



Associazione Italiana di Aeronautica ed Astronautica  
XXIV International Conference  
18-22 September 2017 | Palermo – Enna

**Giorgio Tumino**

## **ESA's Vega and Space Rider Space Transportation Development Programmes: Status and Perspectives**

The European Space Agency is currently investing significant resources in the field of Space Transportation, with the main focus on new launchers developments. The presentation will provide the status and perspective of the new VEGA development programme, including the VEGA-C under development for the short-term, the VEGA-E preparation for the long-term, and a series of spin-offs products under definition, strengthening the VEGA competitiveness for widening the capture of the available worldwide markets.

### **Giorgio Tumino**

**VEGA Development Programme Manager (Directorate of Launchers, European Space Agency)**

- in 1989 started the Engineering studies at the University of Palermo;
- in 1995 graduated in Aerospace Engineering at the University of Rome "La Sapienza";
- in 1996 joined the ESA (European Space Agency) Directorate of Technical and Quality Management at the European Space Research and Technology Centre (ESTEC) in Noordwijk - The Netherlands, to work in the field of aerodynamics, aerothermodynamics, propulsion, structures and thermal protection systems;
- in 2004 moved to the ESA Directorate of Launchers at the Headquarters in Paris - France, to lead the development of the Intermediate eXperimental Vehicle (IXV), ESA's atmospheric re-entry demonstrator whose mission into space was successfully completed in February 2015;
- in September 2015, within the ESA Directorate of Launchers moved to the European Space Research Institute (ESRIN) in Frascati - Italy, to lead the VEGA development programme, including VEGA-C, VEGA-E and a series of associated spin-offs.