



## ***Technology trends and developments for 5G millimeter-waves Access and Backhauling applications***

### ***Abstract:***

The presentation will focus on the development of some integrated components done in Huawei R&D-Milan for 5G Access and Backhauling applications. There is increasing interest in using millimeter-wave spectrum for radio transmission because of the wide spectrum available in this band. Larger bandwidth channels are possible at millimeter-wave and this make possible to design radio systems with increased capacity. Silicon (Si) and silicon-germanium (SiGe) IC technologies are gaining market share in high frequency applications due to the increase of their performance and high-integration capability. Nevertheless GaAs-based technologies still have major advantages in all those applications where high frequency in conjunction with high-linearity and very low noise performances make an important difference. Several RFIC/MMIC basic blocks, such as power amplifiers (Class AB and Doherty PA), switches, mixers, high-linearity Up-Converter and low-noise Down-Converter developed in Huawei R&D-Milan for a first-generation 5G mm-wave demonstrator will be shown and measured results will be presented.

### ***Speakers:***

***Renato Lombardi*** is VP European Research Center and director of the microwave development center of Huawei in Milan. He is also a Huawei Fellow.

***Maurizio Pagani*** is responsible of the RFIC/MMIC design team in Huawei – Milan.

***Federico Vecchi*** got the PhD in microelectronics from University of Pavia and now he is RFIC/MMIC designer in Huawei – Milan.

The seminar will be **November 9<sup>th</sup>**, from **4 to 6 PM** in Aula seminari, floor D.