CANDIDATE BRIEF

**Software Systems Engineer, FAAM Airborne Laboratory,
National Centre for Atmospheric Science, Faculty of Environment**

Salary: Grade 8 (£42,149 - £50,296 p.a.)
Reference: ENVEE1544

Fixed term to 31 March 2026 (due to external funding)
This post is based at the FAAM Airborne Laboratory, Cranfield University
We will consider job share/flexible working arrangements

Software Systems Engineer,
FAAM Airborne Laboratory (FAAM),
National Centre for Atmospheric Science (NCAS),
School of Earth and Environment, Faculty of Environment

Are you highly motivated with a background in software systems design and engineering? Do you have experience of working on complex engineering projects? Would you like to develop scientific systems as part of the transformative FAAM Airborne Laboratory Mid-Life Upgrade project?

The FAAM Airborne Laboratory is a world-class research facility dedicated to the advancement of atmospheric science. FAAM operates a specially adapted BAe-146 4-engine research aircraft managed by a unique team of scientists, engineers, flight technicians and project managers providing a complete package of support for the scientific community. The capabilities are extensively reliant on state of-the-art scientific instrumentation, often uniquely customised for use on the aircraft, which is deployed throughout the world.

FAAM's measurement and operational capabilities are continually evolving, and management of this modification process has to be carried out effectively, against both time and budget constraints. The exciting FAAM Mid-Life Upgrade (MLU) project aims to deliver a range of upgrades and enhancements to the scientific capabilities of the aircraft, its measurement capabilities and its research impact, extending its useful life by at least 20 years.

The MLU is an ambitious 4-5 year £50m project to rebuild significant parts of the aircraft systems, and carry out a comprehensive upgrading of the aircraft's scientific and operational capabilities. Successful delivery will require working closely with major stakeholders, including BAe Systems as aircraft Design Authority, engineering suppliers and the aircraft's scientific user community. The entire project will comprise several hundreds of individual aircraft modifications, each of which will need to be properly developed and embodied on the aircraft.

As a Software Systems Engineer you will be part of a multi-disciplinary team at FAAM and will lead the development of automation on the aircraft. This is a strategically important area of work and will involve designing and developing innovative communications protocols and systems for remote control of scientific equipment,

developing software systems for instruments and working to develop management processes for software systems management.

Systems Engineers at FAAM will take a multi-disciplinary approach to the life-cycle management of scientific systems on the aircraft, including input into the design, realisation, technical management, operations, and retirement of systems.

Good innovative thinking is required along with the ability to work in a complex stakeholder environment. You will be involved in high level negotiations and decision making with scientists, engineers, the aircraft's Design Authority and other stakeholders. The aim is to produce high quality, reliable and innovative atmospheric science instruments and systems for the FAAM aircraft.

The post will be employed by the University of Leeds and will be based within the FAAM team on the campus at Cranfield University.

What does the role entail?

As a Software Systems Engineer, your duties will include:
- Leading the design and development of the protocols, interfaces and systems necessary to enable atmospheric science instruments to be controlled remotely in a secure manner, either from control points on the aircraft or from the ground to the aircraft;
- Developing automated atmospheric measurement systems where applicable;
- Designing and developing innovative software systems for scientific instruments for use on the FAAM aircraft or to assist with FAAM's operations;
- Assisting with the integration of atmospheric measurement systems, including testing, calibration and documentation;
- Providing supporting data and designs to assist with the airworthiness assessment of systems (undertaken by the aircraft's Design Authority), contributing to manuals, guides etc., and producing design data packs for manufacture and assembly.

The post holder will report to the MLU Director and will be supervised on a day-to-day basis by the MLU Project Manager.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Software Systems Engineer you will have:
- A software engineering background, with substantial experience working on complex engineering projects;
- A bachelor's degree, equivalent qualification or experience in computer science, physical sciences or engineering;
- Experience in real-time data display and the remote control of instrument systems;
- Excellent communication skills, with the demonstrable ability to communicate effectively across a range of stakeholders with excellent attention to detail;
- An ability to work within a multi-disciplinary team, and lead others in the delivery of complex engineering tasks;
- An innovative approach to problem solving and devising novel technical solutions;
- Willingness to work flexibly from a base at Cranfield, from home and occasionally from the locations of our stakeholders across the UK.

You may also have:
- Experience or understanding of project management, or working as part of a project team;
- Experience in managing and developing web applications;
- Experience of working in aviation or another safety critical environment;
- Knowledge of atmospheric science, meteorology, and/or meteorological instrumentation.

How to apply

You can apply for this role online; more guidance can be found on our [How to Apply](#) information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:

Stephen Devereau, Mid Life Upgrade Director, FAAM Airborne Laboratory

Email: steve.devereau@faam.ac.uk

Telephone +44 (0) 7500 973201

Additional information

Please note: If you are not a British or Irish citizen, from 1 January 2021 you will require permission to work in the UK. This will normally be in the form of a visa but, if you are an EEA/Swiss citizen and resident in the UK before 31 December 2020, this may be your passport or status under the EU Settlement Scheme.

Find out more about the National Centre for Atmospheric Science and its relationship with the School of Earth and Environment

Find out more about the FAAM Airborne Laboratory

Find out more about the School of Earth and Environment

Find out more about the Faculty of Environment

Find out more about our Research and associated facilities.

Find out more about equality in the Faculty.

A diverse workforce

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Environment we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Environment has received a prestigious Athena SWAN silver award from Advance HE, the national body that promotes equality in the higher education sector. This award represents the combined efforts of all schools in the Faculty and shows the positive actions we have taken to ensure that our policies, processes and ethos all promote an equal and inclusive environment for work and study.

Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position, however, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our Criminal Records information page.