

Breadboarding of Innovative Space Surveillance and Tracking Concept

Code: 22/54

Company: UK Launch Services Ltd

Location: Flexible - Remote or in person at our London office in Battersea or in Machrihanish, Scotland

Company Description:

UKLSL was founded in 2017 to design and deliver sustainable spaceport operations for the commercial space age.

We are a launch operations service provider offering management, regulatory support, logistics support, range services and operations planning services for commercial small satellite launch. Together with our delivery partners we have extensive knowledge of small satellites and their launch requirements and are facilitating commercially competitive launch operations from the UK.

Leveraging this knowledge and expertise, UKLSL is now entering the domain of Space Surveillance and Tracking (SST), developing a novel service built around the principle of 'tagging' space objects.

Project Description:

The need for novel, low cost, and reliable ways to identify and track space objects is essential for the sustainability of space activities. This is particularly true for the Low Earth Orbits used for earth observation and communications mega constellations. Following a successful feasibility study of a novel concept to identify and track space objects at low cost, UKLSL's ambition is to continue the development of this space beacon concept by testing key components of the system and to further demonstrate technical feasibility. The successful applicant will therefore:

- a) Develop their understanding of SST, Space Surveillance and Tracking services in general and of the BEAP concept in particular,
- b) Identify technical elements of the system relevant for a breadboard prototype of the beacon,
- c) Define testing goals, design, and write testing procedures for the breadboard.

If time and capability allow, the successful intern may also contribute to the production of the breadboard and the running of the test campaign.

Applicant Specification:

UKLSL is looking for someone with:

- A strong motivation to contribute to the growth of the UK space industry, • A willingness to quickly adapt to changing business requirements and new challenges on day-to-day basis is fundamental to our team,
- An interest in Space Surveillance and Tracking,
- An interest in bringing to life a paper concept for the first time
- Ability to write plans and procedures
- Hardworking & self-motivated. We are a start-up so we like people who are willing to jump in and start solving problems after only a short briefing period and a limited set of information

The applicant will ideally have an undergraduate or postgraduate 1st or 2:1 degree in relevant engineering subject such as electronic and electrical, radiofrequency and microwave, or space engineering.

Minimum Requirements:

Demonstrable interest and experience in designing, assembling and/or using electronic equipment, for example, through a previous placement, university or personal project

Preferred Additional Requirements:

Past experience of defining and running test campaign in an engineering context

Further details:

8 weeks minimum fixed term contract to be agreed with successful candidate, placement ideally to be completed before the start of the next academic year. The gross salary is £2,800 for the 8 weeks contract. The SPIN Induction Event is to be held on Monday 27 June 2022.

Closing Date for Applications: 12pm on Wednesday 11 May

Applications should be made through the online form on the Satellite Applications Catapult website before the closing date.

<https://sa.catapult.org.uk/work-with-us/space-placements-industry-spin/>

Please note that elements of the form left incomplete will be deemed to render the application ineligible. They will be checked for eligibility and forwarded to the employer. Email applications made to the Satellite Applications Catapult, UK Space Agency, or host organisations will not be processed.