

Design of active receiving antennas

Abstract:

The continuous demand increase in market needs for space applications, Earth Observation, Telecom, Navigation and Science, together with the technology evolution have pushed the increase in capacity flexibility and features offered by the active antenna systems. Solutions based on DRA (Direct Radiating Array) and DAFR allow to implement, multiple beams, geolocation, power flex, beam hopping, nulling...

The objective of the workshop is to give a brief view of some of the key aspects and techniques for multibeam active receive antennas design.

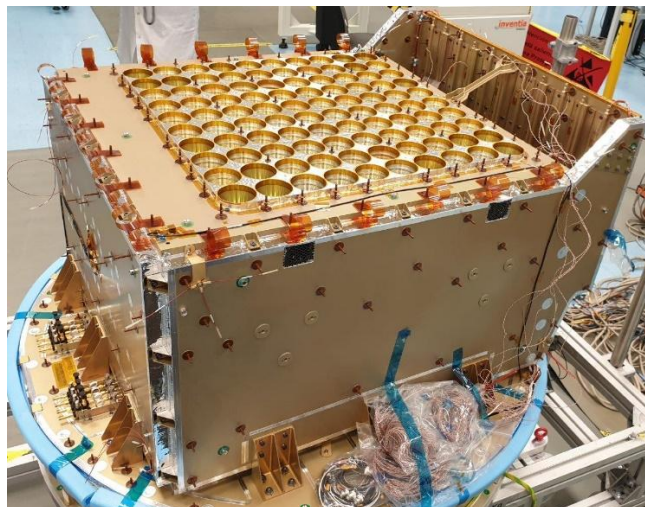
Workshop outline:

Format for the workshop: Workshop based on some slides that include schemes and pictures to describe key concepts and pictures of heritage projects in array antennas.

Speaker: Antonio Montesano

Contents:

- Intro & antenna basics
- Design and architectures
 - Sizing and Driving requirements
 - Solutions and architectures
- Architecture and capacity & Technologies involved
 - Hybrid
 - MMICs (GaN, GaAs, SiGe)
 - ASICs
 - Radiators





Antonio Montesano (Madrid 1964), Telecommunication Engineering (Master) by the Polytechnic University of Madrid, specialised in communications, microwaves, antennas and electromagnetic fields.

His professional career started in the Space Division of former CASA (currently AIRBUS), participating in reflector and array space antennas as design and test engineer. He was responsible of Array Antenna Section, including: RF designs, implementation, product development, technical coordinator and arrays R&D, participating in emblematic projects and Array Antenna Product Owner at Madrid site.

Publications: more than 30 articles and participation in the “Space Antenna Handbook”. Also part of the Multipaction working group during the multination standard definition.