Applied Physics & OSA

Optics Seminar

Towards High-Performance and Reconfigurable Optical Communication Networks

Professor Alan Willner

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Abstract:

Optical communications has enjoyed dramatic growth in terms of technical achievement as well as commercial implementation. This presentation will highlight three main topics. Firstly, a broad perspective will be given on some of the technical trends in optical communication systems. Secondly, I will describe technical issues related to stable, robust optical networking, including: performance monitoring to determine the cause of any data degradations, non-static channel-degrading effects, spectrally efficient modulation formats, targeted optical and electrical signal processing, and photonic switching. Finally, I will discuss adding tunability, flexibility and reconfigurability to different aspects of the base optical technologies.

Brief Biography:

Alan Willner received his Ph.D. in Electrical Engineering from Columbia University. He was a Postdoctoral Member of the Technical Staff at AT&T Bell Laboratories (Crawford Hill) and a Member of Technical Staff at Bellcore. He is currently Professor of Electrical Engineering - Systems at the University of Southern California. He is the Associate Director for the USC Center for Photonics Technology, is Co-Director of the USC Communications Sciences Institute, and was an Associate Director for Student Affairs for the NSF Engineering Research Center in Multimedia.

November 2nd 2008.
4:00pm-5:00pm.
Watson 104

Refreshments will be available in the Watson Lobby at 3:45pm