



# Introduction

The Royal Academy of Engineering (RAEng) /Leverhulme Trust Research Fellowship scheme allows early- to mid-career academics to concentrate on research.

The Fellowship covers a maximum of £55,000 for the salary costs of a replacement academic who will cover the Awardee's teaching and administrative duties for up to one year.

The Fellowships provide engineering academics with an opportunity to reinvigorate their research careers, enhance their current research interests or start new lines of research without teaching or administrative constraints.

These Fellowships also provide:

- early- to mid-career academics with an opportunity to enhance their current research interests and initiating new lines of research by relieving them of their teaching and administrative duties.
- a support fund of up to £2,500 for miscellaneous research costs incurred by the awardee, including conference attendance and public engagement activities.

These Fellowships are funded by The Leverhulme Trust.

# The Leverhulme Trust

The Leverhulme Trust was established by the will of William Hesketh Lever, the founder of Lever Brothers. Since 1925 the Trust has supported grants and scholarships for research and education. Today, the Leverhulme Trust is one of the largest all-subject providers of research funding in the UK, distributing over £60 million a year. The Trust provides funding across academic disciplines, supporting talented individuals in arts, sciences, engineering, and social sciences to realise their personal vision in research and professional training.

# **Submission deadline**

The scheme has one round of applications each year. The submission deadline for this round of applications is **4pm** on **Tuesday 19 November 2024**. Incomplete applications or applications submitted after this date/time will not be accepted.

# **Eligibility criteria**

- Applicants should hold a permanent academic position at a UK university at lecturer, senior lecturer, or reader level (or equivalent).
- Applicants must be teaching an engineering discipline at undergraduate or postgraduate level.
- Applicants must be able to demonstrate a significant administrative workload, which prevents them from dedicating as much time to research as they would like, and that they, therefore, merit being relieved of their teaching and administrative duties.
- The proposed research project can be in 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 project is in an engineering area, please contact <u>Research Team</u>.
- Awardees are required to devote all their working time to the Fellowship as this is a full-time award, but awardees can still spend a maximum of four hours per week on teaching and administrative duties if they so wish.
- Awards can be held on a part-time basis, please refer to the section on Part-time and flexible working below for more details.
- Any applications that are incomplete or do not adhere to the guidelines will be rejected.

# **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 <u>Academy's policy</u> 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.

# **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 <u>positive action</u> 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 of the RAEng/Leverhulme Trust 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 under the host institution's guidance.

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. For more information on Access Mentoring please <u>see guidance</u>.

# 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.

RAEng/Leverhulme Trust Research Fellowships can be held part time but **must be the only form of employment**. The request for a part-time RAEng/Leverhulme Trust Research Fellowship (at no less than 50% of full-time equivalent) must be clearly stated within the application.

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.

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# Use of Al

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.

# **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 <u>Academy's Policy</u> on National Security-Related Risks.

# Animals in Research, Development and Innovation (RD&I)

The Academy acknowledges that, at present, the use of animals remains the only way for some areas of research to progress. Research involving animals is regulated by comprehensive and strict legislation in the UK and must be conducted with a high regard for animal welfare. The Academy will fund work involving the use of animals in the UK which complies with our <u>Animals in RD&I Policy</u>. If your proposal includes the use of animals, you will be asked to provide details at application stage.

If your proposal involves the use of animals and takes place outside of the UK, the Academy will generally not fund this work. Please contact the Academy before proceeding with your application.

Please note: applicable regulatory approval and licenses are not required to be in place at point of application, but all necessary approvals must be in place before the work begins and a clear plan to achieve this at application stage.

# Human Participants in Research, Development, and Innovation (RD&I)

Research, development and innovation involving human participants, human material or personal data can contribute to a better understanding of human health and disease as well as the technological efficacy of new and evolving innovations. The Academy will fund research, development and innovation involving the use of human participants, human material or personal data which complies with our Humans in RD&I Policy.

If your proposal includes the use of human participants, human materials or personal data you will be asked to provide details of your work at application stage.

Please note: applicable regulatory approval and licenses are not required to be in place at point of application, but all necessary approvals must be in place before the work begins and a clear plan to achieve this at application stage.

# How to apply

All applications must be submitted by the applicants themselves via the Academy's online Grants Management System (GMS), available at <a href="https://grants.raeng.org.uk">https://grants.raeng.org.uk</a>. All applicants must first register and provide some basic log-in 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 <u>Academy's Privacy Notice</u> 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 as per our Data Retention Policy.

The application form has eight sections and should take approximately one hour to complete, assuming you have answered the questions offline and merely need to enter the information, rather than composed 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 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 application after submission, which is recommended for reference. There is only one application stage and those meeting the eligibility criteria will enter the assessment stage.

A summary of the 'Guidance Notes' is imbedded within the system itself, however the guidance given below is more detailed, so we recommend you keep this document to hand when completing the application form.

# Completing the application form

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

- 1. Applicant and host institution details
- 2. Project details
- 3. Case for support
- 4. Future plans
- 5. Relief from activities during the Fellowship
- 6. Support requested
- 7. Marketing and notifications
- 8. Statement 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 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.

Once submitted the application form cannot be edited and updated.

# 1. Applicant and institution details

### Q. Applicant name and contact details

Please provide your name, job title and preferred contact details. Some of your details and those of your institution should be automatically generated by the system, as you provided these at registration. Please ensure the contact email address is correct and will be valid for the entirety of the application process as this will be the main method of communication regarding the application.

# Q. List of engineering courses taught

Please list the engineering courses you currently teach.

#### Q. Do you currently hold a permanent academic position?

Please state if you hold a permanent academic position. You must hold a permanent academic position at lecturer, senior lecturer, reader level (or equivalent) at the time of making the application to be eligible for this Fellowship.

#### Q. CV

The format and content of your CV is left to your discretion but should include your track record in research, conference presentations, students supervised, awards/prizes received (if any), details of any successful grant applications and 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. Host institution details

Please provide the contact details of the host institution where the RAEng/Leverhulme Trust Research Fellowship will be held and confirm that this is the 'lead organisation'.

# Q. Candidate'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, spinout 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 latest work in the particular field.

#### 500 words maximum

The Academy's research programmes are aligned with the principles of the Declaration on Research Assessment (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.

# 2. Project details

Here you will provide a few summary details of the application.

# Q. Project title

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 it is understandable to a non-specialist reader.

#### Q. Abstract

Describe the research and expected outcomes 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. Project start date

Please enter your proposed start date. Note: all Fellowships awarded in this round must begin between **1 August 2025** and **1 October 2025**. All Fellowships last between one academic term and one year. Requests for a Fellowship shorter than one academic term will not be accepted.

# Q. Project end date

Please enter your proposed Fellowship end date.

# 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 Annex 1.

# Q. Please provide keywords relating to the project

You can then add two additional keywords to further define the area of your project. For example: lasers, optoelectronics. This will help the Academy identify suitable reviewers.

# Q. List of external organisations who you will be collaborating with as part of the project

Please list any external organisations that you will be collaborating with as part of the project. As well as demonstrating your collaborative intentions, 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.** 

# 3. Case for support

# Q. Why are you applying for this Fellowship?

Please explain why you need relief from your teaching and administrative duties to concentrate on research. Include any relevant examples of duties to demonstrate this. What will be the expected key deliverables if you are awarded the Fellowship?

200 words maximum

### Q. Goals and objectives

Please state the goals and objectives for your research project in order of priority. Please note that if awarded your performance will be assessed against these objectives.

200 words maximum

# Q. Research programme and 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 methodology to be used in pursuit of the research. You should include details on how novel, realistic/ambitious the project is and include milestones that can be used to measure progress.

1000 words maximum

### Q. Gantt chart

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

### Q. Reference (Optional)

List the relevant 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 document as a single PDF, images/diagrams should be collated and uploaded as in the order you wish them to be viewed.

#### Q. Timeliness and novelty

Please state what is novel about the proposed project and why it should be conducted right now.

200 words maximum

#### O. 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.

# Q. Academy's strategic goals (optional)

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 meet our strategic aims, 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

This section is not visible to reviewers.

# 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, if applicable) 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. Impact of COVID-19 (optional)

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).

# 4. Future plans

### Q. Ambitions and future plans

Describe your future career plans and ambitions (for the next five years), including anticipated team size, recognition and how you expect to progress after the Fellowship.

200 words maximum

### Q. Collaborations

Please describe in detail any existing and future collaborations and how these will contribute to and enhance the project.

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.

200 words maximum

# Q. Letters of support from collaborators (optional)

You can upload letter(s) of support from your collaborators.

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.** 

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.

### 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. You should 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. Specific beneficiaries might be companies or public sector, researchers in other disciplines, academic institutions, and society at large. What plans are there for public dissemination and engagement? If there is no specific beneficiary but the output may have general relevance to a specific sector of industry, science or engineering, then an indication of how this might be relevant should be given.

200 words maximum

#### Q. Exploitation

Describe the ways you plan to exploit your research, including the industry and public sector partners that you will collaborate with to achieve this. Here you should explain how you will ensure the benefits and impacts mentioned above will be delivered.

Identify what mechanisms are in place for identification, protection and subsequent exploitation of any deliverable that may arise from the research. You should also indicate when these routes to exploitation are likely to be implemented, including if this will be after the period of the Fellowship itself. 150 words maximum

# 5. Relief from activities during the Fellowship

### Q. Activity Summary

Outline your current administrative and teaching commitments that you are seeking relief from.

300 words maximum

#### Q. Research Activity

Please state your existing commitments which you will continue to perform during the Fellowship.

# 6. Support requested

### Q. Costs table

Applicants must consult with the host institution for support in completing the costs table. Please enter the gross salary, corresponding to the first spinal point of the host institution's lecturer pay scale. This includes pension, NI and anticipated pay awards for the duration of the Fellowship. These funds will be used to support the replacement academic, who is expected to be at an early-career stage.

Support fund: the maximum allowable request from the support fund is £2,500. This fund will contribute towards the awardee's research costs, such as travel, conferences, subsistence, access to specialist facilities, computer software and laboratory consumables.

#### **PLEASE NOTE:**

- · Computers are not an eligible cost.
- Any funds requested must be spent within the Fellowship period. Any unspent funds should be reported and returned to the Academy.

#### Q. Justification of costs

Please provide justification for the costs that you have requested in the costs table and outline how the funds will be used.

100 words maximum

# 7. Marketing and notifications

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.

# 8. 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 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. Letter of support from the head of department

The letter of support should be written by the applicant's Head of Department (or their Head of Faculty if the applicant is the Head of Department). 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) and no longer than two pages and uploaded by the applicant as a PDF.

The letter should include the below points:

- A clear statement about the university's willingness to completely release the candidate from all their teaching and administrative duties during the term of the award should the candidate be successful.
- The university's willingness to support the Fellowship together with an explanation of the reasons why the applicant is a suitable candidate for the award.
- Comments on the suitability of the proposed research activities and the tasks outlined in the case for support.
- Information about the applicant's teaching (and teaching-related) duties and their workload together with a statement on how the applicant's teaching load will be covered in their absence.
- Ideal person specification of an early-career academic who can cover the applicant's administrative/teaching duties and relieve them from these commitments.

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

### Q. Host University declaration letter

The host university 's declaration letter must be completed by an appropriate individual from the institution's research support office or equivalent.

The letter should be on headed paper and should carry the signatory's name, position, contact details, 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 in the box below, as well as any further remarks 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 that is provided on the Royal Academy of Engineering's website, and I also confirm that:

- 1. If awarded, the applicant will be given full access to the facilities, equipment, personnel and funding as required by the application.
- 2. The applicant will be employed by the university for the duration of the award.
- 3. The university will employ an early career academic to cover the teaching and administrative duties of the Awardee for the duration of the Fellowship.
- 4. The salary costs submitted in the application correspond to the first spinal point of the Lecturer pay scale at the university, and the funds will only be used to cover the salary of the replacement academic. Any shortfall in funding discovered after the award has been made will be covered by the university.
- 5. This Fellowship is not a sabbatical and if awarded, will not affect the applicant's eligibility for a sabbatical.
- 6. I am authorised to approve the submission of applications for 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.

# **Assessment of applications**

The scheme has one-stage assessment process. A Selection Panel composed primarily of Academy Fellows will review the eligible applications. The panel members will be selected to represent the engineering disciplines required. Each application will be reviewed by two members of the panel.

A Selection Panel meeting will be held in March 2025, to discuss the applications and select the top ranked candidates for awards. A senior representative from The Leverhulme Trust will also be invited to attend and observe. There is no interview stage.

In assessing the applications, the panel will consider several factors. These include:

- Is the candidate suitable for a RAEng/Leverhulme Trust Research Fellowship?
   Does the candidate demonstrate quality, experience, scientific insight/originality and independence in their research from their CV?
- Quality of the applicant's proposed research project. This includes ambition, novelty and timeliness of the research project. Does the applicant make a strong case for relief from teaching and administrative activities to be able to dedicate to the Fellowship if awarded? Please note that the 'Relief from activities during the Fellowship' section is located towards the end of the application.
- 3. Host institution's support letter and level of commitment, including the identification of the beneficiaries of this research and how they will benefit. Extent of industrial involvement in the project and any societal or economic benefits arising from the research project. Please note that any letters from collaborators are optional to include.
- 4. How is the applicant expected to progress after the Fellowship, and the related long-term benefits. How the applicant will build upon any existing or future collaborations. Has the applicant thought through the proposed dissemination, what are the plans for public engagement?
- 5. Please note that letters of support from any external collaborators are not mandatory but the selection panel does consider them.

# Declaration on Research Assessment (DORA)

The Academy's research programmes are aligned with <u>DORA</u>, which is a set of principles aiming to improve the ways in which the output of research is evaluated by funding agencies, academic institutions, and other parties. The outputs from research are many and varied, and as a funder of engineering research the Academy needs to assess the quality and impact of these outputs in order to make awards. It is 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 on the basis of the journal in which research is published.

# Why applications are unsuccessful

Competitors	Not knowing and acknowledging competitors.		
Vision	Vision and ambition not clearly explained.		
Novelty	Proposal lacking novelty, or not articulating how the proposed work will address a novel research question.		
Communication	Poor communication skills, both written and verbal. Inconsistent/unclear information provided in the application form.		
Failure to demonstrate a significant teaching and administrative workload	Does not demonstrate sufficiently why relief from teaching and administrative duties is needed.		
Lack of alignment with scheme priorities	Proposals that don't clearly align with the specific aims and priorities of the scheme might be less competitive. This also applies to proposals which require longer than the duration of the award.		
Insufficient evidence of impact	Proposals that do not convincingly demonstrate the potential impact of the research on the field or broader society might be seen as less valuable.		
Weak collaboration plan	In cases where collaboration is essential, a lack of strong, well-documented partnerships and letters of support or a vague plan for collaboration can lead to an application being unsuccessful.		
Overambitious project scope	The project may be unrealistic if it overstates the potential impact, or if the proposed milestones, required resources, and the applicant's ability to deliver are not aligned with what is feasible within the given timeframe and budget.		
Insufficient preliminary data or evidence	Applications that lack preliminary data or a strong foundation to support the proposed research may be viewed as speculative or risky.		
Poorly defined research objectives	If the research objectives are unclear, too broad, or lack focus, it may lead to concerns about the project's direction and feasibility.		
Inadequate risk management	Failure to identify potential risks and propose a clear plan to mitigate them can weaken an application, as it suggests a lack of preparedness.		

# **Timeline**

The overall schedule for this round of applications will be as follows:

September 2024	November 2024	November 2024 to February 2025	April 2025
Scheme open 3 September 2024	Submission deadline 4pm, 19 November 2024	Applications sent to the Selection Panel for review	All applicants informed of the outcome of their application

# **Further queries**

If you have any further questions or queries related to this scheme, please refer to the <u>FAQs</u> section on our website or email <u>research@raeng.org.uk</u>

# **Annex 1 – Subject category**

### 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.