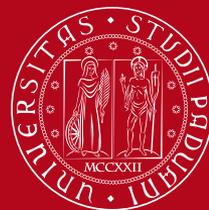


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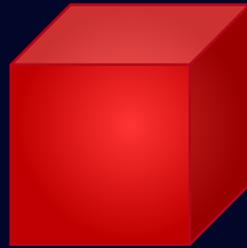


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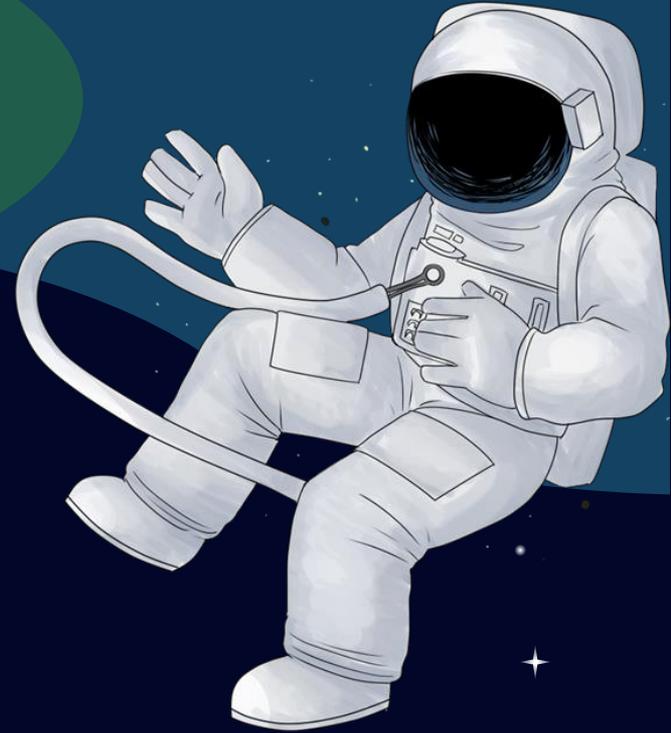
We are a student team from the **University of Padova**

Our objective is to **launch into space** for the **first time** in the history of our University a nano-satellite developed by **students.**



We are participating to the **European Space Agency (ESA)** programme called **Fly Your Satellite! – Design Booster**

Our project offers students at the University to make a **hands-on experience** on a real space mission during academic studies.



The goal of the Fly Your Satellite! program is to **support student teams** during the CubeSat development.

ESA experts review the project with team and organise **training week** to train students.

Only **six teams** were selected!

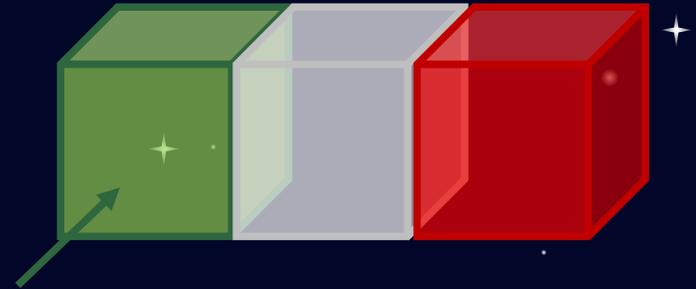
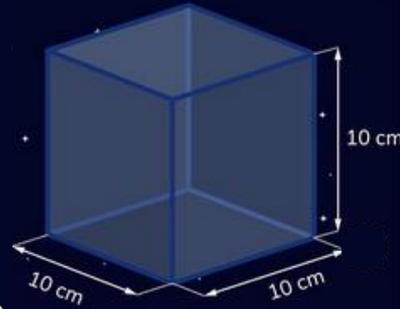




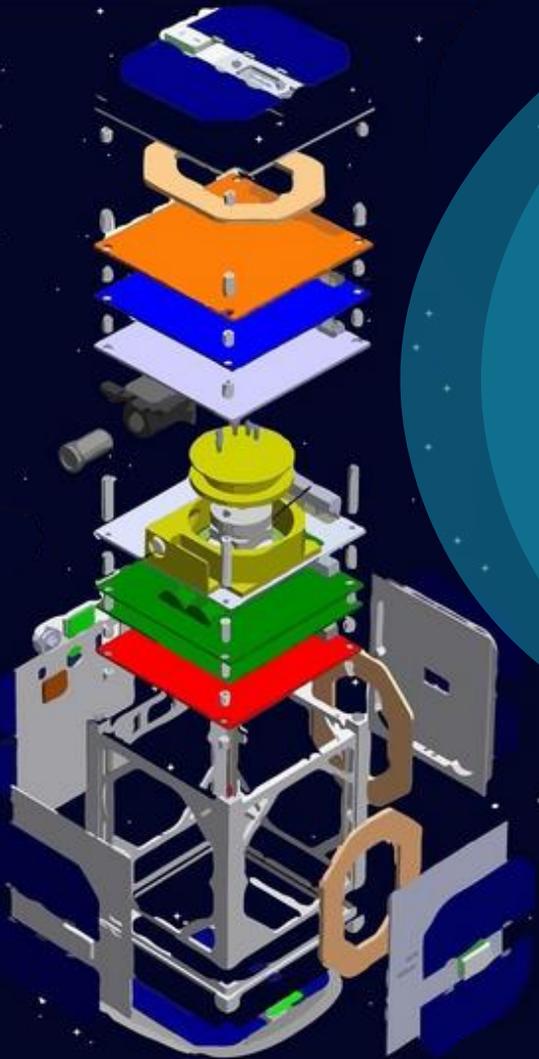
So we are building a satellite...

Precisely, during our project a
CubeSat 2U is **developed**,
assembled and **tested**.

A **CubeSat** is a satellite formed by **one or more units** complying with a precise **standard**



a CubeSat unit



Inside a CubeSat there are several **subsystems** that perform **specific functions**.

With **numerical analysis** and **testing** we must guarantee that the satellite will work properly to achieve the **mission goals**.

Mission Objectives

Study the micro-debris environment in orbit around the Earth

Measure micro-vibrations on board the satellite

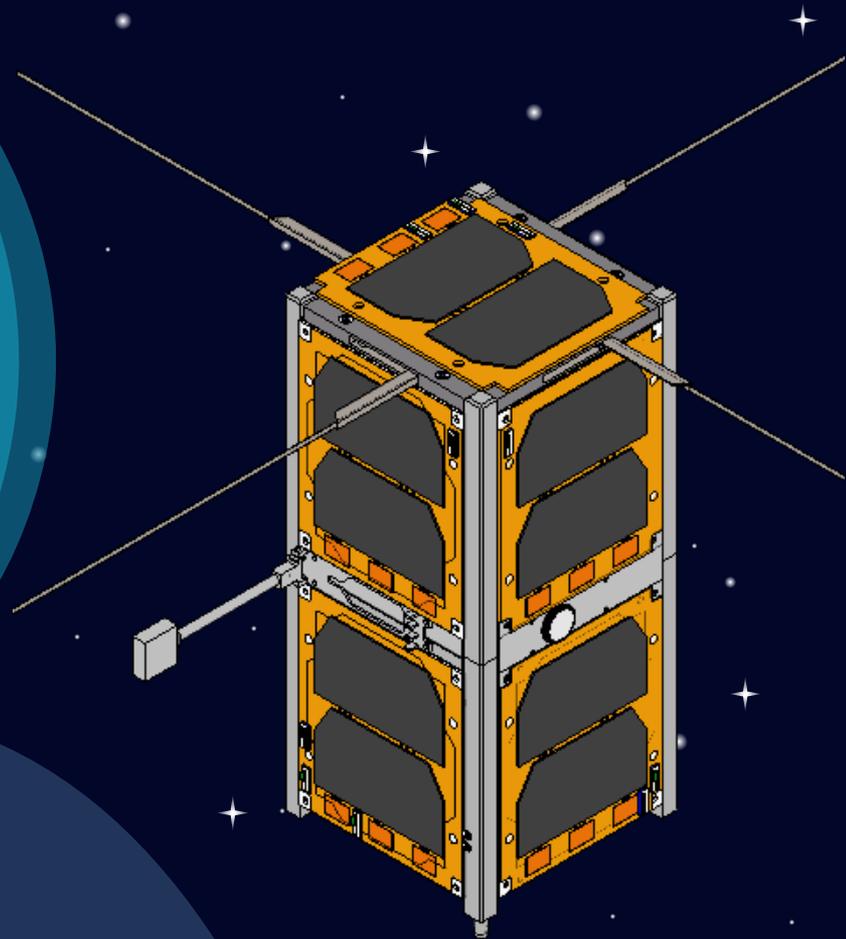
Do precise orbit and attitude determination through laser ranging

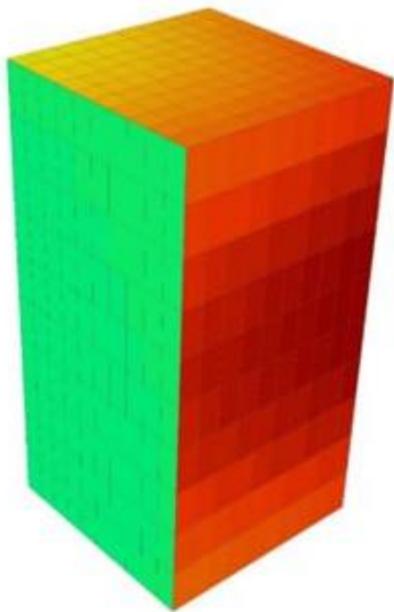
Investigate alternative systems for possible Satellite Quantum Communication applications on nanosatellites

The design of a satellite is an **iterative process**

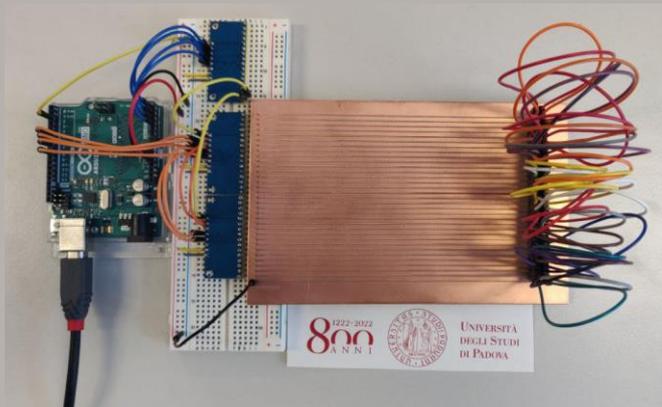
The project is **multidisciplinary**:

- Orbital study
- Telecommunications
- Structural analysis
- Thermal analysis
- Software development
- Circuit design

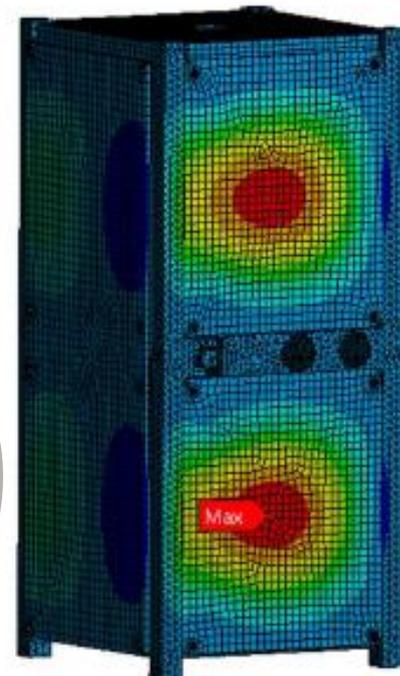




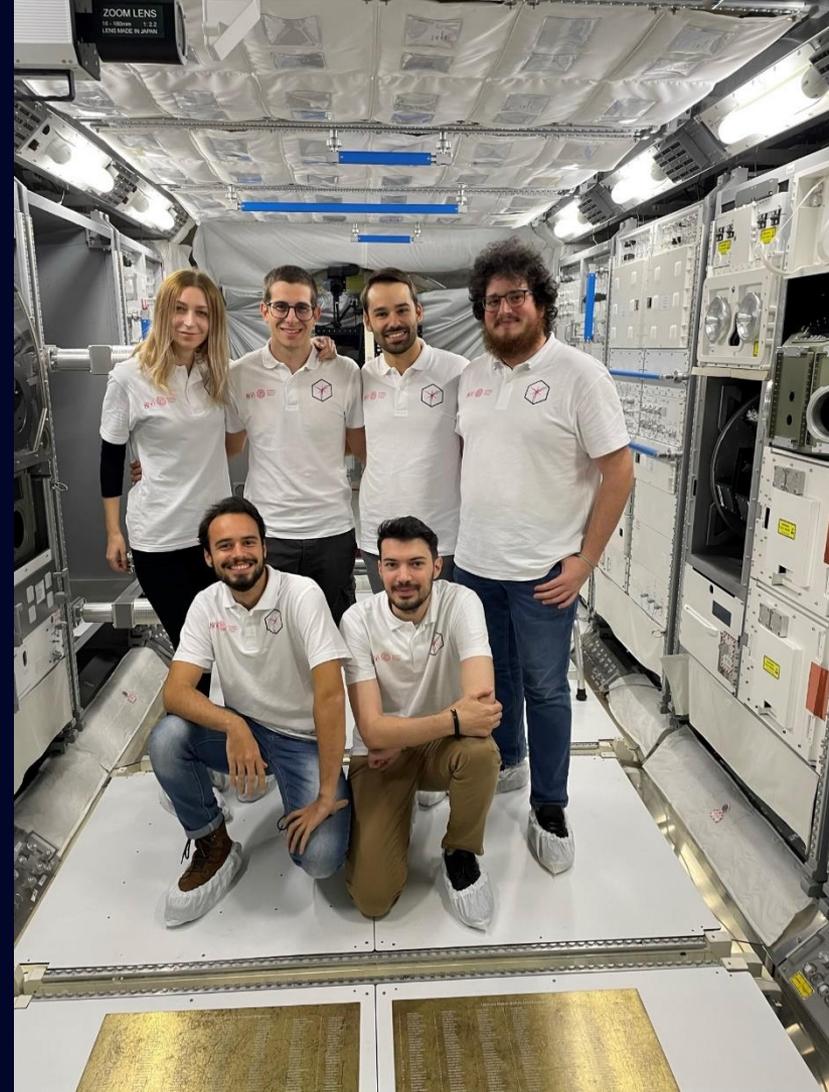
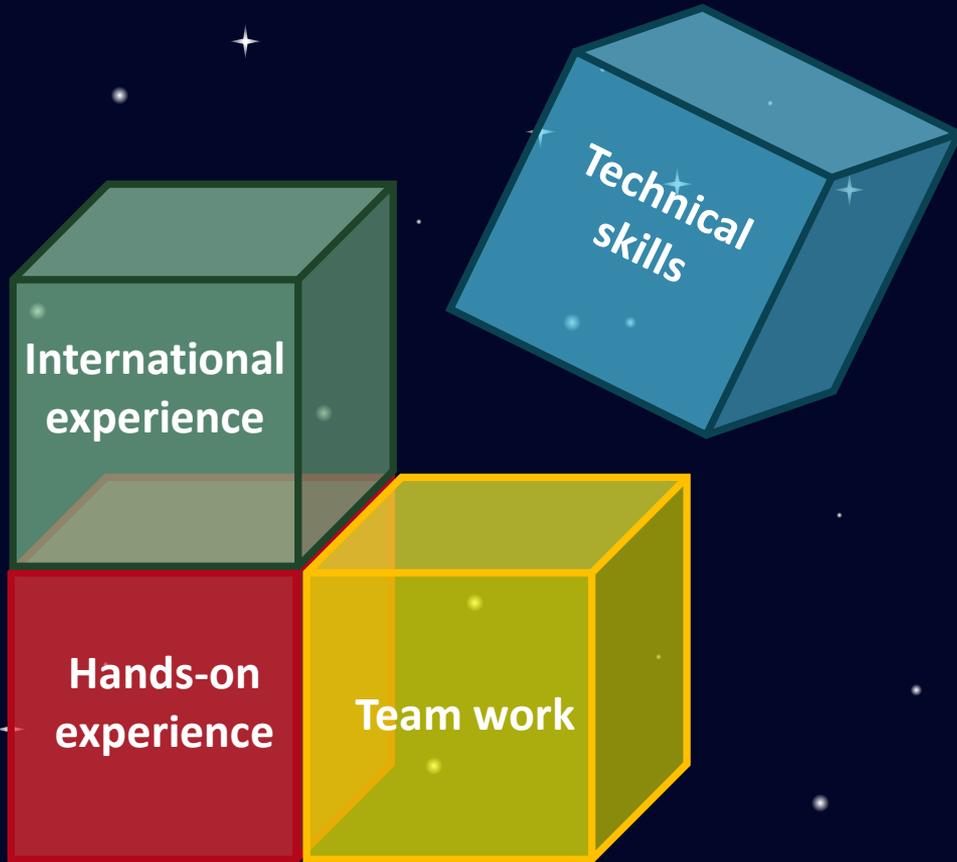
Thermal analysis



**Impact sensor
development**



Structural analysis





*ESA training week
selection workshop*

ESA training week – welcome





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Alba CubeSat UniPD

Presentation - 07/12/2022



Fly Your Satellite! Design Booster
Training Week | 7-11 Dec | ESTEC

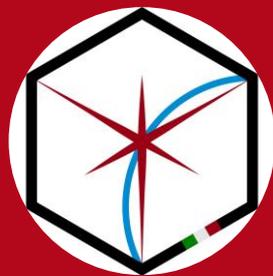
FLY YOUR SATELLITE!

AlbaSat
Università degli Studi di Padova
Italy



Selection presentation

FYS!-DB presentation



Alba CubeSat UniPD

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