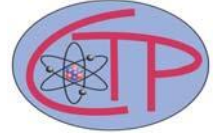




*NEW YORK CITY COLLEGE OF TECHNOLOGY*  
**Physics Department**  
**Center for Theoretical Physics**



# **Polaritonics in 2 and 3 Dimensions**

*Presented by:*

**Jacob Khurgin**

**Johns Hopkins University**  
**Thursday March 28 at 12:00 pm**  
**Numm Room 823**

In this talk I will explore a lesser-known intermediate regime of exciton-photon coupling when the Rabi energy exceeds exciton binding energy. This, the so-called “very strong coupling (VSC)” can be achieved in dielectric micro-cavity with 2D excitons and in plasmonic structures with both 2D and 3D semiconductors. In the VSC regime both shape and binding energy of excitons change which leads to significant enhancement of polaritonic effects. In the second part of the talk I will explore the polariton guiding in the monolayers of transition metal dichalcogenides – the thinnest waveguides ever developed.

*Light refreshments will be served*