

Unique, exciting Master thesis project ("TFE")! Academic year 2016-2017

Become a member of the new OUFTI-2 student team building ULg's next CubeSat in one year!
We offer several projects, each concerning a specific subsystem of OUFTI-2

OUFTI-2's low-data-rate beacon (BCN): design, implementation, and tests

Introduction

OUFTI-2 is the new ULg CubeSat (1 kg, 1 liter, 1 Watt) that will allow D-STAR amateur-radio ("ham") telecommunications, just as for OUFTI-1. The new nanosatellite and its subsystems will be designed totally from scratch, using the experience gained, and lessons learned, through OUFTI-1.

Your project!

- **You** and the team will conceive the architecture of OUFTI-2.
- **You** will design, built, and test its completely new, robust BCN (hardware & software), which has the delicate task of "continuously" transmitting, at low data rate, the call-sign and selected health parameters (voltages,...) under virtually all conditions, even if the other subsystems fail. BCN features redundant computers and radiofrequency transmitters. **You** will ultimately produce a fully functional 10x10 cm BCN electronic card working in perfect harmony with the other subsystems of the satellite.

Benefits for you

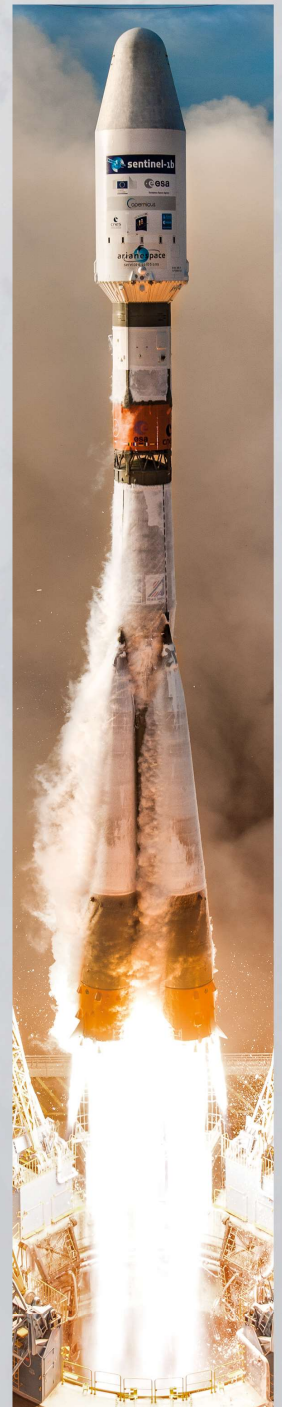
- Work with people who have built, from scratch, a complete ground & space satellite system, with its CubeSat reaching orbit alive!
- Get privileged access to the European Space Agency (ESA) and their training, including at its brand-new learning center in Redu, Belgium.
- Get - if interested, and with our guidance - a ham-radio license (and **your** own call-sign), allowing **you** to use our two ground stations and our mobile transceivers, transmitting up to 550 Watts of radio power!
- Gain international visibility by attending conferences (when warranted).

Your profile

- Computer science, software engineering, electrical/electronics engineering, engineering physics, or equivalent.

Contacts

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Don't miss this once-in-a-lifetime opportunity!