

INTERNSHIP OFFER

Space Mission Predesign Challenge - Second edition

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 in the frame of Fly Your Satellite! And Janus programs.

CSUM is one partner of the NANOSTAR consortium that includes 2 aerospace clusters, 7 universities and ESA-BIC centre from South West of Europe. It aims to provide students with the experience of a real space engineering process that includes all stages, from conception and specifications, to design, assembly, integration, testing and documentation.

2 INTERNSHIP DESCRIPTION

This **NANOSTAR Space Mission Predesign Challenge - Second edition** consists in predesigning a nanosatellite that will be launched in LEO to perform an ambitious scientific mission. The goal of the mission is to verify the survivability in space of a marine photosymbiotic species of worms (Roscoff worms), which may one day play an essential role in the creation of artificial ecosystems for deep space exploration missions.

The scientific payload will monitor the metabolism of the worms and their efficiency for urea and air recycling via video observations and measurements.

Student teams must create a preliminary design of a complete space system to achieve this mission, using the tools and methodology provided by NANOSTAR.



<https://nanostarproject.eu/student-challenges/registration-predesign-challenge-second-edition/>

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Skills/Languages: space engineering, space project management

Level: Master

Location: Centre Spatial Universitaire de Montpellier - 950, rue de St Priest - Bâtiment 6

Preferred starting date: 01/10/2019

Duration: 6 months

Supervisor, Function at CSUM: Muriel BERNARD, Quality & Dissemination Manager

3 CONTACT

Please apply at: <https://questionnaire.umontpellier.fr/index.php/231952?lang=en>