

## **NuSec Research Collaboration Grant**

### **Guidance for Applicants**

The Research Collaboration Grant replaces our previous NuSec-NNSA collaboration grants. The grants support UK researchers working in areas of nuclear security and non-proliferation, either for collaborative work with colleagues in the US, or for research activities solely in the UK.

Please refer to the relevant sections in the Research Collaboration Grant application form.

#### **Eligibility**

Applications can be submitted by researchers working either at UK Universities or at government-funded research laboratories. In general, the eligibility criteria for collaboration grants will follow the UKRI rules governing eligibility for grant funding. In line with normal UKRI funding criteria, applications cannot be accepted from researchers working in industry, in commercial laboratories, or from sole traders/consultants. Researchers from industry are welcome to be a collaborative applicant on a proposal but cannot be in direct receipt of grant funds.

Applications should be submitted by a member of academic staff or a senior research scientist. This can be on behalf of a PhD student or research associate as required. Due to the 80% funding offered by this scheme, the applicant must be able to confirm that 20% of the project cost will be made available from their host institution.

The scope of the programme is focussed on technologies for nuclear security, which will include the following topics:

- Machine learning and big data challenges
- Advanced detection methods for nuclear fuel cycle monitoring.
- Radiation Detection, including detector development, digital pulse processing, and new materials for radiation detectors.
- Novel imaging techniques, including compact gamma and neutron imaging systems, cosmic ray muon imaging of large objects, and real-time CT imaging methods.
- Robotics and remote inspection technologies.
- Additive Manufacturing for non-proliferation technologies.

The technical scope of the collaboration grants is wider than the normal scope of the STFC NuSec network and covers all nuclear security topics including non-proliferation, civil nuclear and radiochemistry.

## Support Mechanisms

The grant funding available to UK researchers will offer a range of funding mechanisms to support collaborative projects with the NNSA, as described in Table 1.

Type	Examples activities	PI Eligibility	Maximum project cost
Postdoctoral Research Projects	PDRA support for up to 12 months, FEC costings.	Academic	£100,000
Student Interns/Summer Projects	Undergraduate summer project (Max 2 months at the <a href="#">SEPNET Stipend rate of £1,450 per month</a> )	Academic	£2,900
Travel Grants:			
<ul style="list-style-type: none"> <li>Research Collaboration</li> </ul>	Visiting a US lab to participate in research	PhD Student, PDRA, Academic	£10,000
<ul style="list-style-type: none"> <li>Conferences and Training</li> </ul>	Research Conferences, Workshops or Training Events	PhD Student, PDRA, Academic	£2,000
<ul style="list-style-type: none"> <li>Staff Visits</li> </ul>	Staff visits & collaboration building	PDRA & Academic	£2,000

*Table 1: Support mechanisms, eligibility, and funding limits for the collaboration grants*

Please note that any NuSec award will be made at 80% of the requested project costs. The applicant will need to demonstrate that the remaining 20% of the project costs will be provided by their host institution. The total project costs should not exceed the maximum amounts shown in Table 1.

### Section 1: Your Details

Applications should be submitted either by a member of academic staff or by a senior research scientist. This can be on behalf of a PhD student or research associate as required.

### Section 2: Project Outline

Enter the expected start and end dates for the project. These dates should accurately reflect the duration of the project.

Chose the type(s) of funding you are applying for. There are 3 types of funding offered:

- PDRA Research Project.
- Undergraduate Internship / Summer Project
- Travel grant. This includes research visits for PhD students or PDRAs, attendance at a conference/workshop/training event, staff visits for meetings or collaboration building.

Note: one application can include more than one type of funding, e.g., a PDRA project combined with some travel funds.

### **Section 3: Research Projects:**

**Research Description** (max 1000 words). You should include a summary of the scientific aims and methodology of the research, describing what you hope to achieve by the end of the project. Explain the novelty of the work and its potential impact in the area of Nuclear Security.

**Research Team** (max 1000 words). Describe the team which will be carrying out the work, and your track record in this area. Give details of the PDRA if known and explain why they are a good match for this project.

**Research Plan** (max 1000 words). Describe the planned schedule for the research, and the expected outputs. List any key dates and milestones. Identify any particular risks and describe how these could be mitigated.

### **Section 4: For Undergraduate Internship / Summer Projects:**

Applications for undergraduate internships or summer projects must be submitted by the academic supervisor, not by the student. Student projects can include a company as a collaborator, provided that the lead applicant is based at a University, and in this case the funds will be awarded to the University. Funds cannot be awarded directly to a company or commercial laboratory.

The student project will normally be located at the applicant's University. For projects with a collaborating company, the student can be located and locally supervised at the company.

**Describe the objectives of the student project** (max 500 words). You should include a summary of the technical work, a schedule describing how this will be achieved, and any relevant experience of either yourself or your US partner in this area. Describe the supervisory arrangements for the project.

**Student Details** (max 500 words): If a student has been identified for this work, please give details of their name, programme of study and any relevant experience they may bring to this project.

### **Section 5: Travel Grants:**

**Types of travel grant.** Travel grants are awarded for different functions, as shown in Table 1.

*Research Visit:* longer visits for PhD students or PDRAs to carry out collaborative research with a US partner. The typical duration is normally 2-4 weeks.

*Conferences and Training:* Attendance at a research conference, workshop, or training event. All graduate students and staff are eligible to apply for this support.

*Staff Visits:* shorter visits for collaboration-building events such as meetings, research discussions or seminars, with a normal duration of up to one week. PDRAs and Academic Staff are eligible to apply for this support.

**Describe the objectives of the travel grant** (max 500 words). You should describe the purpose of the travel and the places that you will be visiting, with dates. Give details of any conference, workshop, or event that you are attending. For staff visits, describe who you will be meeting and the purpose of the visit.

**Travel details** Give details of the dates and places of the proposed travel, including any additional names of those travelling (max 500 words).

**Section 6: Financial Details**

Financial Workbook, use to record the project costs. This information is required in the online application form.

Only some of the items below are applicable, depending on the type of grant requested.

Item	Value	Comment	See Note below
<b>PDRA Research project</b>			
Basic Salary (£)		State the point on the local salary scale and the amount of the annual basic salary.	
Time Allocated		State the duration of the award (weeks or months), and the fraction of time that the postholder will be allocated to the project, e.g., FTE=50% or FTE=100%.	
Salary Cost (£)		The total amount of salary paid to the postholder for the duration of the award	
Salary Employer Contributions (£)		The total amount of employee contributions paid by the host university for the duration of the award	
<b>Total Staff Costs (DI)</b>		Total Direct Incurred salary costs for the PDRA	
Investigators Costs (DA)		Directly Allocated academic staff costs	
Estates Costs (DA)		Directly Allocated estates costs	
Other Directly Allocated Costs (DA)		Other Directly Allocated costs	
Indirect Costs		Indirect Costs	
<b>Total Staffing Costs</b>		Total of all staffing, DA, and Indirect costs. This cannot exceed £100k	
<b>Student Intern/Summer Project</b>			
Student Stipend		Describe the duration and monthly amount of the stipend – see note. State the total amount of stipend paid to the student for the duration of the award.	[1]
Research Costs		Any direct research costs claimed to support the student project – see note.	[2]
Total Studentship (£)		Total studentship costs claimed, which should be the sum of the previous 2 items.	
<b>Travel Award</b>			
Air travel (£)		Give brief details and a breakdown of air travel costs. State the destination and dates of each journey.	[3]
Other transport (£)		Give brief details and a breakdown of non-airline travel costs. State the destination and dates of each journey.	[4]
Accommodation (£)		Give brief details and a breakdown of accommodation costs, including dates and the number of nights claimed.	
Subsistence (£)		State the total amount of your subsistence costs, based on the <b>number of days multiplied by the standard subsistence rate</b> – see note.	[5]
Total travel (£)		Total must be the sum of the four travel and subsistence items above.	

## Notes

[1] Student stipend payments should normally be at the rate of £1000 per month, or pro rata. Requests to pay at a different rate should be justified.

[2] Direct costs to support the student research project can be claimed up to a maximum value of £500. A brief justification/breakdown of the requested costs is required.

[3] Air travel can only be claimed for economy class.

[4] Other travel costs will normally cover second class public transport. Requests for private vehicle, taxi use etc must be justified in the application.

[5] Subsistence costs can be stated in the application using a standard daily subsistence rate of £75 per day as an estimate of actual expenditure. The final payment of subsistence costs to the host University will be based on actual expenditure incurred (not using a fixed ‘per diem’ rate) and will follow the normal local financial regulations at the host University.

Please note that the 100% of the project costs should be itemised in each category, as applicable. Any NuSec award will be made at 80% of the project costs, in line with standard UKRI terms.

Please also include the cost totals in each category on the summary table on page 1.

## Section 7: US Collaboration Information

*NuSec actively supports collaboration with Nuclear Security US researchers within the NNSA or DTRA consortia. Collaboration with the US is not mandatory for this grant call, and applicants may apply for projects based solely in the UK.*

Please complete Section 7 if your project is in collaboration with a US partner.

This grant call can be used to collaborate with US researchers in one of the 3 NNSA consortia (ETI, MTV or NNSC) or either of the DoD/DTRA University Research Alliances (IIRM or MSEE).

**Nature of the US collaboration.** Describe the nature of the proposed US collaboration, including any existing connections you have with the proposed collaborators. How will the proposed project research/travel/training develop, or deepen, collaboration with the US partners?

**Named US collaborator.** Please give the contact name of your US collaborator, if applicable.

**Letter of Support acknowledgement.** A letter of support is required for all applications, with the exception of travel grants to attend conferences, workshops, or training events.

The letter of support should confirm that the proposed grant will initiate or develop collaboration with one of the NNSA/DTRA consortia. The letter should either be provided your particular US collaborator, or alternatively it can be written by the academic lead of the relevant consortium.

The letter of support must be emailed to [info@nusec.uk](mailto:info@nusec.uk) at the time of submission of your grant application. Your application cannot be processed until the letter of support is received.

**Section 8: Financial Contact**

Give the name, postal address, and email of the person responsible for approval and signature of any awarded contract in your finance/research office. This person must have the financial authority to approve and sign any contract which will be awarded by University of Surrey to the host university.

**Section 9: Declaration**

By confirming the declaration, you acknowledge the acceptance of the terms and conditions of the collaboration grant.

**You also acknowledge that any award and subsequent payments will be made at 80% of the requested budget, and that the host university is responsible for sourcing the remaining 20% of the project costs.**

For further information about the grant application process, please refer to the NuSec website <http://www.nusec.uk/nnsa> or email [info@nusec.uk](mailto:info@nusec.uk)