



Industrial Topics in Microelectronics and Photonics - Seminars

Extremely High Frequency Integrated Circuits for emerging communication networks

Abstract: The increasing demand for higher bandwidth in telecommunication networks is pushing the industry to develop wireless and wireline communication systems with much higher capacity than the existing ones. MM-wave carriers and MIMO are expected to be extensively employed in 5G and Point-to-Point systems, while 800-Gb/s data rate per channel is emerging as a promising step in the evolution of Optical transport systems. Some practical example of components designed in our lab with their challenges and possible evolutions will be introduced.

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Federico Vecchi received the M.S. and Ph.D. degrees in electronics engineering from the University of Pavia, Italy, in 2006 and 2010, respectively. In 2010 he got a post-doctoral position from the University of Pavia working on frequency synthesis for serial interfaces applications. He joined Huawei Technologies, Italy in 2011; since then, he's been involved in the design of frequency synthesizers, building blocks for 5G applications (LNA, Mixer, PA), TIAs and Drivers for Optical RFIC applications in CMOS and BiCMOS technologies.