



* **Wednesday, 4th April, 2018**
1.30 pm – 2.30 pm
Room: 209 - Tut Room, 17 Wally's Walk

Concepts for high-efficiency millimetre-wave on-chip and on-board antennas

Antenna power dissipation and efficiency are crucial parameters for millimeter-wave systems. They directly affect transmitter power efficiency and receiver noise figure. Metallic horn antennas are well-known for best performance but suffer from manufacturing complexity. This presentation discusses millimeter-wave antennas focussing on board-mounted (surface-mount) structures as well as on-chip antennas. Cost-efficient manufacturing and packaging concepts such as the use of dielectric resonators, metal stamping, metalized molded plastic are considered with respect to their application for millimeter-wave antennas. Measurement results of prototypes operating at frequencies ranging from 30 GHz to 100 GHz will be presented.

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Jan Hesselbarth graduated in electrical engineering from TU Dresden, Germany, in 1995 and received the doctorate degree from Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, in 2002. He worked as a design engineer with Huber+Suhner, Switzerland, and Alcatel-Lucent Bell Labs, Ireland. He joined ETH Zurich as a lecturer in 2008 and became professor at the Institute of Radio Frequency Technology at the University of Stuttgart, Germany, in 2011. His research interests are in adaptive antennas and millimetre-wave packaging.

Further information:

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