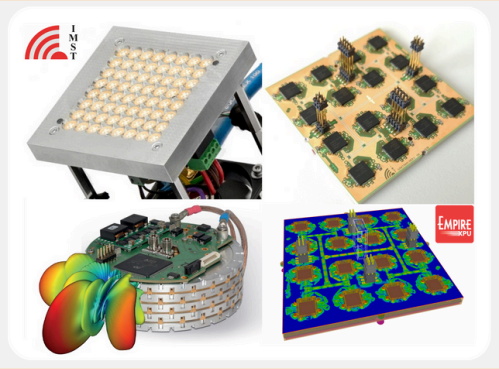
Design, Simulation and Realization of Phased Array Antennas



Abstract

Phased arrays provide scanned beams or multiple beams that are commonly used for radar, communications systems and space applications. This course begins with an introduction of the fundamentals of phased antennas array making emphasis on main concepts as array factor, coupling, gain/directivity and problems such as grating lobes, beam squint and scan blindness.
The second part focuses on practical examples of real active array antenna systems and their effcient 3D EM design and integration.

Speakers

Simona Bruni is Senior Antenna Engineer within the Antenna Front-Ends Team at IMST GmbH. Her research interests include the design of integrated antennas, high-frequency antenna arrays, and front-end design for communications and automotive applications.

Winfried Simon is 'Technical Director' of the EM modelling team at IMST GmbH. His main fields of activities are electromagnetic simulations and the design of antennas and RF Frontends for SATCOM and 5G.

Marta Arias Campo is Senior Antenna Engineer within the Antenna Front-Ends Team at IMST GmbH. Her research interests include the analysis and design of lens antennas and quasi-optical structures for highspeed wireless communications and radar applications.

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