**Title:**

“Integrated Circuits and MMIC’s for mm-Wave Transceivers”

**Speaker:**

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**Abstract:**

The use of mm-wave transceiver technology for high-data-rate communications and pro-active safety systems like car-radar and microwave people scanners is gaining on popularity. The need for miniaturization requires to integrate complete functions on a chip or in a package including even the antenna.

In its introduction, the presentation will give a summary of the criteria and requirements in the context of technology selection and system partitioning. Low cost high performance technologies like CMOS and SiGe-bipolar and low loss, low cost organic packaging materials will be considered.

For the circuit design itself new efficient millimetre-wave radios and transceiver concepts will be discribed and examples and measurements will be given. In addition to the electrical components performance, major criteria to be addressed are high reliability, long lifetime and high yield fabrication. Advanced packaging technologies including MEMS, embedded passive components, 3D integration and package co-design will be addressed too.

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