POLITECNICO
MILANO 1863

DIPARTIMENTO DI
SCIENZE E TECNOLOGIE
AEROSPAZIALI

29.04.2024
h. 14:15

Sala Consiglio DAER
Building B12
Via La Masa, 34 - Milano

PhDAER-SEMINAR

Reaching for the Moon: trajectory optimization & on-board guidance design for the ESA Argonaut mission

In this seminar, the preliminary design of the descent and landing trajectory and guidance algorithms of the ESA Argonaut lunar lander are presented.
It is shown that the proposed end-to-end guidance solution represents an easily implementable alternative to on-board optimization, minimizing the verification & validation effort, computational footprint, and programmatic risk in the development of the related GN&C capabilities.
Conclusions are drawn on the applicability of the proposed approach to ESA's Argonaut mission.

Speaker: Francesco Capolupo

Francesco Capolupo graduated in Space Engineering in 2012 from Politecnico di Milano and ISAE-Supaero, with a Master's thesis carried out at the Massachusetts Institute of Technology. In 2020 he joined the European Space Agency, where he now serves as GNC Systems Engineer supporting Argonaut, ExoMars, and Ariane 6 developments, and supervising multiple R&D activities in the field of Vision-Based Navigation and AI.