

PERSONAL INFORMATION Edoardo Maria Leonardi**EDUCATION AND TRAINING**May 2025–October 2025 **Visiting Phd student**

The University of Arizona

Subject: Debris removal techniques based on Artificial Intelligence methods

Supervisor: Prof. Fabio Curti

2022–present **Phd in Energy and Environment**

Sapienza University of Rome

Subject: Applications of astrodynamics for space exploration and sustainable management

Supervisor: Prof. Mauro Pontani

2018–2022 **Master's degree in Space and Astronautical Engineering**

Sapienza University of Rome

Final grade: 110/110 cum laude | GPA: 29.47/30

Thesis: "Trajectory optimization and multiple-sliding-surface terminal guidance in the lifting atmospheric reentry"

Supervisor: Prof. Mauro Pontani

2015–2018 **Bachelor's degree in Aerospace Engineering**

Sapienza University of Rome

Final grade: 110/110 cum laude | GPA: 29.49/30

Thesis: "Optimal two- and three- dimensional Earth-Moon orbit transfers"

Supervisor: Prof. Mauro Pontani

2010–2015 **High School diploma**

Liceo Scientifico "Virgilio" in Rome

Final grade: 100/100 cum laude

TEACHING2024 **Tutoring experience**

Sapienza University of Rome

Tutor for the course of Spaceflight Mechanics - Master's degree in Space and Astronautical Engineering

Tutor for the course of Physics - Bachelor's degree in Mechanical Engineering

2024 **Private teaching**

College of excellence "Camplus Pietralata"

Private teaching for university students in preparation of Physics 1 exams

PERSONAL SKILLS

Mother tongue Italian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
	Certificate in Advanced English (CAE) C1				
French	A1	A1	A1	A1	A1

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

Computer skills – full proficiency in Matlab/Simulink
 – competent in Office programmes and Latex

Other skills Enjoy running, mountain hiking, cycling and skiing | Marathon runner | Member of the International Virtual Aviation Organization (+100 hrs as flight simulator pilot) | Year-long experience as educator for teenagers | Basic Life Support and Defibrillator Operator certificate | Transverse flute and guitar player.

HONOURS AND AWARDS

2019 Space missions and systems challenge (Prof. Luciano Iess)

Estimation of Cassini orbit insertion maneuver from range/range rate observables - top-three finisher

2015-2019 University merit scholarship

Fee exemption as deserving student

2015 National Excellence Honour roll (MIUR)

Scholarship as student that have obtained a mark of 100 with honours in the state exam

PUBLICATIONS

- [1] E. M. Leonardi and M. Pontani. "Optimal two - and three - dimensional Earth-Moon orbit transfers". In: *Proceedings of the XXV AIDAA International Congress*. Rome, Italy, 2019.
- [2] E. M. Leonardi and M. Pontani. "Optimal Two-and Three-Dimensional Earth-Moon Orbit Transfers". In: *Aerotecnica Missili & Spazio* 99 (2020), pp. 195–202.
- [3] E. M. Leonardi, A. Vitiello, and M. Pontani. "Three-dimensional atmospheric descent and landing via multiple-sliding-surface guidance". In: *Proceedings of the AIAA/AAS Astrodynamics Specialist Conference*. Big Sky, Mt, 2021.
- [4] A. Vitiello, E. M. Leonardi, and M. Pontani. "Multiple-sliding surface guidance and control for terminal atmospheric reentry and precise landing". In: *Proceedings of the 72nd IAC International Astronautical Congress*. Dubai, UAE, 2021.
- [5] A. Vitiello, E. M. Leonardi, and M. Pontani. "Multiple-sliding-surface guidance and control for terminal atmospheric reentry and precise landing". In: *Journal of Spacecraft and Rockets* 60.3 (2023), pp. 912–923.
- [6] E. M. Leonardi and M. Pontani. "Trajectory optimization and multiple-sliding-surface terminal guidance in the lifting atmospheric reentry". In: *Proceedings of the XXVII AIDAA International Congress*. Padova, Italy, 2023.
- [7] E. M. Leonardi, M. Pontani, S. Carletta, and P. Teofilatto. "Low-Thrust Nonlinear Orbit Control for Very Low Lunar Orbits". In: *Applied Sciences* 14.5 (2024), p. 1924.
- [8] E. M. Leonardi and M. Pontani. "Trajectory optimization and multiple-sliding-surface terminal guidance in the lifting atmospheric reentry". In: *Aerotecnica Missili & Spazio* 104.2 (2025), pp. 115–134.
- [9] D. Sanna, E. M. Leonardi, G. De Angelis, and M. Pontani. "Optimal Impulsive Orbit Transfers from Gateway to Low Lunar Orbit". In: *Aerospace* 11.6 (2024), p. 460.

- [10] G. De Angelis, S. Carletta, E. M. Leonardi, M. Pontani, and P. Teofilatto. "Stereographic projection and static digraph for information routing in satellite constellations". In: *Proceedings of the 75th IAC International Astronautical Congress*. Milan, Italy, 2024.
- [11] E. M. Leonardi, G. De Angelis, and M. Pontani. "Guidance strategies to deploy a lunar satellite constellation from Gateway". In: *Proceedings of the 75th IAC International Astronautical Congress*. Milan, Italy, 2024.
- [12] E. M. Leonardi, G. De Angelis, and M. Pontani. "Nonlinear Orbit Acquisition and Maintenance of a Lunar Navigation Constellation Using Low-Thrust Propulsion". In: *Aerospace* 11.12 (2024), p. 1046.
- [13] M. Caruso, G. De Angelis, E. M. Leonardi, and M. Pontani. "Minimum-Fuel Trajectories and Near-Optimal Explicit Guidance for Pinpoint Landing from Low Lunar Orbit". In: *Aerospace* 12.3 (2025), p. 183.
- [14] E. M. Leonardi and M. Pontani. "Trajectory optimization and explicit guidance for rendezvous with Gateway using finite thrust". In: *Proceedings of the 35th AAS/AIAA Space Flight Mechanics meeting*. Lihue, HI, 2025.
- [15] E. M. Leonardi, G. De Angelis, and M. Pontani. "Guidance strategies to deploy a Lunar Navigation Constellation from Gateway". In: *Acta Astronautica* 232 (2025), pp. 143–154.
- [16] C. Ciccotti, E. M. Leonardi, and M. Pontani. "Routing optimization for On-Orbit-Servicing using high-thrust propulsion". In: *Proceedings of the 11th European Conference for Aerospace Sciences*. Rome, Italy, 2025.

DATI PERSONALI

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali"

Il sottoscritto dichiara di essere consapevole che il presente curriculum vitae sarà pubblicato sul sito istituzionale dell'Ateneo, nella Sezione "Amministrazione trasparente", nelle modalità e per la durata prevista dal d.lgs.n.33/2013, art. 15.

Roma, 15/07/2025