

UNIVERSITÀ DEGLI STUDI DELL'AQUILA
Prof. Alessandro Di Carlofelice
Curriculum scientifico

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Alessandro Di Carlofelice graduated in Electronic Engineering from the University of L'Aquila, Italy, in 2006, and earned his Ph.D. in Microwave Radiometry for Remote Sensing and Biomedical Applications in 2011. His early career included participation in the European Space Agency's (ESA) ESMO (European Student Moon Orbiter) program, where he contributed to the design of a microwave radiometer payload aimed at lunar exploration. In 2006, he joined the EXOMARS program in collaboration with Telespazio, focusing on communication scenario analysis and trade-offs for the Rover Operation Control Center (ROCC), which supported the rover mission operations. His work involved detailed analysis of communication systems for deep space exploration.

From 2007 to 2010, Alessandro collaborated with Thales Alenia Space, where he contributed to several high-profile projects, including the testing of hybrid subsystems (Ku-band transmitters) and the design and optimization of space antenna systems for satellite communications. His research during this time spanned a broad range of electromagnetic technologies, including waveguide filters, low-noise amplifiers, and phased array antennas.

In 2011, he became a Postdoctoral Researcher at the Department of Electrical Engineering and Information at the University of L'Aquila. His research focused on the design and development of advanced space communication and radar systems, with a specific emphasis on microwave antennas, RF circuits, and high-efficiency transceiver modules. Alessandro's expertise was key in several European and national projects, such as the H2020 ATOS project, where he led the design of innovative X-band T/R modules for Earth observation systems, and the Oceanos project, which focused on the development of advanced radar technologies for maritime applications.

In recent years, his research has also expanded to include RFID technology for structural health monitoring, where he developed novel chipless RFID sensors for wireless strain measurement. Alessandro is actively involved in teaching at the University of L'Aquila, where he lectures on courses related to electromagnetic fields, antennas, and microwave systems, and provides hands-on training in advanced electromagnetic simulation tools and laboratory activities.

His work has resulted in numerous publications in top-tier journals and international conferences, as well as several patents related to space communication and RF system design. He is an active member of the Italian Society of Electromagnetics (SIEm) and regularly presents his research at international scientific conferences.

Public profile for detailed scientific and research contributions:

- Research projects and publications on [Research Gate](#)
- Publications and detailed statistics on [Scopus](#)
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