WORKSHOPS AND SHORT COURSES - FRIDAY

WF10
Bistatic and Multistatic Radar

Organisers

Mike Cherniakov, University of Birmingham
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Abstract

Bistatic, Multistatic and Netted Radars represent a vibrant research area of modern radar and remote sensing technology. Over the last two decades this technology has been a focus of the worldwide radar community, with great but still not fully discovered potential for target detection, tracking and automatic recognition, as well as wide area surveillance and imaging. The workshop starts by introducing the basics of bi/multistatic/MIMO radar geometries and waveforms, and continues with specific problems of these radars, including real time observation, SAR and GMT modes. Automatic target classification is currently one of the most complex problems of radar technology and a possible solution is in the use of Inverse SAR and specifically Multistatic ISAR. ISAR from the basic to state-of-the-art stage will be discussed during the workshop and Mono and Multi Static ISAR performance will be compared. Since the 1970’s, stealth target detection is considered as the vital problem for defence and Forward Scatter Radar (FSR) is perhaps the only reliable solution for this. Various aspects of FSR will be considered during the workshop. Finally, radar networks, enabling large areas to be covered, are discussed. By this technology a more comprehensive and integrated picture of, for example, aircraft can be created, able to cope with rapidly increasing quantities of air traffic.

Programme

14:20 - 14:30 Welcome
14:30 - 15:15 Bistatic, Multistatic and MIMO radar
Pierfrancesco Lombardo and Debora Pastina
University of Rome La Sapienza, Italy
15:15 - 16:00 Bistatic/Multistatic Inverse SAR
Marco Martorella, University of Pisa, Italy
16:00 - 16:40 Coffee Break
16:40 - 17:25 Forward Scatter Radar
Marina Gashinova, University of Birmingham, UK
17:25 - 18:10 National Networked Radar
Christopher Baker, Aveillant Ltd, UK
18:10-18:20 Open Discussion and Concluding Remarks