2013 Symposia on VLSI Circuits Short Course

(Suzaku I)

Tuesday, June 11

13:40-14:40   **Advanced Wireline Transceivers in the Era of Disruptive Changes**

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Abstract

The Networking Industry is rapidly changing to meet demands of increasing Internet traffic due to Cloud Computing and Social Networking. Device-Aware design is more important than ever to take advantage of further scaling in new technologies like FinFet in their SOC integration. With the added freedom from newer technologies, Wireline Transceiver Designers will now face key questions such as: Binary vs. ADC-based Front-ends, NRZ vs. PAM Coding, and Copper vs. Optical Interconnects. This Short Course will provide further insights into these questions, as well as cover the latest in such Advanced Wireline Transceivers including the current state-of-art in ADC-based Front-end designs.

Biography

Ichiro Fujimori received the B.S. degree in Electrical Engineering from the Science University of Tokyo in 1985, and the PhD degree from the University of Hiroshima in 2003.

In 1985 he joined Asahi-Kasei Microsystems, Japan, and was engaged in the design and development of high-resolution Delta-Sigma data converters for Digital-Audio and xDSL applications. In 2000, he joined Newport Communications (later acquired by Broadcom). As the Manager of Mixed-Signal Engineering he led the team to the development of the first CMOS Transceiver LSI's for SONET OC-192 applications. He is currently the Vice President of Central Engineering at Broadcom Corporation, responsible for the development of multi-gigabit SerDes for Networking, Transceivers for Optical Communications, Ethernet Copper PHY's, PLL's, and Power Management Circuits.

Dr. Fujimori is the recipient the IEEE Journal of Solid-State Circuits, Best Paper Award 2000 for paper entitled "A Multi-bit Delta-Sigma Audio DAC with 120-dB Dynamic Range." He currently serves in the Technical Program Committee of IEEE International Solid State Circuits Conference (ISSCC), the VLSI Circuits Symposium, and also serves as the Associate Editor of the Journal of Solid-State Circuits. He is a Senior Member of IEEE