



CLAUDIO BOTTIGLIERI
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Profile

Who am I

Resolute, Team-Worker, Passionate, Intuitive-thinker, Problem-Solver

My technical interests

Close trajectory optimization, Landing on small bodies, Guidance, Navigation and Control, Autonomous Navigation,

Work Experience

- May. 2022 – present **Flight Dynamics Engineer** for interplanetary **CubeSat operations** (ASI project)
Politecnico di Milano, Italy
- **Design and Develop** of a **Software** architecture to support interplanetary **CubeSat operations**
 - Software **Implementation, Management** and **Requirements definition**
- Feb. 2021 – present **Mission Analysis Engineer** for **Hera's CubeSat Milani mission**, (Phase. A/B/C)
Politecnico di Milano, Italy
- **Mission Design** under demanding scientific **Requirements** and operational **Constraints**
 - Proximity **Trajectory Design, Navigation** and **Landing** in highly non-Keplerian environment
 - Stochastic analysis on trajectory robustness, **Navigation and Guidance assessment**
 - Good knowledge of **ESA** procedures and project management (PRR, PDR, CDR)
- May. 2020 – Dec. 2020 **Master Thesis** in the context of Milani mission:
"Proximity trajectory design for a CubeSat around Didymos, a binary asteroid"
- Characterization of the **dynamical environment** and accurate **gravity field modelling**
 - Proximity **Trajectory Design** strategy and **Optimization** in non-Keplerian environment
- Main Tools:** Matlab, SPICE, GIT, LaTeX

Education

- Sep. 2018 – Dec. 2020 **Master of Science in Space Engineering**
Politecnico di Milano, Italy Graduation with 110 cum laude/110
- Focused on complex space systems design, spacecraft attitude dynamics and control
- Sep. 2015 – Jul. 2018 **Bachelor's degree in aerospace engineering**
University of Naples "Federico II", Italy Graduation with 110 cum laude/110
- Thesis in Gasdynamics:** *"Characterization of a swirler generator for propulsion application"*
- Focused on Programming, Aerospace Physics and Statistics for Reliability and Affordability

Publications

- Bottiglieri, C. et al. (2022). Mission Analysis and Navigation Assessment of Hera's Milani CubeSat. 2022 4S Symposium, Vilamoura
- Bottiglieri, C. et al. (2021). Trajectory Design and Orbit Determination of Hera's Milani CubeSat. 2021 AAS/AIAA Astrodynamics Specialist Conference

Skills and Interests

Languages ITALIAN: mother tongue; ENGLISH: fluent (C1).

Computer skills **MATLAB** (Advanced), **SPICE**(Advanced), **Simulink** (Advanced), **GIT** (Advanced), **LaTeX** (Advanced), **CEA** (Basic), **SPENVIS** (Basic), **CATIA V5-6** (Advanced), **Autodesk Inventor Nastran 2021** (Advanced), **C/C++** (Basic), **MS Office** (Proficient)

Interests Reading, Travelling, Cooking, Puzzle games.