

## Colloquium

## Photonics in Low Dimensional Materials

## **Gilbert Walker**

## University of Toronto, Canada

Nanophotonics explores the interaction with local fields with other nearby objects. These may be biosensors or non-linear optical devices or light harvesting photovoltaics, for example. This talk will first provide an introduction to the research area, near field measurements, and how to understand the basic principles underlying the interactions. Then, it will transition to a discussion of low dimensional materials which 2Dcrystals associated through van der Waals are interactions. Many interesting electronic properties of these materials have attracted great interest over the past 10 years. The optical responses have more recently become a focus of intense efforts. The talk will discuss photon polaritons in materials such as boron nitride, both the fundamental photophysics and the devices that might result from them, and their coupling with other materials, such as graphene.

Tuesday, Jul 3<sup>rd</sup> 2018 11:30 AM (Tea/Coffee at 11:00 AM) Auditorium, TIFR-H