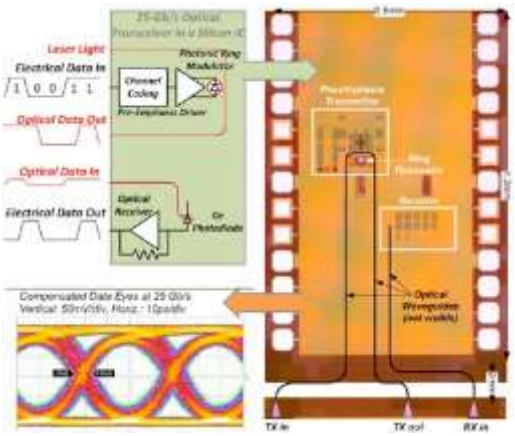
IEEE

MEETING NOTICE

IEEE COMMUNICATIONS SOCIETY

Date/ Time: Tuesday, March 22nd, 2016
6:30 PM Pizza & networking
7:00 PM Presentation

Location: Skyworks Conference Room
Newbury Park, CA 91320
(See RSVP/Directions Below)



A 25-Gb/s Fully-integrated Optical Transceiver implemented in Silicon-on-insulator (SOI) CMOS

Speaker : Prof. James Buckwalter, PhD, UCSB

Title : Energy Bounds for Silicon Photonic Interconnects and Double-edged Pulsewidth Modulation

Abstract:

An explosion of cloud-based applications and the economy growing around these applications has driven the data capacity requirements in data center networks. Communication between servers and racks is the glue within the data center and is at the heart of data center scalability. To keep pace, communication links in data centers require revolutionary approaches to allow increased data rates while consuming less power consumption over the next decade. Energy efficient communication links will demand new approaches for optical and electrical signaling. Silicon photonic integrated circuits have been proposed for energy efficient optical interconnects. I will review recent work on silicon photonic devices and develop energy bounds and optimum data rates based on electronic and photonic device scaling. Additionally, I will present a time-domain signaling approach for high-speed serial communication that attempts to achieve higher-order modulation while circumventing peak power limitations for electrical signaling.

James Buckwalter, PhD, is currently a Professor of Electrical and Computer Engineering at the University of California – Santa Barbara (UCSB). He joined the faculty at the University of California – San Diego (UCSD), La Jolla, CA as an Assistant Professor in 2006 and was promoted to Associate Professor of Electrical and Computer Engineering in 2012. He is the recipient of an IBM Ph.D. Fellowship, Defense Advanced Research Projects Agency (DARPA) Young Faculty Award, NSF CAREER Award, and IEEE Microwave Theory and Techniques Society (MTT-S) Young Engineer Award. He is currently an associate editor of the IEEE Transactions on Microwave Theory and Techniques.

Skyworks, Intersection of West Hillcrest Drive and Lawrence Drive, Newbury Park, CA 91320
(not the main building, please use link below to green arrow that pinpoints building)
http://maps.google.com/maps?q=34.187542,-118.930994&num=1&t=h&vpsrc=0&ie=UTF8&z=18&iwloc=A

Register : https://meetings.vtools.ieee.org/m/38613

Buenaventura ComSoc Chapter