Area Seminar

Title	Two-photon fields: coherence, interference and entanglement
Date and Time	19/06/2013 16:00:00
Speaker	Dr. A. K. Jha IIT Kanpur
Area	Theoretical Physics
Venue	Room No. 469
Abstract	One of the most widely used processes for generating entangled two-photon fields is parametric down-conversion. It is a second-order nonlinear optical process in which a pump photon interacts with a nonlinear crystal and breaks up into two separate photons known as the signal photon and the idler photon. The constraints of energy and momentum conservation render the two photons entangled in several different variables including time and energy, position and momentum, and angular position and orbital angular momentum. In this talk, I will present our studies of the coherence and entanglement properties of the down-converted two-photon field and will also discuss some of the practical implications of these studies for quantum information science.