Autorizzo l'utilizzo del CV ai fini della pubblicazione sul sito di Ateneo dell'Università degli Studi di Roma "La Sapienza"

## WORK EXPERIENCE

**[ 03/2020 – 06/2021 ]**   ### Aerodynamic Course Teaching Assistant

*"Sapienza" University of Rome*

**City:** Rome
**Country:** Italy
**Main activities and responsibilities:**
University teaching assistant of the course "Aerodynamic" of the Bachelor Degree in Aerospace Engineering

**[ 11/2019 – 12/2019 ]**   ### Freelance Aerodynamic Course Teacher

*GAUSS S.r.l.*

**City:** Rome
**Country:** Italy
**Main activities and responsibilities:**
Computational Fluid Dynamics (CFD) Course. The course, held in English, covered the basics of computational fluid dynamics, with emphasis on meshing, numerical simulations, and postprocessing.

**[ 02/2018 – Current ]**   ### Applied Research - Consulting Support Activity

*"Sapienza" University of Rome*

**City:** Rome
**Country:** Italy
**Main activities and responsibilities:**
Consulting support activities for the European Space Agency (ESA):

- Assessment of VEGA-C Vehicle Acoustics at Lift Off
- Thrust unsteadiness of large SRM affecting the vehicle dynamics
- VEGA-LV RACS Performance: Analysis of RACS inclination effects on VEGA-C
- Fluid dynamic numerical study of the cryogenic liquid oxygen/methane flow in the full-scale injector head of the VEGA-E upper stage M10 engine (ESA Lyra Programme)
- VEGA-C Vehicle Aerodynamic Assessment: Aerodynamic crosscheck analysis and buffeting analysis

## EDUCATION AND TRAINING

### Abilitation to Industrial Engineering Profession - Section A (Esame di Stato)

***"Sapienza" University of Rome***

**Address:** Rome, Italy

[ 10/2018 – Current ]   ### Ph.D. in Theoretical and Applied Mechanics

***"Sapienza" University of Rome***

**Address:** Rome, Italy
**Level in EQF:** EQF level 8
**Thesis:** Ph.D. thesis: „High-Fidelity Numerical Methods for Aeroacoustics Phenomena in Compressible Turbulent Flows".

[ 09/2015 – 01/2018 ]   ### Master degree in Aeronautical Engineering

***"Sapienza" University of Rome***

**Address:** Rome, Italy
**Final grade:** 110/110 cum laude   **Level in EQF:** EQF level 7
**Thesis:** Internship Master's thesis at Agenzia Spaziale Italiana (ASI): „Numerical Simulations of Rarefied Gas Flows with "Direct Simulation Monte Carlo" Method.".

[ 09/2012 – 07/2015 ]   ### Bachelor degree in Aerospace Engineering

***"Sapienza" University of Rome***

**Address:** Rome, Italy
**Final grade:** 102/110   **Level in EQF:** EQF level 6
**Thesis:** Bachelor's thesis: „Aerodynamic effects of swept wings".

[ 09/2007 – 06/2012 ]   ### Aeronautical technical expert

***Aeronautical technical institute "F. De Pinedo"***

**Address:** Rome, Italy
**Final grade:** 100/100   **Level in EQF:** EQF level 4
**Main subject / occupational skills covered:**
Aerotechnics / Meteorology / Air Navigation / Air Traffic Control.

## LANGUAGE SKILLS

**Mother tongue(s):** Italian

**Other language(s):**

### English

**LISTENING** C1   **READING** C1   **WRITING** C1

**SPOKEN PRODUCTION** C1   **SPOKEN INTERACTION** C1

## DIGITAL SKILLS

Microsoft Office | Computational Fluid Dynamics(CFD) | ANSYS Fluent | STAR-CCM+ | Meshing | Pointwise | Postprocessing | Tecplot 360 | Paraview | MATLAB & Simulink | LaTeX | Windows OS | Linux OS | MacOSX | high performance computing (HPC) | Numerical Simulations | Fortran 90

## CONFERENCES AND SEMINARS

[ 04/2021 ]  **55th 3AF International Conference on Applied Aerodynamics**

[ 08/2021 ]  **AIAA 2021 Propulsion and Energy Forum**

## PUBLICATIONS

[ 2021 ]

**Numerical Analysis of Side-loads Reduction in a Sub-scale Dual-bell Rocket Nozzle.**

https://doi.org/10.1007/s10494-021-00243-4

**Reference:** Flow, Turbulence and Combustion

[ 2020 ]

**Large-Eddy Simulation of Vortex Shedding and Pressure Oscillations in Solid Rocket Motors**

https://doi.org/10.2514/1.J058866

**Reference:** AIAA Journal, Vol. 58, No. 12

[ 2019 ]

**Aerothermodynamic Analysis of High-Altitude Space Launcher with Direct-Simulation-Monte-Carlo Method**

https://doi.org/10.2514/1.J057635

**Reference:** AIAA Journal, Vol. 57, No. 6

## CERTIFICATIONS

**CINECA - School on Numerical Methods for Parallel CFD**

**CINECA - HPC methods for Computational Fluid Dynamics and Astrophysics**

**CINECA - Introduction to Parallel Computing with MPI and OpenMP**

**CINECA - Debugging and Optimization of Scientific Applications**

**CINECA - Introduction to modern Fortran**

**Tecplot 360 Certification**

**Pegasus Certificate - The European Network of excellence in Aerospace Engineering Education**

**ICAO L4 Training Course - Test of English for Aviation (TEA) Final result 5/6**

**Aircraft Pilot License (VDS Aircraft)**

## PROJECTS

**Sapienza Flight Team (SFT): Aerodynamic Team**

## HONOURS AND AWARDS

**AIAA Solid Rockets Best Paper Award from the AIAA 2021 Propulsion and Energy Forum**

**"Giulio Guj" Master Degree Prize: Best Master Thesis in Fluid Dynamics of the 2016-2017 A.Y.**

**Excellent graduate of the Faculty of Civil and Industrial Engineering (2016-2017 A.Y.)**

**Excellence program of the master's degree course in Aeronautical Engineering**

## DRIVING LICENCE

**Motorbikes**: A
**Cars**:        B