Seminar

Room 164 BLOC

December 1, 2016  3:55-5:10 P.M.

Wireline Transceivers: Recent Trends & Future

by

Namik Kocaman
Broadcom

Abstract: The deployment of wireline links is experiencing an accelerating pace, thanks to skyrocketing demand from cloud computing, media streaming, social networking, and various online business structures. As data rates are increasing, the wireline transceivers are evolving rapidly to satisfy more stringent requirements. This talk reviews the recent trends in analog frontend design for wireline transceivers. Overview of various architectures and corresponding tradeoffs are provided with recent examples. It concludes with a discussion on the design challenges waiting for the future analog designers.

Namik Kocaman received the B.S. degree from Bilkent University, Ankara, Turkey, in 1995, the M.S. degree from the University of Michigan, Ann Arbor, MI, USA, in 1997, both in electrical engineering, and the M.B.A. degree from Paul Merage School of Business, University of California, Irvine, CA, USA. During his graduate studies at the University of Michigan, he worked on low-power interface circuits for MEMS devices and biomedical sensors. He held various engineering positions at Level One Communications, Intel, Newport Communications, and Broadcom Corporation. During his tenure at Broadcom, he has been working on various designs such as multi-rate, multi-format receivers with FFE/DFE equalizers, reference-less CDRs, current/voltage-mode transmitters with embedded FIR filters, time-interleaved ADC-based receivers for wireless 802.11ad, high-speed DACs for coherent transmission, and low-jitter fractional-N PLLs. He is currently a Senior Design Manager at Broadcom SerDes/Optical transceivers group. He has authored/coauthored 16 journal/conference papers and holds 32 U.S. patents.