

Efficient EM design of phased array frontends at IMST

Abstract:

Antenna and complete front-end design for 5G, 6G and SATCOM is a challenging task. Integration and packaging techniques, which combine the antenna and the RF circuitry within a multilayer PCB together with the cooling require full 3D EM and Thermal simulations to get fast to from the first concept to the final product. EMPIRE XPU enables efficient full wave 3D EM simulation of such large and complex scenarios. Different antenna designs will be explained in certain design steps as well as shown in detail in the software with live simulation.

Workshop outline:

The first part of the workshop will be a presentation.

The second part will show live design & simulations of array antennas using EMPIRE XPU.

Winfried Simon studied Electrical Engineering at the Duisburg University and received his Diploma Degree in 1997. He joined the IMST GmbH in Kamp-Lintfort in 1996, and is the team leader of the EM modelling group in the department of Antennas & EM Modelling. His main fields of activities are 3D electromagnetic simulations and the design of antennas and RF Frontends. He is member in different IEC TC 106 project teams defining methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure and board member of the European School of Antennas (ESoA).