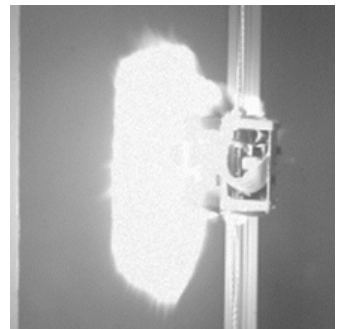
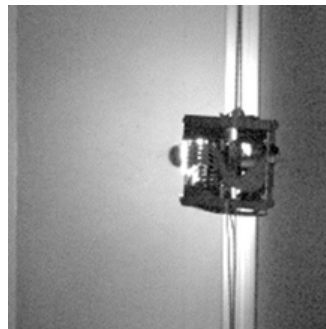
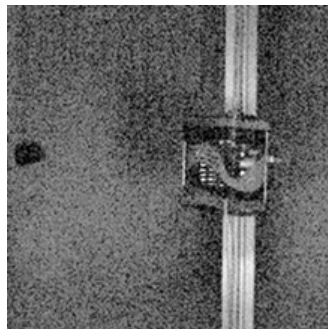
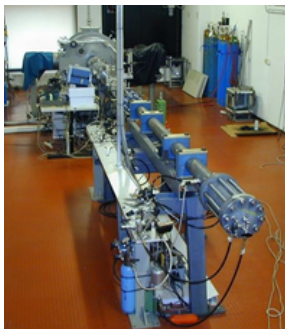


AN OVERVIEW ON SPACE DEBRIS PROTECTION BEST PRACTICES

Space debris represent a real threat to the Earth orbit access and utilization. In the development and management of a space mission, it is important to focus on the evaluation of impact risk, the protection of spacecraft from debris impact, and the modelling of impact-induced fragmentation.

This webinar will focus on the current status and the most promising advancements in this field, introducing the best practices suggested by the scientific community and focusing on specific case studies. Attendees will learn about recent advances in catastrophic fragmentation modelling due to hypervelocity impact, impact risk assessment, spacecraft protection.

The last hour of the webinar will focus on impact testing, with details on the existing technologies and facilities and the current perspectives for the sector.



LEARNING OBJECTIVES

- Understand EDL challenges and current technologies.
- Understand aeroshell and parachute aerodynamic, dynamical modelling and entry and descent phases simulation issues.
- Implement methods and algorithms to reconstruct both the vehicle trajectory and the atmospheric structure from inertial data.
- Application of Bayesian techniques for data assimilation and multi-sensor fusion.

Target audience: This webinar is addressed to doctoral students, non-academic professionals, and graduate students.

Dates and time: 28 and 29 November 2022, 9:00-11:00 CET

REGISTRATION AND CONTACTS

Course Code: 20221128

This course is part of the 2022 institutional activity for AIDAA members. The registration requires the purchase of one of the packages described here <https://www.aidaa.it/package-list/>, and the completion of the online form available on AIDAA webpage.

Course platform: Webex, a link will be sent via email as the registration is complete. At the end of each course, **attendance certificates** will be sent to participants via email.

For further info, please, contact academy@aidaa.it



SPEAKER

Lorenzo Olivieri is a postdoctoral fellow at the Center for Space Studies CISAS G. Colombo of the University of Padova. He graduated in Aerospace Engineering in 2011 and he received a Ph.D. in Measures for Space from the University of Padova in 2015. His research interests include small satellites technologies, docking systems and capturing strategies, and debris protection and removal. During his career he worked in the international teams of the ReDSHIFT and E.T.PACK projects in the framework of the European H2020 program. His research activity is currently funded by the Italian Space Agency in the framework of the ASI-INAF contract N. 2020-6-HH.0 "Supporto alle attività IADC e SST 2019-2021". He is author of 59 international conference articles and 18 papers published on peer-reviewed journals.

Leonardo Barilaro is a senior lecturer at the Malta College of Arts, Science and Technology. He received a Ph.D. in Measures for Space from the University of Padova in 2012 with a thesis on "Measurement techniques for assessing and reducing the risk posed by Micrometeoroid and Orbital Debris (M/OD) to Space vehicles". His research interest include debris protection and removal and impact test facilities development. During his career he worked in international projects supported by the Italian Space Agency, the European Space Agency, and the European Commission. He is currently involved in the development of the first high velocity impact facility in Malta.

