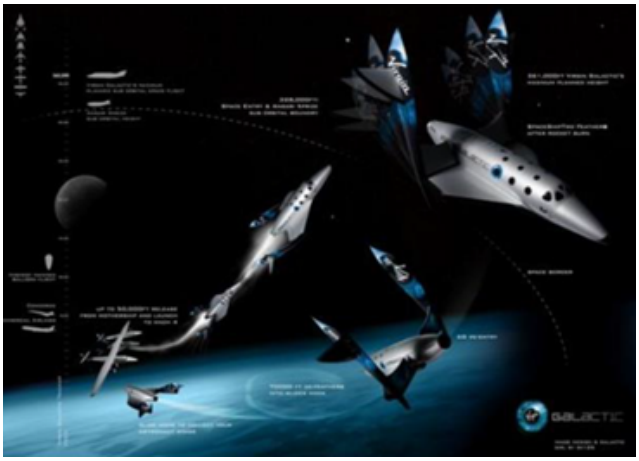
AIDAA
Educational Series & Academy

SPACEPORTS AS GATEWAY FOR SUSTAINABLE ACCESS TO SPACE

The course provides an outlook at the technologies for commercial access to space, in particular suborbital flight, near space flight, satellite air launch, re-entry systems. Special focus is provided to the suborbital flight with special emphasis to the operational aspects and the opportunities of space exploitation offered by a suborbital spaceflight system. Elements of the expected suborbital market are provided, ranging from the space tourism to microgravity experimentation, to astronauts and pilots training. Matching of the suborbital flight to the New Space Economy opportunity is also discussed. The course addresses the concept and implementation of Spaceports as pivotal assets for commercial access to space and presents the major Spaceport functions that are identified to properly run the asset in support of flexibility to adapt non only to the current technologies but to the future developments. The main criteria to establish a Spaceport and relevant assessment methodology is presented, and the future Italian Spaceport is discussed. The Course continues with the description of the Ground Segment, a paramount asset to properly support a space mission execution both during flight mission and ground operations. The main Ground Segment functions and elements are described and the associated operations. The course describes the experience gathered during the development and execution of the ESA Intermediate Experimental Vehicle (IXV) mission with details on the Ground Segment approach and various mission aspects. The mission was supported at the ALTEC mission Control Center in Torino, Italy. The course describes the aspects associated with the feasibility study of Spaceports evaluation in Malaysia and different study cases are presented. Malaysia is significantly interested in access to space and becoming part of the major international players. The class provides highlights on Regulatory aspects and in particular the outfitting of a Regulatory system that allows Spaceports outfitting and suborbital operations in the Italian Territory. Specific Forum are described such the European Spaceport Forum and the International Astronautical Congress, where participants are exposed to the state of the art in space business and can be part of promising network of operators. After the retirement of the Space Shuttle in 2011, the space business has significantly changed, and the course provides an outlook of the new exciting opportunities ahead of us that are reshaping this fascinating business. The course provides elements to both doctoral students who are interested in enriching their curriculum with first-hand experience out of the space industry and operators who are interested in setting up space related services in support to the current and future developments.



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Target audience: doctoral students, non-academic professionals, and Master students.

Dates and time: 22 June 2023, 14.00 - 18.00

REGISTRATION AND CONTACTS

Course Code: 20230622

This course is part of the 2023 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

Francesco Santoro received his degree in Electronics Engineering from the University of Pisa, Italy and gathered over 35 years of experience in the Aerospace Industry growing a very wide range of experience and relationship with the major Space Agencies, in particular ASI and ESA and commercial Companies. His current position is Program Manager of the Technology and Space Exploitation business line at ALTEC S.p.A., Torino Italy. He has recently been appointed as member of the Board of Directors of Digisky, an ALTEC participated Company operating in the field of Earth Observation through proprietary solutions dedicated to a variety of industries including agriculture, utilities, large infrastructures & environmental monitoring. In this workframe, Francesco is Program Manager of the ESA Skymetry Program, a web-based service that offers a wide range of monitoring solutions dedicated to the needs of multiple industries such as transportation, energy and water infrastructures, based on the integration of EO change-detection satellites services with the execution of selective aerial mapping missions intended to check and analytically qualify the reasons for the detected change. He is also Program Manager of the ASI SINAV research program aimed at creating a fast autonomous navigation system for martian rovers supported by algorithms for analyzing panoramic images acquired by rovers and aerial platforms during autonomous and collaborative planetary exploration missions, using "Deep Learning" methods. Francesco is Chair/Co-Chair of specific committees of the International Astronautical Congress (IAC), the Commercial Spaceflight and Safety Committee and the Space Transportation Committee and is author and co-author of specific papers on the issues of competence. He supports education activities by intensively collaborating with universities and acting as Industrial Tutor to support internships and graduation thesis. Francesco has actively been involved with IAC for several years and in particular participated to the Congresses in Beijing, Montreal, Guadalajara, Adelaide, Jerusalem, Paris. Francesco has also wide experience in conducting initiatives with Southeast Asia Countries (Malaysia) facilitating their plans to foster access to space.