

# MECHANICAL ANALYSIS OF ROBUSTA 1U NANOSATELLITE

## Internship offer

### UNIVERSITY SPACE CENTER OF MONTPELLIER (CSUM)

The University Space Center of Montpellier 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 CSU 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.

### INTERNSHIP DESCRIPTION

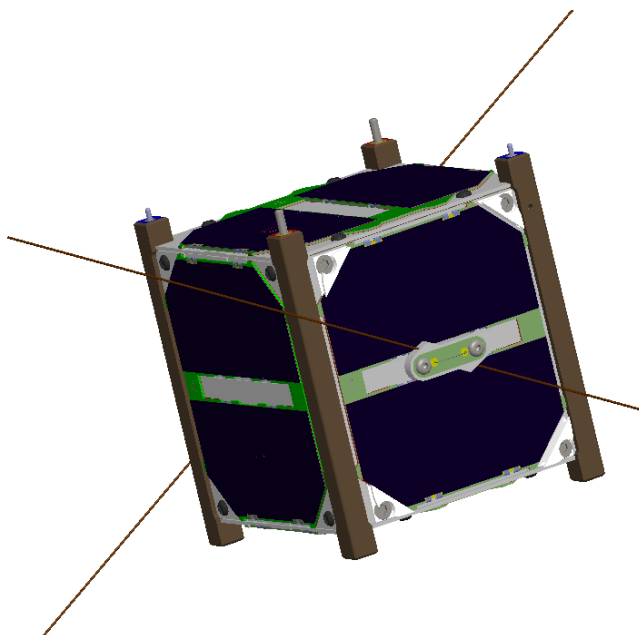
#### Overview

During the launch phase a satellite is subjected to mechanical solicitations as quasi-static loads, random/sine vibrations and shocks due to the launcher. In the frame of the development of the ROBUSTA 1U platform, the CSUM is looking for an intern who will conduct the mechanical analysis of the CAD model.

#### Internship

The aim of the internship is to analyze the mechanical behavior of the full integrated platform and to determinate if it is able to withstand the launch.

Additionally, the intern could be involved in the AIT tasks (Assembly, Integration and Tests) of engineering and flight models of the next nanosatellites.



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File name: CSUM-M-RH-PROP\_Mechanical Analysis of ROB1U\_2020-05-15\_v1.1  
Version: 1.1  
Date: 15/05/2020  
Author: BRIAND Romain

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## QUALIFICATION AND SKILLS

**Language:** French and English -Being able to have a technical discussion with experts

**Skills:**

- CAD software (SolidWorks is appreciated). Conception and simulation.
- Finite Element Analysis
- Knowledge about material science
- Practical skills about mechanical tasks are appreciated (tools, process...)

**Level:** 1<sup>st</sup> / 2<sup>nd</sup> year of Master of Science (MSc) or equivalent in Mechanical Engineering.

**Location:** Montpellier, France

**Preferred starting date:** September 2020

**Duration:** 5-6months

**Supervisor:** Romain Briand, Mechanical and AIT engineer

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

## CONTACT

Send your resume and cover letter to

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