

Exploring Commercial Research and Development Opportunities for NovaSAR-1 Datasets

Code: 21/10

Company: Satellite Applications Catapult

Department Name: Geospatial Intelligence

Project Description:

Satellite Applications Catapult (Catapult) is actively working on a wide variety of international projects across our Market and Technology Value Streams that exploit commercial and freely available satellite image datasets at local, continental and global scales. A key strategic programme of activities for the Geospatial Intelligence Technology Value Stream sits around the first ever UK manufactured SAR satellite – [NovaSAR-1](#). It was launched from India in September 2018 and, following an in-orbit testing phase, the satellite has been operational and in use by the international partners since November 2019. In the UK we started to receive [images](#) from the satellite in December 2019. Manufactured entirely in the UK, NovaSAR-1 has two key advantages:

- its S band radar frequency optimised for maritime and vegetation monitoring, and
- its novel orbit allowing to take images at different times of the day to existing complementary SAR satellites.

This project involves undertaking supervised research and development of satellite-derived Earth Observation products with a focus on exploring the potential for using NovaSAR-1 datasets within the product generation workflows. While the specific research questions are expected to be evolved to fit the successful candidate's background and experience, the overall project aim will be to generate novel insights into potential geospatial value propositions for using NovaSAR-1 datasets across Catapult Market Value Streams (agriculture, sustainability, maritime, etc.).

The successful candidate will have the opportunity to work alongside experienced Earth Observation and Geospatial Specialists within Catapult's Geospatial Technology team and undertake research and development using leading approaches, tools and processing environments to support contemporary geospatial value propositions associated with a unique SAR data source.

Applicant Specification:

- Applicants will need to have an understanding of Earth Observation data, computing skills, be able to critically evaluate problems, suggest solutions and show initiative in a supervised R&D project.

- Experience in one or more of the following areas: computer science, physics, mathematics, remote sensing, GIS
- Knowledge / experience of satellite-based synthetic aperture radar (SAR) and downstream applications (land cover / crop classification, vessel detection, etc.)

Minimum Requirements:

- Understanding of or demonstrated interested in Geospatial and Earth Observation concepts and applications
- Knowledge / understanding of SAR applications and associated data processing
- Ability to learn new software and technologies quickly
- Ability to follow instructions and work in a team environment
- A 'can-do' attitude to challenges in the workplace
- Detail oriented

Preferred Additional Requirements:

- Experienced in undertaking SAR and Earth Observation research & development in downstream applications
- Awareness and understanding of open source and commercial satellite image missions and datasets
- Demonstrated proficiency with one or more programming languages (i.e. code repository / website)

Further details:

8 weeks minimum fixed term contract to be agreed with successful candidate but nominally with a start date around June 2021 to attend the SPIN Induction day hosted by the Satellite Applications Catapult, and completion before September 2021 for the Showcase that month. Salary is £1,500 per calendar month gross (guide only).

Interviews:

Week of 15 March 2021 but will be confirmed.

Closing Date for Applications: 5pm on Friday 5 March 2021

Applications should be made through the online form attaching a CV, before the closing date. 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.