

Duration: 08:30 - 12:30

Room: Stockholm

SF-02

Radar Based Detection of Drones

Organisers:

Thomas Zwick, Karlsruhe Institute of Technology, Germany

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Abstract

In recent years drones became a real threat to big events, critical infrastructure, but also simply to everybody's privacy. Since the devices are quite small they cannot be detected by the existing air surveillance radar systems. Therefore, a new technology for the detection of drones is required and several new products have been announced in the last few years. Nevertheless, these technologies are still subject to intensive research which will be presented in this short course. In the first part after an overview over the problem also non-radar based technologies (camera, acoustic) will be presented, but the major part of the workshop is dedicated to radar-based drone detection technologies.

Programme

08:30 - 08:50 Drone - Where do you Fly?

Werner Wiesbeck, Karlsruhe Institute of Technology, Germany

08:50 - 09:20 UAV Detection and Engagement - System Design Concept

Andreas Strecker, Airbus DS Electronics and Border Security GmbH, Germany

09:20 - 09:50 Multisensor Data Fusion for UAV Detection and Localization

Snezhana Jovanoska, Wolfgang Koch, Fraunhofer FKIE, Germany, Jan Goerlich, SAAB MEDAV Technologies, Germany, Reiner Thomä, TU Ilmenau, Germany

09:50 - 10:10 MIMO Radar for UAV Detection

Jens Klare, Oliver Biallawons, Delphine Cerutti Maori, Fraunhofer FHR, Germany

10:10 - 10:50 Break

10:50 - 11:10 Discrimination of UAVs Using Micro-Doppler

Lars Fuhrmann, Oliver Biallawons, Fraunhofer FHR, Germany, Lars Fuhrmann, University of Siegen, Germany

11:10 - 11:50 Multistatic OFDM Radar Network for Drone Detection

Benjamin Nuß, Thomas Zwick, Karlsruhe Institute of Technology, Germany

11:50 - 12:30 Detection and Discrimination of Micro-UAS Using Staring Radar

Tim Quilter, Ohio State University, USA