

**Duration: 08:30 - 17:50**

**Room: Shanghai**

**WS-13**

**Advanced RF and Microwave Circuit Technologies**

**Organisers:**

Dmitry Kholodnyak, St. Petersburg Electrotechnical University, Russia

Matthias Hein, TU Ilmenau, Germany

**Abstract**

Wireless connectivity shapes our daily life. RF and microwave frontends are indispensable core elements of every wireless sensor, mobile communication or navigation device, or signal processor. Key enablers are compact size, high functional density, high level of integration, high frequency selectivity, electronic reconfigurability, high energy efficiency, and low power consumption.

This workshop aims at presenting latest research on advanced RF and microwave circuit technologies in the area of metamaterials, multi-band filters, and advanced substrate and device technologies. The contributions will be provided by renowned experts from all over the world, covering relevant applications reaching from radio-frequency identification over antennas up to millimetre-wave systems. The workshop addresses young engineers seeking in-depth information as well as experienced researchers wishing to update their advanced background knowledge.

***Programme***

***08.30 - 08.40 Welcome, Overview, and Introduction***

***08:40 - 09:25 Broadband Interconnects and Miniaturized Components in Substrate Integrated Waveguide (SIW) Technology***

Maurizio Bozzi, University of Pavia, Italy

***09:25 - 10:10 Unique Silicon-Ceramic Substrate Technology for Advanced RF Applications***

Jens Müller, TU Ilmenau, Germany

***10:10 - 10:50 Break***

***10:50 - 11:40 RF/Microwave Circuits, Sensors and RFID Systems based on Metamaterial Concepts***

Ferran Martin, Univeristat Autònoma de Barcelona, Spain

***11:40 - 12:30 Dirac Cone Metamaterials for Propagation Control***

Atsushi Sanada, Osaka University, Japan

***12:30 - 13:50 Break***

***13:50 - 14:40 Recent Advance in Planar RF Filter Technologies***

Jiasheng Hong, Jia Ni, Zhou Zhou, Heriot-Watt University, Edinburgh, UK

***14:40 - 15:30 Practical Aspects of Multilayer Planar Design for the Implementation of Multi-Band Filters***

Riana Geschke and Leokadia Nepaya, University of Cape Town, South Africa

***15:30 - 16:10 Break***

***16:10 - 16:55 Dual-Mode Frequency Tunable Planar Filter Design with Capacitive Coupling Technique***

Kenjiro Nishikawa, Kagoshima University, Japan

***16:55 - 17:40 Advanced Millimetre-Wave Systems and Packaging***

Michael Schlechtweg, Fraunhofer Institute for Applied Solid State Physics, Germany

***17:40 - 17:50 Discussion and Conclusion***