

Eugenio Ferrato

Aerospace Engineer

Master's Student in Space Engineering

University of Pisa

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Education

Oct 2014 – Present

Master of Science in Space Engineering

- University of Pisa, Pisa (Italy)
- **Examinations:** Fundamentals of Spacecraft Technology 30L/30, Aerospace System Analysis 28/30, Electric Propulsion I 28/30, Aerospace Control System Design 25/30, Aerospace Structures 27/30, Spaceflight Mechanics 30/30, Thermal Fluid Sciences 26/30, Electric Propulsion II 30L/30, Space System 30/30, Rocket Propulsion 28/30, Spacecraft Structures and Mechanisms 29/30
- Expected Degree Grade (in April 2017): 110/110 | 1st
- Thesis Topic: “*Numerical Modeling of an Air-Breathing Hall Effect Thruster*”

Sep 2011 – Oct 2014

Bachelor's Degree in Aerospace Engineering

- University of Pisa, Pisa (Italy)
- Degree Grade: 107/110 | 2nd:1
- Thesis Topic: “*Nonconventional nozzles for space applications*”

Experiences

Feb 2016 – Mar 2017

Internship at SITAEL S.p.A.

<http://www.sitael.com/>

- Year-long support to SITAEL's electric propulsion R&D activities.
- Development of a one-dimensional model for an Air Breathing Hall Effect Thruster. Such a device could be suitable for aerodynamic drag compensation in VLEO orbits (150-250 km altitude range).
- Experimental campaign and model validation scheduled for January 2017.

Oct 2015 – Present

U-PHOS in REXUS – Designer in Mechanics and Integration Division

<http://www.uphos.ing.unipi.it> - <http://rexusbexus.net/>

- U-PHOS (Upgraded Pulsating Heat Pipe Only for Space) aims to characterize the thermal response of a large diameter Pulsating Heat Pipe in milligravity condition.
- The U-PHOS team, composed of 19 students from the University of Pisa, has been selected in December 2016 to participate to the 22nd REXUS/BEXUS campaign, an educational space programme sponsored by the European Space Agency (ESA) and realized under a bilateral Agency Agreement between the German Aerospace Center (DLR) and the Swedish National Space Board (SNSB).
- U-PHOS successfully passed through all the phases of the review procedure and is going to be launched in March 2017 on board of a sounding rocket from the Esrange Space Center of Kiruna, Sweden.

Sep 2013 – Sep 2015

E-Team in Formula SAE – Designer in Powertrain Division

<http://www.eteamsquadracorse.it/>

- Formula SAE is a student design car racing competition organized by SAE International, in which more than 400 teams of students around the world compete for their own university.
- In September 2015, E-Team gained its best achievement: winning the Class 3 Design, Cost Report and Business Plan Presentation events at the Varano de' Melegari Autodrome.

Projects

Oct 2015 – Jun 2016

Ganymede Explorer

As part of the Space System course, our team performed a pre-phase A study of a landing mission on the Jovian satellite Ganymede. In this team, composed of six international students, I took on the role of project manager and designer of the attitude control and propulsion systems.

Languages

- Italian – Native
- English – Professional working proficiency (C1 level in writing, reading, listening and speaking)

Relevant Technical Skills

- Plasma Physics
- Thermal-Fluid Science
- Mathematical Modelling
- Structural Analysis
- Space Propulsion
- **Computer Skills:**
very good command of Microsoft Excel, Word and Power Point;
good command of LaTeX, MATLAB and Simulink, CATIA, SolidWorks, ANSYS Mechanical APDL

Personal Qualities

- Flexible and quickly adaptable
- Cooperative attitude in team working
- Strong and effective interpersonal communication
- At ease in international contexts

Personal Activities

Amateur Chess Player

I recently started playing and studying chess. I feel it is a very challenging and stimulating game, since it simultaneously involves different ways of thinking, such as creativity, logic and strategy.

Guitar Player

During my university studies, I played in several Italian clubs and restaurants in a quartet formed by two acoustic guitars and two female voices. In the same period, I was the lead guitar of a progressive rock band, with which I recorded an album in May 2012. This valuable experience taught me, among many other things, how to manage my time and be confident in front of an audience.