University of Pavia
Ph.D. School of Electrical and Electronics Engineering and Computer Science

SEMINAR

AIR TRAFFIC MANAGEMENT: FROM NAVIGATIONAL AIDS TO UAVs

Maximilian Arpaio, PhD

Project Manager, Thales Italia S.p.A. – Air Operations Divisions
Gorgonzola (MI), Italy

13 January 2022, 14.00
Aula E2, and online at: https://us02web.zoom.us/j/6272078782

Abstract: Global air traffic has grown steadily since 2003. To adapt air traffic management infrastructure to future demand, civil and militar aviation authorities need to upgrade their current systems to develop new applications. In response to increasing air traffic volumes at the busiest airports, Thales group developed an integrated gate-to-gate solution that encompasses the en-route, approach and airport phases. To better address the lecture thorugh the above path, the main navigation aids will be thus shown and explained including their principles of operation, with a special enphasis on their strenghts as well as on their current weak points. Technological innovations that are advancing on the market will be then introduced, with a special focus on systems that are based on GNSS technology like ADS-B, Multilateration and GBAS. For some of them, the main implementation issues of operation will be discussed as well as with some practical cases. The seminar will close with some thoughts on the future technologies as applied to current air navigation aids in the frame of the current pandemic situation and the rise of UAVs.

Bio: Maximilian Arpaio received the Master degree in Telecommunications Engineering from the University of Parma in 2005 with a Thesis on DAB antennas. In 2007 he got a specialization in Wind Engineering at the Faculty of Aerospace Engineering of the Polytechnic of Milan, studying the effects of the wind on blunt bodies for antennas arrays. In 2012 he received his Post graduate Master in Project Management from the Faculty of Economics of the University of Verona with a Thesis on Multicultural Projects. Finally, in 2021 he obtained his PhD in Electronic Engineering, Telecommunications and Information Technologies at the Alma Mater Studiorum University of Bologna, carrying out research activities in the field of antennas and propagation in relation to 5G and drones. On a professional level, after a short period of research at University, from 2006 to 2008 he worked at the Telecomunicazioni Aldena company in Milan as technical engineer for radio-television transmission systems, as well as designer of passive RF / MW components and antenna systems engineer. In 2008 he joined Thales group, within the Air Operations Division, Navigation and Airport Solutions. In this period he worked in Milan as a project and system engineer for new generation surveillance systems and conventional air navigation aids, with particular reference to Multilateration and ADS-B technologies. Since mid-2011 he joined the Project Management Department, where he currently manages with a Senior profile civilian and military international projects with a special imprint on strong technological innovation components. His current interests are focused on antennas and RF propagation within different environments. He has been collaborating for many years with various Italian universities by promoting technical seminars and scientific collaborations.

Organizers

Prof. Marco Pasian

Ph.D. Coordinator

Prof. Ilaria Cristiani

Seminar in English

For more information: marco.pasian@unipv.it