

# **Access Mentoring Applicant Guidance**

## **UK Intelligence Community**

### **Postdoctoral Research Fellowships 2025**

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#### **Rationale**

The Academy’s overarching goal for 2025 is to harness the power of engineering to build a sustainable society and an inclusive economy that works for everyone. As part of delivering this goal, the Academy will work to foster talent and diversity so that the UK has a world-leading and truly inclusive engineering workforce. This should be reflected in the awardees of the Academy’s grant schemes.

#### **Aim**

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.

The process will be run in the 2025 [UK Intelligence Community \(IC\) Postdoctoral Research Fellowships](#) call (Tuesday 29 April 2025 deadline).

**Access Mentoring should not be used by universities as a mechanism to influence internal selection or shortlisting processes.**

**Candidates who undertake Access Mentoring are expected to submit a full application to the UK IC Postdoctoral Research Fellowship scheme.**

## **UK Intelligence Community Postdoctoral Research Fellowships summary**

The Government Office for Science offers UK Intelligence Community (IC) Postdoctoral Research Fellowships to outstanding early career science or engineering researchers. These Research Fellowships are designed to promote unclassified basic research in areas of interest to the intelligence, security, and defence communities. The Centre for Protection of National Infrastructure, Defence Science and Technology Laboratory, Home Office, the National Cyber Security Centre, and UK National Authority for Counter-Eavesdropping are among the organisations represented in the UK Intelligence Community for this scheme.

Each year members of the IC identify research topics, and the Research Fellows work locally with their University Research Advisor to develop and submit research proposals that align with the topics. The research is conducted by the Research Fellows while working in partnership with their University Research Advisor and collaborating with an advisor from the Intelligence Community (IC Advisor).

The IC Advisor is the government representative for each topic. They are the responsible party from the government to track that the research of the UK IC Postdoctoral Research Fellow is in line with aims of the research topic.

The Research Fellowships are aimed at early career researchers from all branches of science and engineering who have up to five years postdoctoral experience. Only citizens of Australia, Canada, the EEA, New Zealand, Switzerland, the UK or the US can apply. If you hold dual citizenship, you are eligible to apply provided that at least one of your citizenships is from one of these countries.

**Note:** nationality restrictions and security checks are now required by The Government Office for Science. This is to mitigate risks in the researchers' relationships with UK government and to safeguard awardees. Nationality is a protected characteristic under the [Equality Act 2010](#), however exceptions for the purpose of safeguarding national security are permitted.

## Common errors in UK Intelligence Community Postdoctoral Research Fellowship applications

The most common reasons applications are unsuccessful are given below:

<b>Topic</b>	The proposal does not meet the chosen research topic and requirements.
<b>Track record</b>	Applicants' research track record is not strong and relevant to the chosen research topic.
<b>Collaboration</b>	Unclear on potential collaborator plans including industrial/clinical collaborations and clear routes to impact and exploitation.
<b>Competitors</b>	Not knowing and acknowledging competitors.
<b>Vision</b>	Vision and ambition not clearly explained in line with the chosen research topic and requirements.
<b>Novelty</b>	Proposal lacking novelty, or not articulating how the proposed work will address the research topic.
<b>Realistic</b>	Unrealistic in terms of overstating potential impact. Also, milestones, resources, and the applicant's ability.
<b>Support</b>	Lacking strong letters of support from the host institution, University Research Advisor or industrial partner and potential collaborators.
<b>Communication</b>	Inconsistent/unclear information provided in the application form.

### Eligibility

Applicants will need to meet the following criteria to qualify for Access Mentoring:

1. Meet the eligibility criteria for a Royal Academy of Engineering [UK IC Postdoctoral Research Fellowship](#).
2. To be from an underrepresented group in engineering, specifically:
  - **Women**
  - **Black people (including any mixed ethnicity groups that include Black ethnic backgrounds)**
  - **Disabled people**

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

All candidates, including those from the identified underrepresented groups, must meet the assessment criteria for the UK IC Postdoctoral Research Fellowship scheme, detailed in the [applicant guidance notes](#).

Eligible applicants are not obligated to undertake Access Mentoring.

## **Mentors**

Access Mentors will be Fellows of the Academy or UK IC Postdoctoral Research Fellowship alumni.

## **Mentor/mentee pairing**

- Mentees will be matched with a mentor on a first come, first-served basis.
- Mentees will be matched with a mentor at the Academy's discretion.
- Mentor and mentees will not be matched based on research discipline or any other criteria.
- Mentees will be matched with a mentor up to the capacity of the mentors.
- Mentors will be from a different institution to the applicant.
- A mentor may have multiple mentees.

## **Mentor role**

Access Mentors will provide the applicant with advice in producing a high-quality application aligned to expectations of the scheme. The applicant is not obligated to follow the Access Mentor's advice and should use their judgement and act accordingly in their best interest and that of their proposal. The mentor is not responsible for the outcome of the application. Mentors will not review their mentees application in the scheme review period.

An Access Mentor does:

- Read the application and suggest areas of improvement
- Listen and give their time
- Support, encourage and challenge
- Provide a framework to look at options, to understand implications and to plan future action
- Share experiences where relevant
- Signpost, if asked, information and resources – including people/networks.

An Access Mentor does not:

- Collaborate on research
- Apply jointly for grant funding
- Get involved in matters relating to status, promotion, or payments
- Directly act on behalf of a mentee
- Judge the actions the mentee takes.

## **Format**

Applicants will meet with their allocated mentor for a 1-2-1, one-hour meeting (approximately) at their mutual convenience. Mentors will receive a draft copy of the application in advance of the meeting. Applicants should ensure that the proposal is at a sufficient level of maturity to maximise their time at their mentor meeting.

The UK IC Postdoctoral Research Fellowships scheme deadline is 29 April 2025. The mentor meeting will take place no later than 22 April 2025 (one week before the scheme deadline).

Meetings will be held virtually. If both the mentor and mentee agree, meetings may be held physically. Any subsequent meetings are at the discretion of the mentor and the mentee.

**Once the application has been submitted the Access Mentoring relationship officially ends.** Once the application has been submitted the mentor will not provide any further advice or support on the application.

The Academy and mentor are not liable for the information that is disclosed by the mentee.

### **Application limit**

There is no limit on the number of Access Mentoring applications an institution can submit for the UK IC Postdoctoral Research Fellowship scheme. Providing the candidate meets the eligibility criteria and submits a full application to the grant scheme.

**PLEASE NOTE:** 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.

**PARTICIPATION IN ACCESS MENTORING DOES NOT GUARANTEE THE APPLICATION WILL BE SUCCESSFUL.**

**ACCESS MENTORING IS CONFIDENTIAL. ALL CANDIDATES ARE TREATED EQUALLY. CANDIDATES WHO RECEIVE ACCESS MENTORING ARE NOT DISCLOSED TO THE REVIEW PANEL.**

### **Application form**

Access Mentoring applications are to be submitted via the Academy's [grant management system](#). The Access Mentoring application process is separate to that of the UK IC Postdoctoral Research Fellowship. Applicants should ensure they adhere to the UK IC Postdoctoral Research Fellowship application guidance.

Access Mentoring application **deadline is 4pm Tuesday 1 April 2025**. This is subject to capacity of mentors being reached and may close sooner.

## **1. Applicant details**

### Q. Applicant name and contact details

Please provide your name and preferred contact details. You should also provide the details of the host institution where the UK IC Postdoctoral Research Fellowship will be held and confirm that this is the 'host organisation'.

### Q. UK IC Postdoctoral Research Fellowship eligibility

Applicants will need to meet the eligibility criteria for the UK IC Postdoctoral Research Fellowship. Please confirm that you have understood and met the Research Fellowship eligibility criteria by stating your UK IC Postdoctoral Research Fellowship application reference number. The application reference number will be in the format of **ICRF-2526-9-xxx**.

Q. Access mentoring eligibility

To qualify for access mentoring applicants will need to confirm they are from an underrepresented group in engineering, specifically:

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

Q. Mentoring

What are the key attributes you would look for in a mentor and how do you think they would be able to help you? What specific areas would you like advice on?

100 words maximum.

**2. Project details**

Q. Project title

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

Q. Project summary

Describe the research in terms that can be understood by a non-specialist reader. 100 words maximum.

Q. Research topic

Select one of the research topics relevant to your application. See the [applicant guidance notes](#) for research topic descriptions.

01	Novel S&T solutions for unexpected loss of Positioning, Navigation and Timing (PNT) capabilities
02	Preparation, quantification and characterisation of trace explosive samples
03	The psychology of intuition - the implications associated with creativity and cognitive bias for the security community
04	Machine learning trained fingerprinting of the near field measurement
05	Light weight metamaterial ultrawideband frequency absorber
06	Utilizing a modern mobile to provide a level of TSCM capability
07	Utility of synthetically generated data for training or testing AI/ML systems
08	Bio-manufacture of quantum technology
09	Novel approaches to space domain awareness Radio Frequency Satellite Characterisation
10	Improved spatial resolution for optical surveillance using distributed apertures
11	Ocean acoustic modelling for superior environment intelligence
12	Aging of fingerprints. Can fingerprint deposition time be determined from crime scenes/objects?
13	Exploiting biology for overmatch compute advantage

14	Integrating multimodality and context to automatic language analysis
15	Barriers to adoption of a security-minded approach to information management
16	Can obscured biometric markers be detected from crime scenes/objects with skin barriers in place?
17	Autonomous AI-powered red teaming for enhanced cybersecurity
18	Novel methods for structural health monitoring and detection of faults
19	Identifying hazardous materials using spectroscopic or quantum sensing techniques
20	Wideband Electromagnetic field measurement with a low cost, size, weight and power Quantum sensing solution
21	Advanced processing for real-time RF mapping
22	Central bank digital currency technology: the impact on global finance and implications for national security
23	Performance improvement from antenna diversity from space platforms
24	Development high-throughput informatic tools to support proteomic analysis in complex samples
25	Advanced Techniques for Antenna-Receiver Performance Enhancement and Miniaturization (ATARPEM)
26	Challenges in maintaining professional and personal boundaries online or in person with others
27	Using AI to power synthetic biology applications

Q. Please provide keywords relating to the project

You may wish to include relevant words from the subject categories provided.  
10 words maximum.

### **3. Declaration**

Q. Applicant declaration

I confirm here and by submitting this application that:

- I have read and accept the application guidance and other information regarding this scheme, which is provided on the website of the Royal Academy of Engineering (the Academy)
- all the information submitted herein is wholly accurate at the time of submission, and I will update the Academy of any material changes which may affect the application
- I meet the eligibility criteria for the Academy's Access Mentoring scheme
- I meet the eligibility criteria for the Academy's UK Intelligence Community Postdoctoral Research Fellowships scheme
- I will submit a full application to the Academy's UK Intelligence Community Postdoctoral Research Fellowships scheme
- I have the express permission of any individuals whose contact details I have shared as part of this application process, to share these details with the Academy.

Furthermore, I acknowledge that the Academy may disclose the information contained within this application to external parties for the purpose of assessing the application.

Please tick the checkbox once you have read and understood the declaration included in the application form. Once the entire application form is completed, a grey 'submit application' button will become available to the top right of the screen.

Q. Marketing: where did you hear about access mentoring?

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, but you may view it from your GMS account.

**Timeline**

<b>Milestone</b>	<b>Date</b>
Access Mentoring call opens	December 2025
UK IC Postdoctoral Research Fellowship call opens	December 2025
Access Mentoring application deadline. This is subject to capacity of mentors being reached and may close sooner	<b>4pm, 1 April 2025</b>
Mentor-mentee pairing	December 2024/April 2025
1-2-1 meetings	Before 22 April 2025
UK IC Postdoctoral Research Fellowship call deadline	<b>4pm, 29 April 2025</b>

**Feedback**

On completion of the Access Mentoring process, applicants will be asked for feedback via a survey on the Access Mentoring process so it can continue to be refined and tailored to be of most value.

For all queries, please contact the Research Team at [research@raeng.org.uk](mailto:research@raeng.org.uk).