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PHD COURSE:

Multibeam Antennas and Beamforming Networks for Space Applications

- Speaker:** Dr. Giovanni Toso
(*European Space Agency*)
- Dates:** 26-27-28 May 2014
- Location:** ICT International Doctoral School, University of Trento
- Duration:** 20 Hours
- Note:** The lessons will be held in English
- Contact:** Prof. Andrea Massa (andrea.massa@ing.unitn.it)



The objective of this course consists in presenting the state of the art and the on-going developments in Multi-Beam Antennas (MBAs) and Beam-Forming Networks (BFNs). MBAs find application in several fields including communications, remote sensing (e.g. radars, radiometers, etc.), electronic surveillance and defense systems, science (e.g. multibeam radio telescopes), RF navigation systems, etc. The BFN plays an essential role in any antenna system relaying on a set of radiating elements to generate a beam.

• About the Speaker

Dr. Giovanni Toso received the Laurea Degree (summa cum laude) and the Ph.D. in Electrical Engineering from the University of Florence, Florence, Italy, in 1992 and 1995, respectively. In 1996 he was visiting scientist at the Laboratoire d'Optique Electromagnétique, University of Aix-Marseille III, Marseille, France. From 1997 to 1999 he was a Post Doctoral student at the University of Florence. In 1999 he was a visiting scientist at the University of California, Los Angeles (UCLA). In the same year he received a scholarship from Thales Alenia Space (Rome, Italy) and he has been appointed researcher in a Radioastronomy Observatory of the Italian National Council of Researches (CNR). Since 2000 he is with the Antenna and Submillimeter Section of the European Space and Technology Centre of the European Space Agency, ESA ESTEC, Noordwijk, The Netherlands. He has been initiating and contributing to several R&D activities on satellite antennas based on arrays, reflectarrays, constrained lenses and reflectors. G. Toso has co-authored more than 50 technical papers published in peer reviewed professional journals, more than 200 papers published in international conferences' proceedings, and more than 10 international patents. In 2009 he has been coeditor of the Special Issue on Active Antennas for Satellite Applications in the International Journal of Antennas and Propagation. G. Toso is an Associate Editor of the IEEE Transactions on Antennas and Propagation.