

Duration: 08:30 - 12:30

Room: Prag

WF-02

Wearable Antennas and Smart Textiles

Organisers:

Holger H. Meinel, Independent consultant, Germany

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Abstract

Smart textiles are under research and development for about a decade now. The EU programme called Flex-Stretch fostered the general application from early on. Today knitted electronic components for sensors, the circuitry, capacitors and antennas can be seamlessly integrated into garments. A wide range of specialized yarns, being available today, allows very specific applications, e.g., LED integration (for professional decoration), RFID integration (for manufacturing and product monitoring), sensors and controller integration, mostly in the medical area (for industrial stress sensor system and hospital bed linen).

These days Internet-of-Things (IoT) as well as applications in the agro-food area need flexible wireless systems, i.e. textile integrated and wearable antennas are needed especially.

With this WS engineers from the RF-side as well as textile engineers should exchange their knowledge for the better of both disciplines.

Programme

08:30 - 09:00 Substrate Integrated Waveguide (SIW) Technology for Wearable Applications and the Internet of Things (IoT)

Maurizio Bozzi, University of Pavia, Italy

09:00 - 09:30 Wearable Antennas Using Conductive Fabrics

Alessandra Constanzo, University of Bologna, Italy

09:30 - 10:00 Textile Sensors, Actuators and More...

Anne Schwarz-Pfeiffer, HS Niederrhein, Germany

10:10 - 10:50 Break

10:50 - 11:20 Wearable Antennas for Data and Power Transfer

Laura Corchia, Giuseppina Monti and Luciano Tarricone, University of Salento, Italy

11:20 - 11:50 Materials for Smart Textiles

Kay Ulrich, Sabine Gimpel, TITV – Textilforschungsinstitut Thüringen Vogtland e.V., Germany

11:50 - 12:20 Smart Textiles: From Prototype to Commercial Product

Lieva van Langenhove, Ghent University, Belgium