

INTERNSHIP OFFER

CONCEPTION OF 3U CUBESAT SOFTWARE FOR GROUND SUPPORT EQUIPMENT

1 UNIVERSITY SPACE CENTER OF MONTPELLIER

The University Space Center of Montpellier (CSUM) is the French leader in the development and operation of nanosatellites developed by students. It has acquired in-depth competences in the field of design, manufacturing, testing and operation of nanosatellites and their subsystems, as well as in the area of space project management and product assurance in the framework of university space projects. The CSUM has an AIT (Assembly Integration and Test) Facility, a CDF (Concurrent Design Facility) and both UHF and S-band Ground Stations. The CSUM develops its own 1U and 3U CubeSat nanosatellite platforms with the support of the Van Allen Foundation and both the French and the European space agencies.

2 INTERNSHIP DESCRIPTION

In the frame of the AIT/AIV sequence of MEDITERANNEE ROBUSTA3A CubeSat, several models of the satellite are being manufactured and tested in the CSUM. These tests often require specifically developed software to be incorporated in Ground Support Equipments (GSE). These software tools are used for:

- Validating satellite BUS communications
- Checking satellite responses to telecommands
- Checking satellite functional behaviour in different mission scenarios
- ...

The student will have to work alongside the AIT team in order to design, specify and code these software tools for their use in the satellite Assembly and Test sequence. The student will also interact with the Ground Segment team in order to design SGSE as much as possible compatible with existing tools and applications.

The student will be in charge of verifying the compliance of the GSE with the requirements of the project and the tests plans. She/he will test the GSE and be part of the tests involving it on the Structural and Functional models of the satellite.

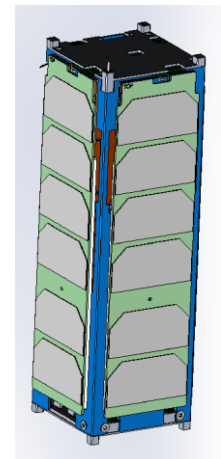


Figure 1: ROB3A
CubeSat CAD Model.

Skills/Languages:

- Software development (python, C)
- Software Test Frameworks (pytest)
- English Language, Writing and reading of technical documentation

Location: CSUM, Montpellier, FRANCE

Preferred starting date: 01/09/2021

Duration: 3-5 months

Supervisor, Function at CSUM: Rafael DUARTE – Ground to Earth Division Manager

Stipend: 3.90 euros/worked hours for duration between 308 and 924 hours, 35 hours/week.

3 CONTACT

Please upload your application at: <https://csu.edu.umontpellier.fr/en/job-offers-internship/>