INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE
2A & 2B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032, India

Seminar Notice

Org. by

School of Physical Sciences

Title:	**Study of two coherent non-linear optical processes induced by ultra-narrow resonances in atoms**
Speaker:	**Chitram Banerjee, Laboratoire Aime Cotton, University of Paris, Saclay, Orsay, France**
Date:	**September 25, 2019 (Wednesday)**
Time:	**15:30**
Venue:	**Physics Seminar Room (C-406), 3rd Floor, Centenary Building, IACS**
Abstract:	Light-atom interactions form the basis of technologies such as telecommunication, information processing, sensing, etc. In this talk, two distinct phenomena are discussed both of which occur due to non-linear interactions between light and atoms. The first part is dedicated to four-wave-mixing based on the internal degrees of freedom of room-temperature helium atoms and uses it for optical signal amplification and generation of squeezed states of light. The second part is based on external degrees of freedom of cold atoms and used for light storage and phase conjugate field generation through multi-wave mixing.

All are cordially invited to attend the seminar