

# FLORIPASAT – EMPOWERING STUDENTS ON SPACE APPLICATION FIELD



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The FloripaSat is an initiative of researchers and students at the Federal University of Santa Catarina to develop complete space missions in the nanosatellites category. FloripaSat is not only a satellite project, but a training/technical/research environment which allows graduate and undergraduate students to work with space applications on real satellite missions. It started in 2013, motivated by a project funded by the Brazilian Space Agency to design a 1U CubeSat, named FloripaSat-I. However, the same student team has also participated in SERPENS-I 3U CubeSat mission, in Rio Verde VSB-30 sounding rocket campaign and, recently, has been designated to lead the SERPENS-II 3U CubeSat project.

**The FloripaSat team consists of researchers and students from different knowledge areas, from graduate and undergraduate courses, as follows:**

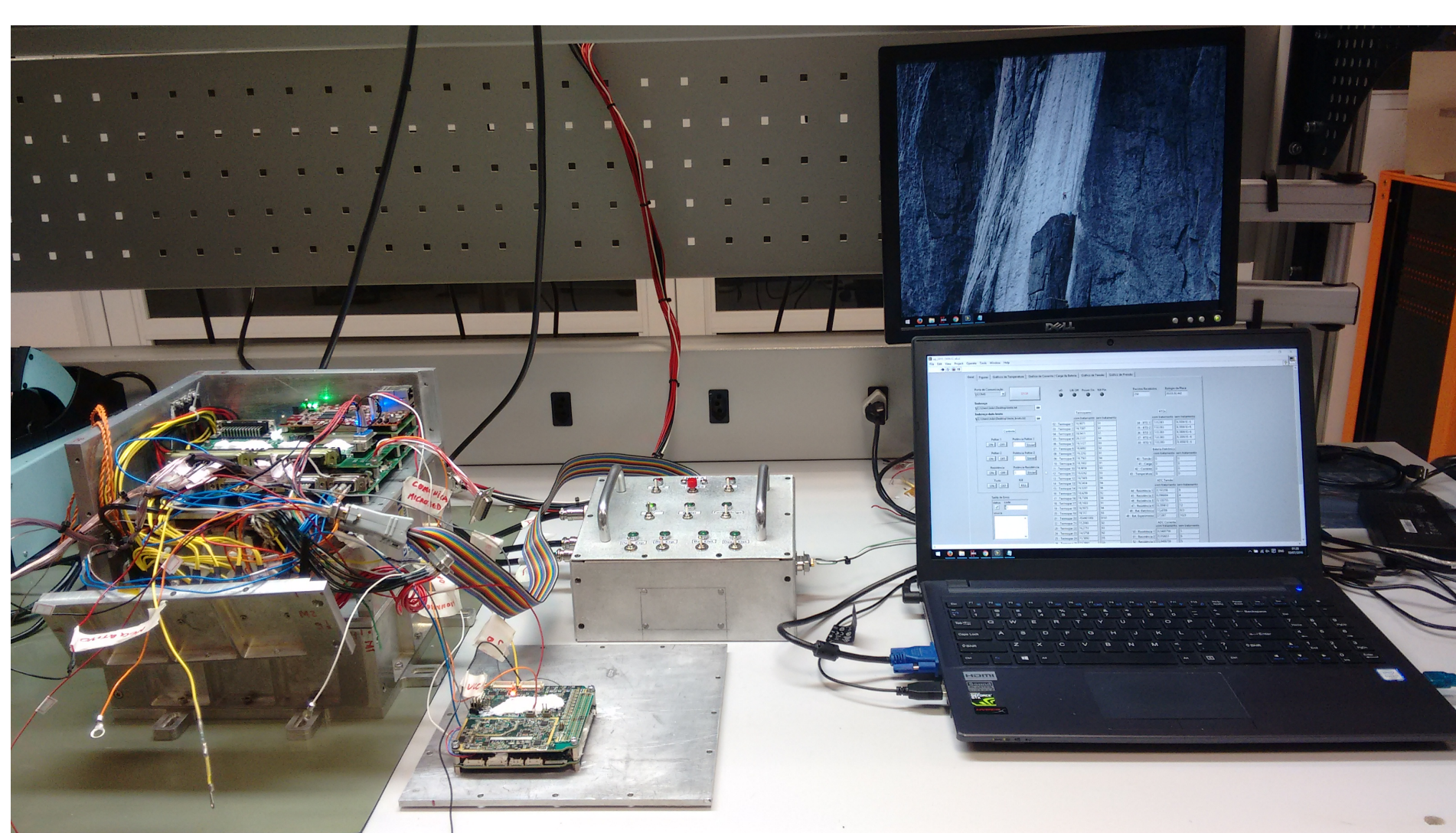
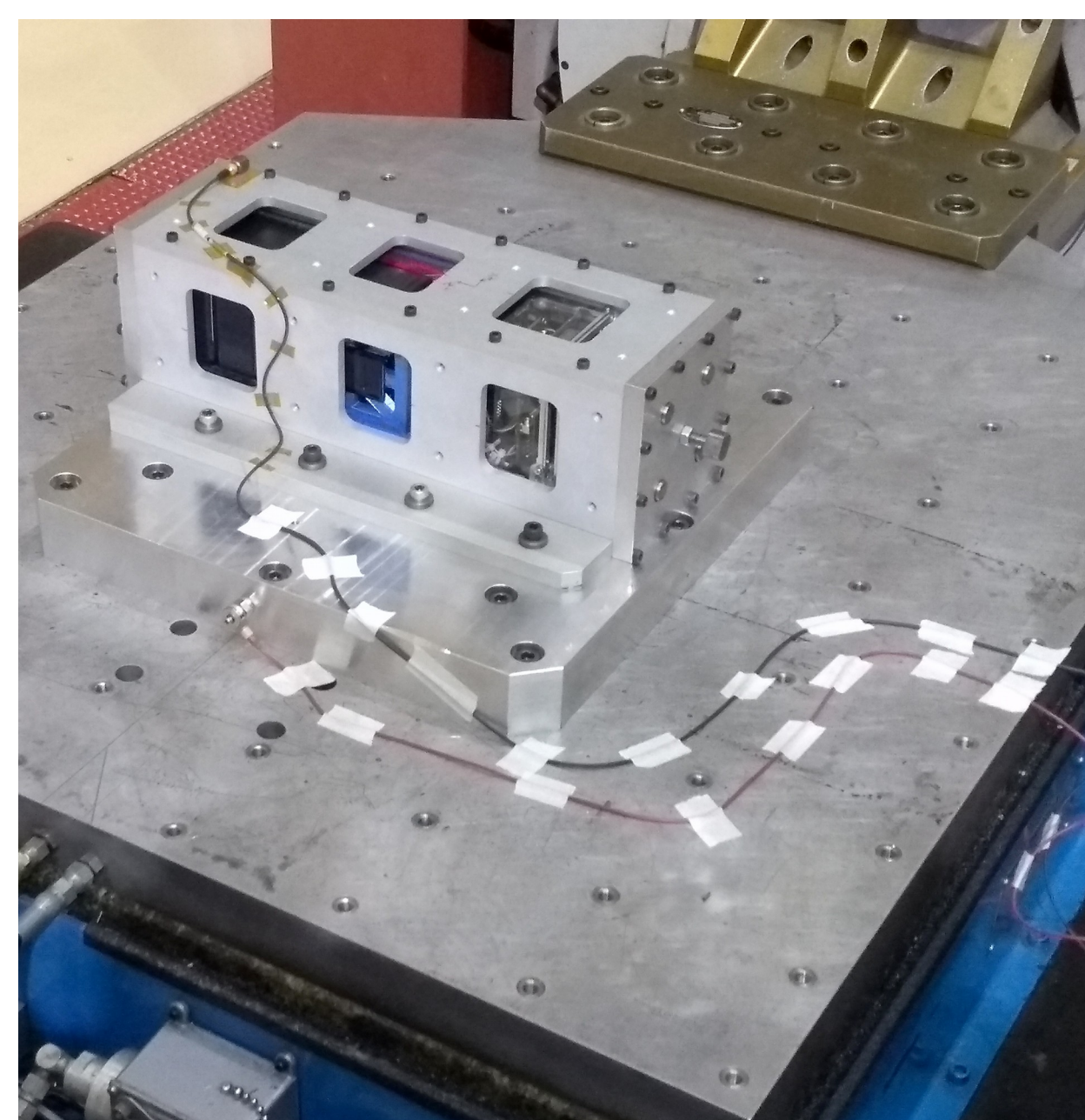
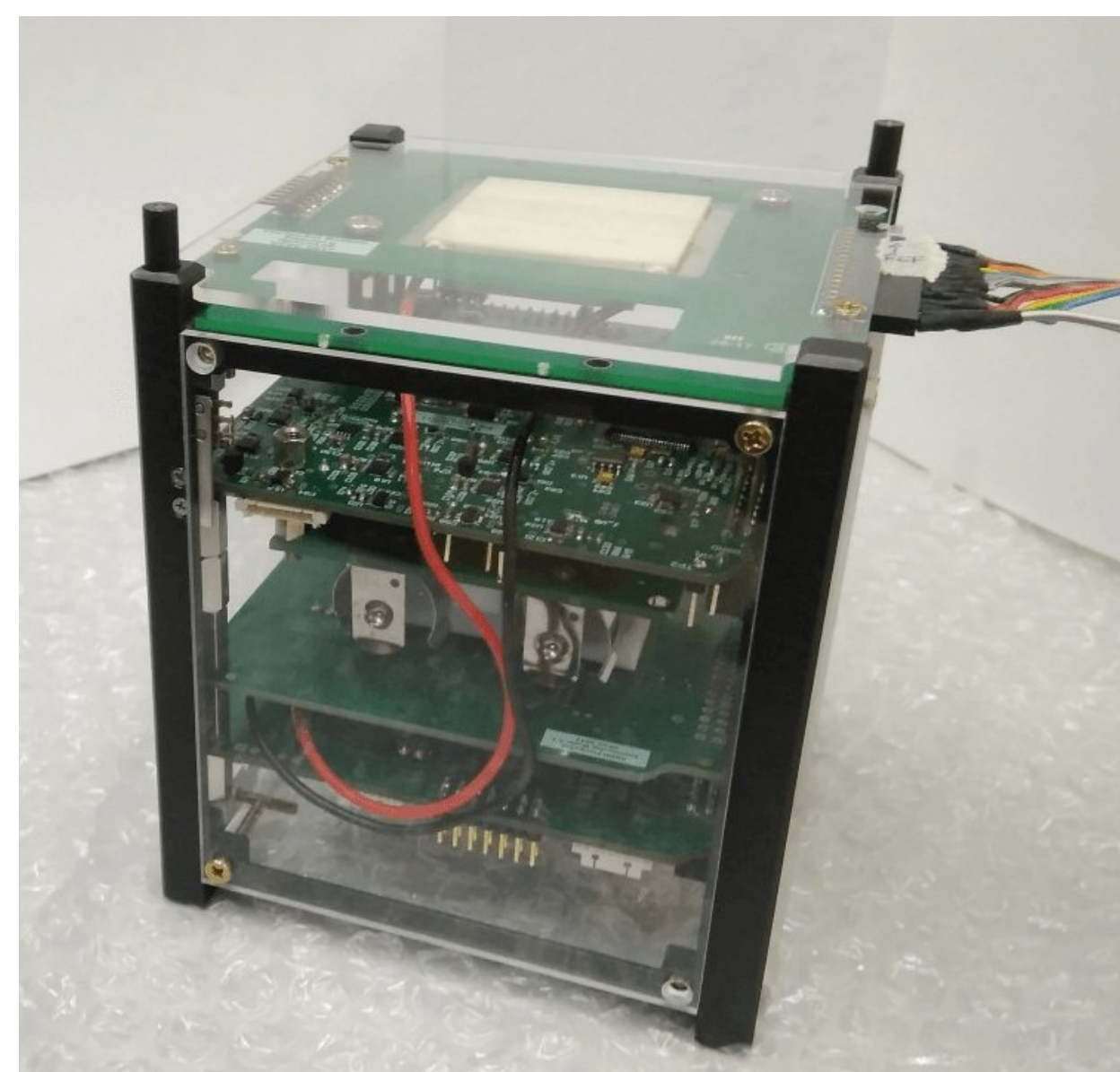
- Electrical Engineering
- Electronic Engineering
- Mechanical Engineering
- Aerospace Engineering
- Automation and Control Systems Engineering
- Mechatronic Engineering
- Computer Science
- Design

## FloripaSat management methodology:

- Students develop space systems through a practical approach
- The incoming students are trained through tutorials and small courses
- The tutorials and small courses are offered by the more experienced students
- Scrum framework adapted to software and hardware co-design
- Methodology aligned with recent trends on industry project management

## FloripaSat spin-off experience:

- FloripaSat team has directly contributed to the creation of a spin-off named Nanoraven
- Nanoraven is located in France, operates in partnership with UFSC and develops communication solutions for nanosatellites



## FloripaSat collaboration groups:

- SENAI Institute for Innovation in Embedded Systems
- National Institute for Space Research (INPE)
- Laboratoire d'Informatique, de Robotique et de Microélectronique de Montpellier (LIRMM)
- University of Montpellier
- University of New South Wales (UNSW)

## Projects results:

- FloripaSat-I engineering model tested on-board VSB-30 rocket
- FloripaSat-I engineering model qualification tests at INPE
- Multi-mission platform designed to perform experiments under micro-gravity conditions
- SERPENS-II project

