# Simone D'Alessandro

## EDUCATION AND RESEARCH

**Dec 2019–Present** — **Research Fellow**

Sapienza, University of Rome, Rome (Italy)

Research interests: Thermoacoustics, High-frequency combustion instability, Gasdynamics, Liquid propellant rocket engines, Aeroacoustics, LRE system analysis

**Nov 2016–Oct 2019 (defense 17 Feb 2020)** — **PhD in Aeronautics and Space Engineering**

Sapienza, University of Rome, Rome (Italy)

Research interests: Thermoacoustics, High-frequency combustion instability, Gasdynamics, Liquid propellant rocket engines, Aeroacoustics

**Oct 2020–Dec 2020**
**Oct 2019–Dec 2019**
**Oct 2018–Dec 2018** — **Teaching Assistant (Tutor) in Liquid Rocket Engines (English language)**

M.Sc. in Space and Astronautics Engineering - Sapienza, University of Rome, Rome (Italy)

**Apr 2018–Jun 2018** — **External PhD Student collaborator – Combustion Dynamics group (VDY)**

DLR, the German Aerospace Center, Lampoldshausen, Hardthausen (Germany)

**Oct 2013–May 2016** — **M. Sc. in Space and Astronautical Engineering (marks 108/110)**

Sapienza University of Rome, Rome (Italy)

Thesis: "Numerical Modeling of Longitudinal Combustion Instability in a Single Element Rocket Combustor by quasi-1D Euler Equations"

## PERSONAL SKILLS

**Language(s)** — Italian (mother tongue), English (proficient)

**Digital skills (proficient if not specified)**

Programming: Fortran, C, Python, C++, .NET/C# (basic)

Parallel progr.: MPI, OpenMP, OpenACC, Cuda, OpenCL (basic). CINECA certificates available.

Commercial software: Matlab, Mathematica, Ms Office, Ecosim, COMSOL (basic)

Operative systems: Linux, Mac OS, Windows

## ADDITIONAL INFORMATION

**Invited talks** — June 29th, 2018: Low order modeling of high frequency combustion instability in liquid propellant rocket engines, DLR – the German Aerospace Center, Lampoldshausen, Hardthausen, Germany

**Grants**
- "Avvio alla ricerca 2018" (Research kick-off, Sapienza)
- "Giovani ricercatori 2017" (Young researchers, Sapienza)
- "Avvio alla ricerca 2017" (Research kick-off, Sapienza)

**Awards** — "2013 Maurizio Di Giacinto award - Best Mini-Rocket and Launch-Plan", 2nd Sapienza student rocketry challenge