapult
7. Satellite Applications Catapult

Appendix B:
Engineering categories

1) **Civil, construction and environmental**
Including aspects of civil and structural engineering; construction materials; earthquakes; wind and fire engineering; building engineering physics; construction management; numerical modelling; environmental engineering; water resources and flooding; offshore and coastal engineering; hydraulics; climate change and sustainability; waste management; geotechnical engineering; geomatics/surveying.

2) **Materials and mining**
Including metallurgy; metal forming; corrosion; failure analysis; structural integrity; non-destructive testing; inspection technologies; failure prevention; fabrication and repair technologies; welding and joining technologies; discovery and development of mineral resources; extraction and processing of minerals; mining engineering; materials performance; materials research; plastics and composites; structural materials (excluding materials specifically covered elsewhere).

3) **Chemical and process**
Including all aspects of chemical and process engineering; aspects of fuel technology; oil; coal and gas technologies; carbon; carbon sequestration; clean technology; combustion; catalysis; particulates; food processing; fermentation processes; pharmaceutical engineering; biotechnological processes.

4) **Aerospace**
Including all aspects of aeronautical engineering and aerospace manufacturing; turbomachinery and aerothermal engineering; avionics; radar systems; antennae; satellite systems; autonomous systems; aspects of systems engineering; airlines; materials for aerospace.

5) **Transport and mechanical**
Including all aspects of mechanical engineering; automotive; rail and marine engineering; transportation infrastructure; engines; turbomachinery; mechatronics; acoustics and vibrations; ultra-sonics; heat and thermodynamics; fluid dynamics.

6) **Manufacturing and design**
Including manufacturing management and manufacturing process innovation; manufacturing business improvement and re-engineering; CAD/CAM; robotics for manufacturing; engineering design.

7) Electrical and electronic

Including electrical, electronic and control engineering; design for electronics; aspects of nanotechnology and semiconductor engineering; lasers; optoelectronics; photonics; microwave engineering; instrumentation; display technology; solid state electronics.

8) Energy and power

Including energy technologies; electric power and energy systems engineering; nuclear and renewable energy generation; energy infrastructure; management of energy and energy resources for generation, storage, and transmission; distribution and conversion of electric energy and power; electricity supply and energy conservation; hydrogen power; fuel cells.

9) Medical and bioengineering

Including all aspects of medical and biomedical engineering; orthotics; prosthetics; ultrasound for medicine; medical scanning and imaging; drug delivery;biomedical materials; tissue engineering; medical devices; medical robotics and computer assisted surgery.

10) Computing and communications

Including computational and software engineering; informatics; web and data science; telecommunications; mobile telephony; broadband; wireless spectrum; signal processing; television, film, and broadcasting; computer and video games; special effects.