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# Optimized Design and Management of Overlay Networks

by Anwar Walid, Bell Laboratories, Alcatel-Lucent

**Date:** May 3, 2010 (Monday)  
**Time:** 6:00 pm (refreshment starts at 5:45 pm)  
**Place:** 202 ECEC, NJIT

## About the Speaker

Anwar Walid is a Distinguished Member of Technical Staff with the Mathematics of Networks and Communications Research Department at Bell Laboratories, Alcatel-Lucent, Murray Hill, NJ. He joined Bell Labs in 1992 after receiving the Ph.D. degree in Electrical Engineering from Columbia University, New York. He developed theory and algorithms for network control and resource management for several products and has eight issued patents and six pending. He received the Best Paper Award in ACM SIGMETRICS. He contributed to the Internet Engineering Task Force (IETF), wrote RFC's and helped in creating the Traffic Engineering Working Group. He is editor of IEEE/ACM Transactions on Networking and IEEE Network Magazine. Dr. Walid is an IEEE Fellow, and an elected member of Alcatel-Lucent Academy, Tau Beta Pi National Engineering Honor Society and IFIP Working Group 7.3.

## About the Talk

A myriad of networking services have emerged in response to growing technological and social needs which are facilitated by building hierarchical overlays on existing network infrastructures. Examples of such overlays include content distribution and peer-to-peer networks, IPTV and virtual private networks. In addition to providing QoS and security features, network overlays are also important internetworking models for converged technologies such as IP over Optical. Ensuring service quality and efficient operation require optimization of the topological design, the cross-layer interfaces and the control and management functions. I will review work on designing optimized overlays which enable autonomic capabilities for select applications and converged technologies.

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