UNIVERSITÀ DI PAVIA
Department of Electrical, Computer and Biomedical Engineering

PHD SCHOOL IN MICROELECTRONICS

Industrial Topics in Microelectronics and Photonics - Seminars

Coherent Electro-Optical Transceivers for High-Speed Data Links

March 7th, h 16.00, Magenta Seminar Room (D Floor)

Zoom Link for remote connection

Department of Electrical, Computer and Biomedical Engineering

Abstract: Since their first commercial deployment in 2008, coherent optical transceivers have proven to be a key technology for increasing data rates of optical serial links, and they are now employed in most long-haul and metro optical networks. After reviewing the operating principle of coherent systems, this talk will present recent advancements and future directions of coherent electro-optical transceivers, including photonic integrated circuits, digital signal processing and integrated analog front-ends. Particular focus will be given to integrated transimpedance amplifiers and linear drivers in BiCMOS technology. The talk will conclude with an overview of research and developments activities in the Nokia optical subsystems unit.

Speaker: Lorenzo Iotti received the B.S. and M.S. degrees in electrical engineering (2011, 2013) and the Ph.D. in microelectronics (2017) from the University of Pavia (Italy). His doctoral research focused on BiCMOS LO generation design for mm-wave wireless backhaul systems.
From 2017 to 2020 he was a Post-Doctoral Researcher at the University of California, Berkeley (USA) and a member of the Berkeley Wireless Research Center (BWRC), where he was involved in CMOS transceiver design for RF and mm-wave wireless systems, with focus on Massive MIMO phased arrays. In 2020 he joined Nokia Corporation, New York (USA), where he works on integrated transceiver design for optical communications.

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