

Leandro Lucchese



ABOUT ME

Aerospace Engineer

PhD student in Space and Astronautical engineering, specialized in computational fluid dynamics, structural analysis and multidisciplinary design optimization.

EDUCATION

Ph.D in Space and Astronautical engineering (CFD for combustion chambers of liquid rocket engines with variable thrust) Sapienza University of Rome / 2021 – current

M.S in Space and Astronautical engineering

Sapienza University of Rome / 2018 – 2020

• Final grade: 110 cum laude / 110

B.S in Aerospace engineering

Sapienza University of Rome / 2015 – 2018

• Final grade: 110 cum laude / 110

UNIVERSITY PROJECTS & EXPERIENCE

Ph.D experience

- Mathematical modeling of combustion chambers.
- CFD simulations of multiphase chemically reacting mixtures through RANS approach.

Master's degree thesis:

Development of a Finite-Element model generator and launch vehicles multidisciplinary design optimization

- Development of a MATLAB tool for automatically generating a detailed FEM model of any launch vehicle structure given its geometrical and structural parameters, and performing the structural analysis on MSC Nastran.
- Structural optimization of VEGA-like and Ariane 5-like vehicles through genetic algorithm on ESTECO ModeFrontier.

Aeroelasticity course:

• Aeroelastic analysis on a wing Finite Element model on MSC Nastran.

Sapienza technology team (AUSVI-SUAS competition):

• Implementation of an autonomous navigation system for a four wheels rover on Python.

5th Mission Idea Contest (MIC) finalist:

Constellation of passive SAR-based micro satellites for a Master-Slave configuration

• Structural and power subsystems manager for the University competition