

Area Seminar

Title	Coherent pump-probe spectroscopy of atomic and molecular systems
Date and Time	29/04/2013 16:00:00
Speaker	Ms. Niharika Singh BARC, Mumbai
Area	Theoretical Physics
Venue	Room No. 469
Abstract	Quantum coherence and interference provide an interesting outlook for designing strategies for the control of optical response of atomic/molecular medium. This theme is the main focus of the work presented in this talk. The specific issues addressed are electromagnetically induced transparency (EIT), amplification without inversion (AWI) and spontaneously generated coherence (SGC). Also examined are the issues related to the effect of permanent dipole moments on the coherent dynamics of molecular systems and realization of negative refractive index in coherently prepared atomic medium. These phenomena help to understand the subtle quantum effects in laser-atom interactions, they on the other hand provide useful platform for development of quantum technologies.