Duration: 08:30 - 12:30
Room: Istanbul

WM-04
High Power RF and Microwave Amplifiers and Generators

Organiser:
Georg Böck, TU Berlin, Germany

Abstract
This half-day workshop presents topical development trends in the field of very high power signal generation and amplification. Starting from tube based microwave power generation new transistors using Si-, GaAs- and GaN-Technology are more and more taking over former tube dominated areas like broadcast, radar, jamming and industrial applications. Pros and Cons of tubes and solid-state devices will be discussed. The talks span from device level to circuit design and system level considerations. It will discuss also efficiency enhancement concepts of high power broadband transmitters for analog and digital broadcast services. Another topic will review high power RF generators in the kilowatt range with operating frequencies up 100 MHz for plasma applications. Essential requirements for these generators are high efficiency and extreme ruggedness including the ability of temporarily withstanding 100% reflected power. This workshop will discuss several amplifier- and power-combining topologies suitable for the realisation of those amplifiers with highly reflective loads. Moreover, insights with respect to product qualification, lifetime testing and industrialized, cost effective high volume production will be outlined.

Programme

08:30 - 09:20 Can Solid State Devices Replace Tubes in the Near Future?
Marcel Mallah, Fricke und Mallah Microwave Technology GmbH, Germany

09:40 - 10:10 High Power RF-Generators for Plasma Excitation
Daniel Gruner, COMET AG, Plasma Control Technologies, Switzerland

10:10 - 10:50 Break

10:50 - 11:40 Bandwidth isn't Everything - Efficiency Rules the World
Lothar Schenk, Rohde & Schwarz, Germany

11:40 - 12:30 High Power Broadband Amplifiers for EMC Applications
Florian Ohnimus, Rohde & Schwarz, Germany