

Industrial CASE and CASE-Plus Studentship Competition 2021 Guidance for Applicants

Call opens:	6 August 2021
Call closes:	16:00 hrs 30 September 2021

Please read this guidance for applicants before completing the Je-S form, Case for Support and Non-academic/Company Details form.

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Scheme Remit – What is an Industrial CASE Award

The Industrial CASE Studentship collaborative training competition gives PhD students experience outside a purely academic environment. The competition provides support for students working on projects that involve joint supervision by a member of staff at an academic or related institution and an employee of a non-academic organisation such as a UK industrial firm, public sector organisation or charity. The projects must fall within the STFC core science programme in astronomy, solar and planetary science, particle physics, particle astrophysics and cosmology, nuclear physics and accelerator science or must aim to apply technologies or techniques developed within the programme into other areas.

Industrial CASE-Plus Studentships

The Industrial CASE-Plus Studentship competition extends the Industrial CASE competition to help students become more effective in promoting technology and knowledge transfer, should their chosen career path take them into either academic research or industry. For the first 3.5 years of the award, Industrial CASE-Plus operates in the same way as the Industrial CASE competition. The main difference is that the student spends a further year on the premises of the non-academic partner, working full-time as an employee and gaining further technological training. During this additional year, the student is employed by the non-academic partner, at a salary equivalent to that of a new STFC postdoctoral researcher. Entry into the last year is dependent on the student demonstrating a level of achievement agreed in advance between the non-academic partner, the Research Organisation and the student.

Research Councils Joint Vision for Collaborative Training

Collaborative training involving non-Academic partners can take a range of forms, from input to training courses, to placements, to formal collaborative doctoral projects. This Vision aims to highlight the benefits of this broad range of opportunities for all parties.

Objectives

Collaborative training will provide doctoral students with a first-rate, challenging research training experience, within the context of a mutually beneficial research collaboration between academic and partner organisations in the private, public and civil society sectors.

Benefits to the student

Collaborative training provides students with access to training, facilities and expertise not available in an academic setting alone. Students benefit from a diversity of approaches with an applied/translational dimension. Students have an opportunity to develop a range of valuable skills and to build networks beyond academia. These opportunities should significantly enhance their future employability.

Benefits to the academic / partner organisations

Collaborative training encourages productive engagement between partners. The partners benefit from engaging with motivated doctoral students undertaking cutting-edge research relevant to the organisation's priorities and objectives. Collaborative training provides opportunities to explore novel research collaborations or build on, and strengthen, current partnerships.

Defining excellent project-based collaborative training

Projects should be jointly conceived doctoral studentships or shorter projects built around a placement opportunity with a partner organisation. A key aspect is that they include time working in the partner organisation, alongside their employees. They should be structured to include a level of detail and reporting appropriate to the scale of the project. All partners, including the student, should be clear on the objectives, outputs and outcomes, for all parties, before the project commences and commit appropriate time and resources to ensure delivery. Key aspects:

High-quality project

A challenging and realistically achievable project. Projects might be short-term placements or doctoral projects but will stimulate excellent research with the potential for innovation and impact. Through a truly collaborative approach, it provides tangible benefits for the student and partners.

High-quality training environment

Through access to distinctive but complementary environments, partners provide a stimulating framework for research training and wider development activities. Joint supervision or mentoring gives a unique perspective on research in a non-academic environment and the impact of collaborative research.

High-quality student experience

Provides an enhanced training experience enabling the student to acquire a different set of skills and expertise and gain an appreciation of the practicalities of research and innovation in a non-academic context. The student gains a better understanding of how research may have an impact in a wider context which will enhance their future career prospects.

Defining excellent collaborative training beyond projects

Non-academic organisations can collaborate on doctoral training beyond project-based interactions. For example by engaging in the co-development or co-delivery of training modules or more targeted development session^[1].

Benefits to the partner/academic organisation

The academic organisation has access to first-hand experience and expertise in terms of delivering training which is tailored to the needs of the non-academic sector. By contributing to student development activities, partner organisations are enabling students to develop expertise which directly meets their needs and to gain a better understanding of the sector.

They can engage with more students in a way that is less resource-intensive than a projectbased mechanism.

Benefits to the student

Students get information and guidance direct from the sector. They have an opportunity to engage with experts from the non-academic sector to understand their perspectives on research and research skills and allowing them to seek advice on career development.

^[1] This does not include training packages created or delivered by commercial developers e.g. professional training providers.

Eligibility

Applications must be submitted by the academic partner through the Je-S system. Proposals may be led by either the academic supervisor at an eligible UK University or research institute or supervisor/supervisors at the non-academic partner organisation, but the application process must be completed by the academic partner, who will then be the recipient of the award.

Before preparing and submitting a proposal it is essential you ensure the non-academic partner and academic institution are both eligible.

Organisations eligible for Research Council funding cannot act as a non-academic partner. In most cases, the non-academic partner will be a company and must have an established UK-based research and/or commercial production capability.

Organisations eligible to receive STFC grant funding and those <u>independent research</u> <u>organisations</u> approved as eligible to hold grants may act as the academic partner but not as the non-academic partner. Non-University academic-related partners would need to host the studentship in conjunction with the University where the student would be registered.

Other UK-based organisations (including UK subsidiaries of foreign firms) may act as the nonacademic partner if they can provide students with distinctive research training and experience not available in an academic setting. In exceptional cases, organisations based overseas may be eligible; however they must have an established UK-based research and/or production capability and be able to provide the student with an opportunity to gain skills not currently available in the UK.

Academic departments must hold STFC studentship accreditation or submit an accreditation application with their proposal. Please contact <u>studentships@stfc.ukri.org</u> for further information.

Scheme Value and Costings

STFC Funding Contribution

Funding for 3.5 year studentships is available.

Payments to the student:

- an enhanced stipend of £1,615 per annum

Payments to the Research Organisation:

- tuition fees
- Research Training Support Grant (RTSG), a contribution towards incidental costs of training research student - £1000 per annum
- a contribution of £230 towards the cost of conference fees and UK fieldwork
- fieldwork expenses

In addition, <u>Long Term Attachment</u> (LTA) funding can be applied for through a separate approval process.

Industrial CASE-Plus have an additional year's funding; following submission of the student's thesis, additional funds will be awarded and the grant extended. The non-academic partner will pay 50% of the student's salary in the additional year; STFC will contribute the remaining 50% up to a maximum of £14,250.

Non-academic Funding Contribution

Non-academic partners are required to make a financial contribution to both the student and the project. More information can be found under <u>Non-Academic Partner Responsibilities</u>.

Withdrawal of the non-academic partner

In the event of a non-academic partner withdrawing from the Industrial CASE arrangements, STFC will continue to pay the Industrial CASE addition of £615 per annum to the student.

Subject of Research Project

The project must fall within the remit of the STFC core Science Programme (astronomy, solar and planetary science, particle physics, particle astrophysics and cosmology, nuclear physics and accelerator science) or must aim to apply technologies or techniques developed within the programme into other areas. **Projects where the remit falls under other Research Councils regardless of whether STFC facilities are used are not eligible.**

Non-academic partner responsibilities

Industrial CASE awards are for a minimum of 3.5 years. During the period of the award, the student is required to spend a period on the premises of the non-academic partner. For a 3.5 year award, the cumulative period should be no less than 9 months but this could be spread over the period of the studentship and would not normally exceed 18 months. The time spent during this period should be beneficial to the student with the non-academic partner providing access to training, facilities and expertise not available in the student's academic setting.

The non-academic partner is required to take part in recruitment and monitoring of the student and to maintain active contact with the student and academic supervisor throughout the period of the studentship. Non-academic partners (excluding SMEs – see below) are required to make a financial contribution to both the student and the project. It must include:

- A minimum annual contribution to the academic research organisation towards the cost of the project of £1,400.00;
- All additional expenses incurred by the student as a direct result of attendance at the premises of the non-academic partner, such as the cost of travel and accommodation (including the cost of flights in the case of overseas companies);
- All additional expenses incurred due to the use of equipment and facilities, costs associated with conference and meeting attendance, consumables;
- A minimum annual contribution to the student of £2,760.

Small & Medium Enterprises (SMEs)

There is no longer a requirement for SMEs to make a contribution to the academic research organisation or to the student's stipend. These costs will instead be provided by STFC. SMEs would still be expected to fund the additional accommodation and travel costs associated with attending the non-academic partner and additional expenses incurred due to the use of equipment and facilities. SMEs can make additional financial contributions.

Definition of an SME is:

- The company must have a staff headcount of <250
- The company must have a turnover not exceeding €50m AND/OR a balance sheet total not exceeding €43m

Industrial CASE-Plus Studentships only

During the additional year, the student is employed by the non-academic partner at a salary equivalent to that of a new STFC postdoctoral researcher. STFC will contribute 50% of the salary cost incurred by the non-academic partner (up to a maximum STFC contribution of \pounds 14,250). STFC will not commence funding for the additional year until the PhD thesis has been submitted.

How to Apply

Applicants are reminded that their project must be within the remit of STFC core science programme in astronomy, solar and planetary science, particle physics, particle astrophysics and cosmology, nuclear physics and accelerator science; or must seek to apply techniques and technologies developed within the programme into other areas. Applicants may not have the same application under consideration by more than one Research Council at any time.

If in doubt, applicants should consult <u>Studentships</u> well before the submission deadline to confirm which Research Council is best placed to consider their proposal.

Submitting an Application via Je-S

Proposals should be submitted by a supervisor from a Research Organisation eligible to be the academic partner through Je-S.

On the Je-S homepage, please select 'Documents' followed by 'Create New Document'. From the drop down list select:

CouncilSTFCDocument TypeStudentship ProposalSchemeIndustrial CASECallIndustrial CASE 2021/Industrial CASE Plus 2021

Project Details (Up to 150 characters)

Assign a reference to this proposal so that it is easily identifiable to you in the "Studentship Proposal – Current Documents" menu within Je-S.

<u>Title</u>

Please give the project title for your proposal.

Research Organisation

The lead organisation is the academic institution and is responsible for the submission of the proposal.

Please enter the department within which the project will be based.

Grant Holder

The lead supervisor of the project at the academic institution. Give details of the person to whom all STFC correspondence should be sent to regarding the processing and outcome of the proposal and to whom any related queries should be directed.

Project Summary (Up to 4000 characters)

Please provide a description of the proposed project and the relevance of the project to STFC's remit in a manner for a non-specialist reader. This summary will be made publicly available if the proposal is funded. Please ensure that your proposal project is within remit prior to submission.

Please include details of your collaborating partner.

This summary should be considered as the 'abstract' for your proposal. The 4000 character limit is an agreed length for all proposals on Je-S. Please do not aim to use this limit; the Case for Support form is intended for the detailed description of the proposal.

Documents required:-

Industrial CASE Proposals require two additional document attachments:

- An Industrial CASE 'Case for Support' Proforma
- Non-academic Partner / Company Details

Industrial CASE-Plus Proposals require three additional document attachments:

- An Industrial CASE 'Case for Support' Proforma
- Non-academic Partner / Company Details
- CASE-Plus document

NOTE: all mandatory attachments must be completed using the standard <u>STFC templates</u> (except CASE-Plus document). No other attachments to those required will be considered. The documents must be submitted as pdf attachments and written as per <u>STFC Specific</u> <u>Requirements.</u> Standard Arial 11 pt is the preferred font for STFC.

The required attachments must be submitted with the Project Proposal Proforma in Je-S. We will not accept stand-alone documents.

Proposals must be received by **16:00 Hours, 30 September 2021**. Applicants should ensure proposals are submitted to their institution's submitter/approval pool a minimum of five working days in advance of this deadline; this enables institution checks to be carried out prior to final submission to us.

Case for Support Guidance Notes

THE PROJECT

Proposed project details (Up to 2500 characters including spaces – the content in a chart or table will be permitted in addition to this limit)

This section enables the CASE Panel to assess the scientific merit of the project; please write clearly with sufficient detail.

Give references to STFC's strategic priorities and explain how the project is aligned to STFC's core programme.

Provide a detailed description of the milestones, methodology, experimental approaches, study designs and techniques to be used. You may use a Gantt chart to detail the milestones. Highlight plans which are particularly original or unique.

Identify the extent to which the project is innovative both commercially and technically. Highlight and explain the timeliness and novelty of the project. Describe any evidence you have to substantiate your belief that the intended project is innovative.

It is the nature of research that the outcomes of a project cannot be predicted. It is important that the key technical and other risks to the successful delivery of the project are identified in the proposal, and contingency plans are in place to ensure the project has successful outcomes. Therefore, identify key risks and uncertainties of the project and provide a risk analysis for the project content and approach. Explain how the project would mitigate these key risks and alternative approaches that may be used in contingency. Give details of the arrangements that are in place for managing risks (both technical and environmental). You may provide this information as narrative or within a table (example below).

Risk	Unmitigated severity*	Mitigation	Mitigated Severity*

*Numerical scale – 1=negligible to 5=severe

IMPACT (Up to 1500 characters including spaces)

Give details of the economic, social and environmental benefits that the project is expected to deliver. List any beneficiaries from the research, for example those who will benefit from the proposed research- directly or indirectly. It may be useful to think of beneficiaries as 'users' of the research outputs.

Beneficiaries must consist of a wider group than that of the investigator's immediate professional circle carrying out similar research.

Economic – Highlight benefits to users, suppliers, the broader industrial markets and the UK economy. The application should identify and quantify where possible the benefit to each of the beneficiaries.

Social – Quantify any expected social impacts, either positive or negative, on, for example, the quality of life, social inclusion/exclusion, education, public empowerment, health and safety, regulation, diversity and any expected impact on Government priorities.

Environmental – If applicable, demonstrate how the project will benefit the natural environment.

ACADEMIC RESEARCH ENVIRONMENT, TRAINING AND SUPPORT (Up to 1500 characters including spaces)

Give details of the academic training and research environment and explain how this will benefit both the student and the project. Provide a clear project plan of how the project will be managed, including how the student's time will be split between the academic RO and the non-academic partner research training environment and how these fit in with the aspects of the project. Give details of how the training and research environment will enrich the student's experience.

You may wish to include:

- integration with existing students;
- interactions with other researchers and staff;
- opportunities to participate in interdisciplinary teamwork;
- current infrastructure, expertise, facilities and technologies available in the department/group and the organisation;
- a timeline showing how the student's time will be split between the academic RO and the non-academic partner.

Research Training

Give details of how you will address the project-specific needs of the student, highlighting how this addresses strategic skills gaps (where relevant) and how the project will be managed so that the work at the academic RO can derive greatest benefit from the placement for the student.

You may wish to include:

- appropriate practical and technical research training;
- specific training courses and seminars for example computing and statistical techniques;
- wider skills training for example health and safety, business and finance related training and transferrable skills and employability

NON-ACADEMIC PARTNER RESEARCH ENVIRONMENT, TRAINING AND SUPPORT (*Up* to 2500 characters including spaces)

Give details of the non-academic training and research environment and explain how this will benefit the student and the project. Clearly state what facilities will be available and how the project will relate to them.

You may wish to include:

- Integration with existing students, if applicable;
- interactions with other researchers and staff, such as technicians, health and safety, lab scientists, senior scientists, IP and legal reps, sales, managers, directors, CEO, CSO;
- opportunities to participate in interdisciplinary teamwork;
- current infrastructure, expertise, facilities and technologies available in the organization.

Give details of how you will address the project-specific and generic training needs of the student, highlighting how this addresses strategic skills gaps (where relevant) and how the project will be managed so that the work while at the non-academic partner will be carried out with greatest benefit to the student.

You may wish to include:

- appropriate practical and technical research training
- specific training courses and seminars
- internal arrangements for planning, managing and monitoring its provision of postgraduate research training
- computing
- statistical techniques
- wider skills training for example health and safety, presentation and communication skills, team working, time-management, business and finance related training
- Intellectual property related training

MANAGEMENT AND MONITORING (up to 2000 characters including spaces)

<u>Supervisors</u>

You must provide details of the supervisors, both academic (4.1) and non-academic (4.2), that are connected to the project. There should be a minimum of two entries in total. i.e. at least one academic and at least one non-academic. One supervisor must be identified as the main supervisor.

Conflicts of Interest

Where the academic partner is also involved with the non-academic partner e.g. spin-out companies, provide details of how both the academic and non-academic supervisor roles will be defined to give the student the best all round experience. Applicants should declare any interests which anyone named on the application has with any individual, organisation, project partner or supplier involved in the research, or any interest that might be perceived to influence the applicant's objectivity in conducting the research. Guidance on providing declarations of interest can be found on the <u>UK Research and Innovation website</u>.

Monitoring Arrangements

Clearly show the roles that the academic department and the collaborating organisation will play to ensure high quality supervision of the student and the proper monitoring of student progress throughout the duration of the award.

Provide details of how you will monitor the student and their training needs during the course of the studentship, including:

- Involvement of staff other than the principal academic supervisor in the supervisory process (if appropriate);
- How you will manage the partnership with the industrial company to ensure high quality supervision of the student and the proper monitoring of student progress;
- Opportunity for students to provide feedback.

THE COLLABORATION (Up to 4000 characters including spaces)

Explain how the collaboration will provide the student with a challenging research training experience, within a context of a mutually beneficial research collaboration between the student, academic and non-academic/industry partner. Explain how the project will be managed in order to maximise the benefit to all parties in terms of student training and scientific output.

- Provide the unique qualities of the collaboration. How will the collaboration benefit the proposed project? Can the project be done without the collaboration?
- How will the collaboration benefit the training experience of the student?
- How will the collaboration benefit both the academic and non-academic partner?
- Give details of what IPR arrangements are in place.
- Provide details of specific training that will only be carried out when the student is on placement at the non-academic partner which could not be carried out at the academic partner .e.g. Health & Safety, marketing & sales, production.
- Give comprehensive and technical details of the anticipated work the student will complete while at the non-academic partner – refer to timelines if appropriate.
- Give details of any commercial agreements in place.

CASE-Plus document

An additional document is required for a CASE-Plus application describing how the research programme in the additional year will relate to that undertaken in the 3.5 years leading to the PhD. Give details in terms of time, cost, quality and achievement of how the additional year will enhance the previous work. Explain what further technology training the student will receive to assist with promoting technology transfer. In addition, it should describe how this extra year will help the student become more effective in promoting knowledge transfer should their chosen career path take them into either academic research or industry.

Explain what the benefits will be to the student, the academic partner and the non-academic partner in the additional year.

Assessment Criteria

The primary aim of Industrial CASE is to provide training that is high-quality, that involves experience outside a purely academic environment and that seeks to further the STFC core science programme or to apply the knowledge and capability developed within the programme to areas where it will have a societal or economic impact.

The key assessment criterion will be the overall quality of training offered by the academic institution and the proposed non-academic partner, in line with the "Researcher Development Statement" developed by Vitae which outlines the areas of professional development that research organisations should be addressing in their training programmes. <u>The Researcher Development Statement</u> replaces the Research Councils' Joint Skills Statement.

The assessment panel will not necessarily be experts in your field. Therefore, please pitch your application, particularly your Case for Support, at a non-specialist audience drawn from the broad fields of astronomy, solar and planetary science, particle physics, particle astrophysics and cosmology, nuclear physics and accelerator science. Weighting will be applied to the technical aspect of proposals in the project section however all other criteria will be marked equally. The proposal must be of acceptable technical and quality, have a high enough level of industrial collaboration and support and have an acceptable project management plan to be considered for funding.

The assessment panel will consider the following:

- 1. THE PROJECT
 - Is the proposed project well-aligned to STFC's core programme?
 - Is the project of a sufficient quality for a PhD project?
 - Is the project achievable for the student in the time frame and are the milestones realistic?
 - What is innovative about this project?
 - Is there an explanation of the risks (technical, environmental), how they will be tackled and alternative approaches that may be used in contingency?
- 2. IMPACT PLAN
 - What economic, social & environmental benefits, beyond that of the investigator's immediate professional circle, is the project expected to deliver?

3. RESEARCH ENVIRONMENTS, TRAINING AND SUPPORT <u>Academic</u>

- What is the overall quality of the academic research environment and training programme to be made available to the student?
- Does the academic partner show a level of commitment to the studentship and provide interactions with other students and researchers? <u>Non-Academic</u>
- What is the overall quality of the non-academic environment and the research training programme to be made available to the student by the non-academic partner?
- What facilities does the non-academic environment provide for research training and does the proposed project relate to the facilities available?

4. MANAGEMENT & MONITORING

- What is the overall quality of the proposed management of the student with the non-academic partner?
- Are there suitable arrangements in place for supervision of the student at both the academic and non-academic partners?

- Are there provisions in place for monitoring progress?

5. COLLABORATION

- Has a case been made for the collaboration?
- Does the application demonstrate a robust partnership?
- How will the student benefit from the collaboration?
- How will the awarding of a studentship benefit the academic partner?
- How will the awarding of a studentship benefit the non-academic partner?
- Are there suitable IPR arrangements in place?
- Are there specific details on specific training that will be carried out when the student is on placement at the non-academic partner which could not be carried out at the academic partner?

6. INDUSTRIAL CASE-PLUS ONLY

- How does the project in the additional year enhance the work of the previous 3.5 years in terms of time, cost, quality and achievement?
- What additional technological training will the student receive?
- How will the student become more effective in promoting knowledge transfer?
- How will the awarding of the additional year benefit the academic and non-academic partner?

Scheme Conditions and Features

Training Grants

Individual studentships will be awarded in the form of Training Grants (TGs) commencing in the 2022/2023 academic year. The award is for 3.5 years of funding profiled over the 4 years of the Training Grant.

STFC Industrial CASE Awards are governed by the core <u>Training Grant Conditions</u> that have been developed for use by all Councils unless otherwise stated. Applications are accepted and awards made on the understanding that research organisations and award holders agree to observe the terms and conditions and the scheme requirements set out in the offer document.

PhD examiner

Research Organisations are encouraged to include an industrial external examiner for the PhD.

Reporting

STFC are regularly asked by government to demonstrate the impact of their funding, including the impact of supporting studentships. To ensure that we can continue to make a good case for student support to the government, we collect 'outcomes' information from studentship funding (such as publications and collaborations) via <u>Researchfish</u>, the Research Councils' harmonised research outcomes collection system.

An STFC funded student is responsible for providing information about the outcomes from their studentship. They will be invited to enter and submit data to Researchfish every year until three years after their studentship has finished (since many outcomes occur towards or past the end of the studentship). They should make sure their contact details are kept up to date for this purpose.

Contact

For any queries regarding the Industrial CASE Studentship Scheme please contact studentships@stfc.ukri.org

Does your proposal fall into the UKRI STFC scientific remit?

Does your Department have STFC studentship accreditation?

Is the non-academic partner organisation eligible to act as a project partner on this scheme?

Have you adhered to character limits in your application?

Does your CASE proposal cover all assessment criteria?

- Project Innovation, quality and risk
- Impact Potential wider benefits
- Environment Training and Support
- Management and Monitoring arrangements Quality and provision
- Collaboration Robust partnerships and benefits.

Does your CASE/Plus proposal cover the criteria above and the following criteria?

- Additional year enhancement benefits, time, cost and achievement
- Additional technological training
- Knowledge transfer
- Benefits to academic and non-academic partner

Have you used the 2021 template attachments?

- Case for Support Proforma
- Non-academic Partner / Company Details
- CASE-Plus document (CASE Plus only applications)