



מרכז פיטר ברויידה לחדשנות בהנדסה ובמדעי המחשב
המחלקה לפיסיקה יישומית
ביה"ס להנדסה ולמדעי המחשב ע"ש רחל וסלים בנין

Announcing A Special Brojde Center Lecture:

Prof. Alan Willner

Steven and Kathryn Sample Chair in Engineering
Department of Electrical Engineering
University of Southern California

**High-Capacity Optical and RF Communications using
Multiplexing of Multiple Orbital-Angular-Momentum Beams**

Wednesday, December 31 2014, at 12:00

Los Angeles Building, Hall 7

Gathering & Refreshment at 11:40

Abstract: The ability to multiplex multiple, spatially overlapping data-carrying modes over the same physical medium represents the potential for increasing system capacity and spectral efficiency. Generating different amounts of orbital-angular-momentum (OAM) on different optical beams has emerged as a technique for such mode multiplexing. Each OAM beam is orthogonal and can be efficiently multiplexed and demultiplexed, and OAM is compatible with other forms of multiplexing (e.g., polarization multiplexing and WDM). This presentation will explore the achievements of and challenges to OAM-based optical and RF communication systems, including transmission and switching.

Website: <http://csi.usc.edu/~willner/>