

Advanced Fatigue & Structural Integrity Engineer (KTP Associate at Leonardo Helicopters, Yeovil location)

**College of Business, Technology and Engineering (BTE)
School of Engineering and Built Environment**

Fixed term for 16 months

Full time: 37 hours per week

£40,000 to £45,000 per annum, dependent on experience

Job number: 120367

Closing date: 15/11/26 at 23:30

The role

As part of an Innovate UK funded Knowledge Transfer Partnership (KTP) between Sheffield Hallam University and [Leonardo Helicopters](#), you'll lead a project to introduce and embed advanced multiaxial fatigue assessment methods into Leonardo's structural design and certification activities.

The project will integrate specialist fatigue-analysis approaches with existing finite element workflows to improve the assessment of fatigue-critical helicopter components.

This appointment carries a range of benefits including:

- A generous training and personal development budget, with allocated time to further develop your technical skills.
- Gaining experience in managing and delivering a high-profile project for the company.
- Automatic inclusion in our pension scheme.
- The opportunity to register for a higher degree for which tuition fees will be waived (if applicable).
- Explore collaborative research opportunities with the academic and industrial supervisors based on project findings.

Although the appointment duration is 16 months, the project offers an excellent opportunity to develop specialist expertise in fatigue, structural integrity and rotorcraft engineering while working within a world-leading engineering organisation.

Knowledge Transfer Partnerships (KTP)

Knowledge Transfer Partnerships help businesses improve their competitiveness and productivity through the better use of knowledge, technology and skills available within the UK knowledge base.

Each partnership employs a high-calibre Associate to lead a project that is strategically important to the business, supported jointly by the company and the university. www.ktponline.org.uk

The Company Partner - Leonardo Helicopters

Leonardo is a global high-tech company and one of the world's leading organisations in aerospace, defence and security. Leonardo Helicopters' Yeovil site is a major UK centre for rotorcraft engineering, design, development, manufacture and support. The successful candidate will be embedded within the Fatigue and Damage Tolerance team and will work with specialists across structural analysis, design, testing, materials and project engineering.

Within the KTP Framework the KTP Associate is employed by Sheffield Hallam University but will undertake their work on a daily basis at the company's premises. The University will have full responsibility for the duties and outputs of the role, working in conjunction with the company partner.

Location

The post will be based at Leonardo Helicopters, Lysander Road, **Yeovil, Somerset, BA20 2YB**, with visits to Sheffield Hallam University as required for supervision, training and project activities.

Security checks requirement

This role is subject to pre-employment screening in line with the UK Government's Baseline Personnel Security Standard (BPSS). An additional range of Personnel Security Controls referred to as National Security Vetting (NSV) may apply, this could include meeting the eligibility requirements for The Security Check (SC) or Developed Vetting (DV). For more information and guidance please visit: <https://careers.uk.leonardo.com/gb/en/security-and-vetting>

Sheffield Hallam University

Founded in 1843 as the Sheffield School of Design, Sheffield Hallam has exercised a powerful impact on the city, region, nation, and world. Today we are one of the UK's largest and most diverse universities: a community of around 35,000 students, 4,500 staff and 295,000 alumni around the world. We transform lives. We shape our students' futures, preparing them for whatever

they choose to do, and create knowledge that provides practical solutions to real world challenges. Our research focuses on three key themes: driving future economies, enabling healthier lives, and building stronger communities. We have an international reputation in areas such as materials science, art and design, sports science and engineering, biomedicine, and economic and social research – all delivered through our research institutes. This contributes to our standing in the Research Excellence Framework (REF). Notably, in REF 2021, 72% of our research submitted was rated world-class or internationally excellent.

Benefits

Sheffield Hallam offers [a wide range of benefits and opportunities](#) to pursue a rewarding and fulfilling [career](#) in a supportive environment. Whilst the KTP Associate is employed by Sheffield Hallam University the KTP Associate's hours and holidays are aligned to the host organisation for equity with the hosts staff.

Knowledge Transfer Partnerships (KTP)

Knowledge Transfer Partnerships is Europe's leading programme helping businesses to improve their competitiveness and productivity through the better use of knowledge, technology and skills that reside within the UK knowledge base.

Supported by a Government grant via Innovate UK, each partnership employs one or more high calibre Associates (recently qualified people) to work on a project, which is core to the strategic development of the business. [Read more about Innovate UK Knowledge Transfer Partnerships](#).

Within the KTP Framework, you will be employed by the University but will undertake your work on a daily basis at the Company premises. The University will have full responsibility for the duties and outputs of the role, working in conjunction with the Company Partner.

Location

The post will be based at Leonardo Helicopters, Lysander Road, **Yeovil, Somerset, BA20 2YB**, with visits to Sheffield Hallam University as required for supervision, training and project activities.

[Find out more about getting to our campuses](#) in Sheffield. Our main campus is next to the main Sheffield train station.

Flexible working

Colleagues who are Hybrid Workers work from home one to four days a week and from one of our Leonardo sites the rest of the time. We expect the amount of days spent onsite or at home, to vary each week depending on the needs of our business and our customers. You may find that sometimes you are required onsite all week. At other times, you may be able to work remotely all week.

We understand the need for a healthy work-life balance, so where possible we operate several flexible working schemes. If you'd like to work on a flexible basis, please contact the recruiting manager to discuss options available for this job.

Questions about the job

For informal enquiries about this job please contact Professor Luca Susmel at Sheffield Hallam University, (Head of Research, Innovation and Knowledge Exchange and Academic Supervisor for this Project).

Email: l.susmel@shu.ac.uk

Selection event

Candidates shortlisted for the role will be invited to a selection event. Details and timing will be confirmed.

- The selection event is expected to comprise an interview and a short technical presentation. Shortlisted candidates will receive the presentation brief in advance.
- The interview will be at the job's location at Leonardo Helicopters in Yeovil.

We want our selection process to be as inclusive as possible for everyone. If you are invited to the selection event, you will have the opportunity to ask for reasonable adjustments to enable you to thrive.

How to apply

All applications should be made online using the [Sheffield Hallam jobs portal](#).

Please attach a CV (3 pages max. font higher than 10) and cover letter (2 pages max. font higher than 10) to your application.

Your cover letter should clearly demonstrate what you bring to the role in line with the person specification essential and where possible desirable criteria (below), and should specifically address the following points:

- How your qualifications and experience are relevant to solid mechanics, fatigue, structural integrity, finite element analysis and engineering simulation.
- How your qualifications and experience will enable you to manage and deliver a technically challenging programme of activities within a demanding timescale.
- How your qualifications and experience will help you communicate and operate effectively in both university and industrial engineering environments.
- How you would translate advanced engineering methods into practical tools, procedures and knowledge that can be embedded within Leonardo Helicopters.

To find out more, take a look at our [guide to applying](#).

We recommend you download the job description and person specification when you apply, as this will not be available once the job has closed.

Equity, equality, diversity and inclusion

We are proud of the rich diversity of our community. Our vision is 'Sheffield Hallam: A Culture Of Inclusion'.

This means creating a diverse, inclusive and welcoming environment where people of all identities and backgrounds feel they belong.

We welcome your application irrespective of age, pregnancy and maternity, disability, sex, gender reassignment, sexual orientation, race, religion or belief, or marital or civil partnership status.

[Find out more about equity, equality, diversity and inclusion at Sheffield Hallam](#)

**We empower people from
all backgrounds to build
fulfilling careers.**



Right to work

We are unable to employ anyone who does not have the legal right to work in the UK. If you need sponsorship to undertake this role, please use the UK government's [Visas and immigration](#) pages to check your eligibility.

[More information for international candidates](#)

Please note this job may be eligible for the Global Talent Visa - UK Research and Innovation endorsement route. [Please visit GOV.UK](#) for information.

Job description

Job title: KTP Associate / Advanced Fatigue & Structural Integrity Engineer

College: Business, Technology and Engineering / School of Engineering and Built Environment

Grade: KTP Associate

Reports to: Research Fellow

Role purpose

To introduce and embed advanced multiaxial fatigue assessment methods, including approaches accounting for local stress-gradient effects, within Leonardo Helicopters' structural design and certification workflows.

Responsibilities

- Review Leonardo Helicopters' current fatigue assessment methods, finite element workflows and relevant engineering processes, identifying opportunities for the new methodology to be embedded.
- Develop a detailed understanding of the advanced multiaxial fatigue assessment methods underpinning the project, including the treatment of local stress-gradient effects.
- Perform finite element, stress and fatigue analyses of representative fatigue-critical helicopter components.
- Tailor and further develop specialist fatigue-analysis software for use within Leonardo Helicopters' engineering environment.
- Integrate the new fatigue assessment capability with existing finite element and digital engineering workflows.

- Apply and validate the methodology through two priority industrial case studies, benchmarking predictions against existing methods and available experimental or service evidence.
- Develop practical engineering procedures, guidance and demonstrator analyses to support routine application of the new methods.
- Work collaboratively with engineers across Fatigue and Damage Tolerance, stress, design, structural testing, materials and project engineering.
- Comprehensively document the methods, software and project outcomes and transfer the resulting knowledge to Leonardo Helicopters staff.
- Produce user guidance and deliver technical training to selected Leonardo engineers and internal champions.
- Manage project activities, milestones, risks and deliverables in collaboration with the industrial and academic supervisors.
- Fulfil the responsibilities of a Knowledge Transfer Partnership Associate as required by Innovate UK.

This list is not exhaustive – we may ask you to carry out other duties appropriate to the grade.

Person specification

Here are the skills, experience, knowledge, and capabilities required to successfully carry out this job. As part of your application, you should show how you meet the Essential, and where possible the Desirable criteria, using examples from your experience.

Essential Attainment criteria (academic or professional qualifications, titles etc)	Assessment method
Good honours degree (1st/2.1 or equivalent) in Mechanical, Aerospace, Aeronautical, Structural Engineering or a closely related discipline.	Application Certificate
Postgraduate qualification and/or equivalent professional experience in a relevant discipline e.g. MEng or MSc in an engineering discipline	Application Certificate
Desirable Attainment criteria (academic or professional qualifications, titles etc)	Assessment method
PhD or equivalent professional qualification/ experience in a relevant engineering area.	Application Certificate

Essential Capabilities criteria (knowledge, skills, experience and behaviours)	Assessment method
Strong knowledge of solid mechanics, stress analysis and fatigue.	Application Interview Presentation
Experience of finite element analysis and engineering simulation software.	Application Interview Presentation
Excellent analytical and problem-solving skills.	Application Interview Presentation

Good planning and organisational skills, with the ability to deliver to project milestones.	Application Interview Presentation
Very good verbal and written communication skills, including technical reporting and presentations.	Application Interview
Ability to work independently and within multidisciplinary academic and industrial teams, translating research into practical engineering solutions.	Application Interview
Primarily based at Leonardo Helicopters in Yeovil, with travel to Sheffield Hallam University and other locations as required.	Please consider before applying.
Eligible to obtain the level of UK Security Clearance required for the role. (see main advert for full information).	Undertaken when job offered.
Desirable Capabilities criteria (knowledge, skills, experience and behaviours)	Assessment method
Experience of fatigue analysis and/or structural integrity assessment.	Application Interview
Experience with relevant engineering packages (e.g. Abaqus, NASTRAN, HyperMesh, nCode DesignLife or NASGRO) and/or Python.	Application Interview
Experience of aircraft/rotorcraft structures, structural testing, certification or industry-facing R&D.	Interview

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To search our jobs,
visit www.shu.ac.uk/jobs

