



THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering



Lasers and Electro-optics Society
Hong Kong Chapter

Seminar

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Advanced Signaling for Optical Fiber Communications

by

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Date : November 29, 2004 (Monday)
Time : 4:00pm – 5:00pm
Venue : Rm. 833, Ho Sin Hang Engineering Building,
The Chinese University of Hong Kong

Abstract

Over the last decade optical fiber transmission systems have rapidly evolved from single channel and single span systems to powerful WDM longhaul systems. Parallel to this development the data rate per channel steadily increased since not only longer all-optical transmission paths in a network but also higher line rates contribute to reduced overall costs per transmitted bit. On the other side, longer transmission links and higher line rates require more complex signaling techniques since the mitigation of link length depending impairments like i.e. dispersion and nonlinear distortions necessitate more advanced transmitter and receiver schemes. As examples for advanced signaling in optical communication systems we discuss duobinary as chromatic dispersion resistant modulation format and show methods for polarization mode dispersion mitigation. We further will introduce different 160-Gb/s transmission formats, which possess improved nonlinear propagation features.

Biography

Lothar Möller received the Dipl.-Phys. and Dipl.-Ing. degrees in physics and electrical engineering from RWTH Aachen, Germany, in 1992 and 1993, respectively, and the Ph.D. degree from ETH Zurich, Switzerland in 1996. Before joining Bell Labs, Holmdel, in 1998 he was with Lucent Technologies Network Systems GmbH, Nuremberg, the German facility of Lucent Technologies where he started his career in 1997. Dr. Möller (co-) authored more than 60 papers in the fields of signal equalization, polarization mode dispersion, and ultra high-speed signaling and has over 10 US patents granted/filed.

**** ALL ARE WELCOME ****

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