

**סמינר מרצה אורח*****Adiabatic Nonlinear Optical Processes******Dr. Gil Porat***

Nonlinear optical processes are commonly used to mix laser frequencies in order to produce new laser frequencies that are not available by direct laser action. Due to their nonlinear nature, it is challenging to control such processes. Consequently, laser frequency mixing is limited in various aspects, e.g. efficiency and bandwidth.

This seminar will concern theory and experimental demonstration of methods for steering the nonlinear dynamics of nonlinear optical processes. These methods utilize adiabatic (i.e. very slow) variation of a system parameter, which leads to powerful control over the nonlinear interaction. Adiabatic methods will be shown to facilitate efficient frequency mixing for single as well as cascaded processes. Furthermore, special features will be introduced, e.g. large bandwidth, insensitivity to absorption of intermediate frequency and intensity-dependent phase-matching.

הסמינר יתקיים ביום שלישי 17/12/13 שעה 13:00 בחדר סמינרים 300 בניין 30 קומה ג'