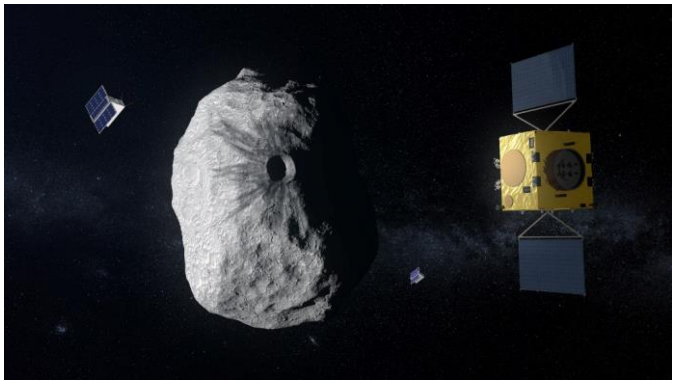
ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
CAMPUS DI FORLÌ

Lecture Hall via Fontanelle 40, Forlì

Monday, April 15th @ 10.00

Space Exploration at GMV



Space missions are pushing more and more towards an active interplanetary exploration, in which the probe does not only Fly-by but it interacts with the body: it navigates into close proximity orbits, it lands on and it performs surface operations. GMV, as ESA and the European Commission, have clear goals for the planetary exploration and the main targets are the Moon, Mars and Asteroids.

GMV has been involved into several of the preliminary activities related to these missions and over the years has consolidated his leading role in the field of Mission Analysis and GNC, becoming an acknowledged European provider of a complex subsystem such as the one of the Guidance, Navigation and Control.

It is easy to imagine how the GNC of these exploration missions is one of the most critical elements of the spacecraft: long distances, demanding goals and the need of fast reactions are driving towards an increased level of autonomy. Autonomous GNC and goal-oriented solutions are what GMV is offering in this field.

A special focus will be given to HERA, a European mission of opportunity in the frame of planetary defense, with the main objective of demonstrating the kinetic impactor technique on a binary asteroid system. HERA is based on the extensive work done by the European Space Agency and European industry between 2011 and 2016 for the AIM studies, in the frame of the AIDA joint mission with NASA.

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