



### ***High Speed Serial Communications: 56Gb/s PAM4 ADC based Networking SerDes***

**Abstract:** This presentation is summarizing the main applications for the high speed serial communications, together with a description of the usual challenging design requirements to be satisfied. Then, the commonly used receiver topologies are introduced. Finally, a 56Gb/s PAM4 ADC-based SerDes for Long Reach applications, realized in 28nm CMOS technology, is presented.

### ***A multi-band Rel9 WCDMA/HSDPA/TDD LTE and FDD LTE Transceiver with Envelope Tracking***

**Abstract:** In this talk, a transceiver capable of supporting 2G/3G/4G LTE Rel. 9 is presented. The chip includes main and diversity receivers, direct conversion transmitter, closed loop power control, antenna tuning and Envelope Tracking DAC and supports the dual band carrier HSDPA using a second Receive PLL. The Receivers have better than 2.5dB Noise Figure with better than 50dBm IIP2 for all modes.

### **Speakers:**

**Matteo Pisati** was born in Cremona, Italy, in 1976. He received the Master degree and the Ph.D. in electronics engineering from the University of Pavia, Italy, in 2001 and 2005, respectively. During this period, he spent six months at Conexant Systems, Newport Beach, CA, where he focused on the architectural analysis of clock and data recovery. In 2005 he joined STMicroelectronics, where he was involved in the design of high speed analog and mixed signal circuits for Serial Interfaces applications. During 2012, he joined Marvell, Pavia, where he is now project leader in the SerDes group.

**Luca Fanori** was born in Pavia, Italy, in 1984. He received the M.Sc. degree in electronic engineering and the Ph.D. in electrical engineering from the University of Pavia, Pavia, Italy. He was in an internship at Marvell Italy and Ericsson AB in Sweden to design All-Digital-PLL and studying LTE transceiver architectures. Currently he works for Marvell Italy in the Wireless Team that design transceivers for mobile applications.

The seminars will be **May 16<sup>th</sup>**, from **4 to 6 PM** in Aula seminari, floor D.