

PERSONAL INFORMATION

Davide Cavalieri

POSITION

Ph.D. student in Aeronautics and Space Engineering

EDUCATION AND TRAINING

28/07/2021

Master's degree, Space and Astronautical Engineering

University of Rome "La Sapienza"

- Main topics: Gasdynamics, Space Propulsion, Space Structure, Space Missions & Systems, Combustion, Space flight mechanics, Thermal analysis.
- Thesis title: "Theoretical and numerical modelling of multicomponent transcritical diffuse interfaces under LRE conditions"
(Advanced thermodynamics, multiphase flow, real gas and fluid mechanics coupling)

24/07/2018

Bachelor's degree, Aerospace Engineering

University of Rome "La Sapienza"

- Main topics: Calculus, Geometry, Chemistry, Physics, Aerodynamics, Aerospace Materials, Space exploration systems, Aerospace propulsion.
- Thesis title: "Design, construction and experimental testing of a small-scale solid rocket motors SRM"

PERSONAL SKILLS

Mother tongue

Italian

Other language

English

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
B1	B1	B1	B1	B2

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Good interrelation and collaboration skills, acquired in multiple activities in the field university, sports, social. Presentation of scientific results, drafting of technical reports. Motivated, perseverant, curious, and competitive

Computer skills

- OpenFOAM
- MATLAB
- Tecplot
- LaTeX
- Wolfram Mathematica
- Python
- IDM CIC
- Ansys Fluent
- Arduino
- Microsoft Office™ tools

Driving licence

- A1, B

ADDITIONAL INFORMATION

Publications
Presentations
Projects
Conferences
Seminars
Honours and awards
Memberships
References

- D. Cavalieri, G. Indelicato, A. Remiddi, P. E. Lapenna, F. Creta. (2021). Theoretical and numerical modelling of multicomponent transcritical diffuse interfaces. XXVI International Conference Italian Association of Aeronautics and Astronautics - AIDAA 2021
- D. Cavalieri. Theoretical and Numerical Modeling of Multicomponent Transcritical Diffuse Interfaces Under LRE Conditions. Aerotec. Missili Spaz. (2022)
- D. Cavalieri, G. Indelicato, A. Remiddi, F. Creta, P.P. Ciottoli, P. E. Lapenna. A Pressure-Based Numerical Framework for Highly Stratified Transcritical Real-Fluids Simulations. AIAA 2023-1666. AIAA SCITECH 2023 Forum. January 2023.
- D. Cavalieri, J. Liberatori, R. M. Galassi, P. E. Lapenna, M. Valorani and P. P. Ciottoli. "Unsteady RANS Simulations with Uncertainty Quantification of Spray Combustor Under Liquid Rocket Engine Relevant Conditions," AIAA 2023-2148. AIAA SCITECH 2023 Forum. January 2023.