

IEEE Communications Society Distinguished Lecture

The Emerging Optical Internet

by

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Date: July 07, 2003 (Monday)
Time: 11:15 am (refreshment starts at 11:00 am)
Place: 202 ECEC, NJIT

About the Speaker

Dr. Nim Cheung is a Telcordia Fellow and an Executive Consultant for Telcordia Technologies, a subsidiary of Science Applications International Corporation (SAIC). He received his B.Sc. degree from University of Hong Kong and Ph.D. degree from California Institute of Technology. He was formerly Vice President of Applied Research Government Program in Telcordia Technologies and has held different research and management positions at AT&T Bell Labs, Bellcore and Telcordia in optical networking and network management. Dr. Cheung has conceived and helped create many gigabit and optical networking testbeds sponsored by the U.S. Government. He is a Fellow of IEEE and a recipient of Bellcore Award of Excellence. He has held numerous leadership positions in the IEEE Communications Society, serving as Vice President of Technical Affairs from 1996-97 and is currently Chair of the Emerging Technologies Committee and a Distinguished Lecturer of the Society.

About the Talk

The phenomenal advances in Dense Wavelength Division Multiplexing (DWDM) technologies have greatly transformed the deployment of the core Internet infrastructure. In this new Optical Internet, IP packets are transported directly over the optical layer, with or without the traditional technology layers involving SDH/SONET, ATM, and Gigabit Ethernet(GE). IP over DWDM includes a family of technologies that have the potential of significantly simplifying the architecture of future data networks, with enhanced survivability and reduced costs for their deployment.

This talk provides a review of recent research and development activities in the Optical Internet. We will start with an overview of high-speed Internet technologies and new approaches to terabit routers and switches. This is followed by novel techniques to implement IP over DWDM networks, including the recently proposed burst mode and optical packet switching techniques and rapidly re-configurable optical links. We will also address some of the signaling and network management issues for these emerging optical networks.

Sponsors: IEEE Communications Society North Jersey Chapter
NJIT Department of Electrical and Computer Engineering

For more information contact Nirwan Ansari (973) 596-3670, or Amit Patel a.j.patel@ieee.org, or check <http://web.njit.edu/~ieecenj> for latest updates. Directions to NJIT can be found at: <http://www.njit.edu/University/Directions.html>.