

## Model-Based and Software Systems Engineering

**Code:** 21/58

**Company:** GMV NSL

**Location:** Remote / Harwell, Oxford

### Company Description:

GMV Innovating Solutions Limited, the UK aerospace company belonging to GMV, has signed a merger agreement with Nottingham Scientific Limited (NSL). GMV trades in the aerospace, defence, ICT and intelligent-transportation-systems markets while NSL is UK leader in satellite navigation and critical applications. GMV NSL, 80-strong, will be integrated into GMV's set of companies, which closed 2019 with a staff of 2,176 and a turnover of more than €236 million. GMV NSL will be able to rise to even greater challenges and tap into the opportunities offered by the UK market, especially the space market, not only in satellite navigation and in critical applications, but also in earth observation, telecommunications and new technologies. This position is for the Harwell site of GMV NSL.

### Project Description:

HRAF (Harwell Robotics and Autonomy Facility) is an ESA activity which looks to grow advanced capabilities in field of Verification & Validation (V&V) for Robotic and Autonomous Systems. Currently, HRAF Pilot 3 (or HRAF Exploration) is an on-going ESA activity led by GMV to develop a distributed simulation environment, with test scenarios including Mars Sample Return (MSR) and Asteroid Descent & Landing, and relies on Model-Based, and Model-Driven techniques.

The proposed project would see the successful applicant extend the baseline capabilities of the distributed simulator, by developing a tool capable of automatically generating the interface software based upon a model, or other description of the interfaces. Currently this task is performed via manual coding which is time consuming and is susceptible to human error, requiring large development and test resources.

### Applicant Specification:

We are looking for a self-motivated, enthusiastic and quick learning candidate to join our team for this project. The applicant should be currently studying:

- Computer Science, Space Systems Engineering, Robotics
- Or other related degree.

### Minimum Requirements:

- Good programming knowledge and experience (preferably with C/C++ and Python)

- Working understanding of System Engineering practices
- Enthusiasm for problem solving and highly motivated

**Preferred Additional Requirements:**

- Knowledge of and/or experience using model-based techniques and programming tools– UML / SysML, Cameo, Modelio or similar
- Knowledge of and/or experience using Middlewares / Software Frameworks (e.g. MQTT / ROS (1 or 2) / HLA / Redis)

**Further details:**

8 weeks minimum fixed term contract to be agreed with successful candidate. Virtual Induction Event to be held on 21 June 2021. Ideally to complete before the start of the next academic year. Salary is £1,500 per calendar month gross.

**Closing Date for Applications: 5pm Wednesday 16 June 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.