## Condensed Matter Theory Center Seminar



Tuesday, March 29 11:00 am – 12:30 pm 2205 Toll Physics Building

## Mohammad Hafezi UMD and NIST

## Two-dimensional photonic systems with synthetic topology

Abstract: I review some recent developments in investigation of topological physics in photonic systems, from non-interacting to interacting regimes. In particular, I talk about the measurement of the winding number in a 2D photonic system and the observation of anomalous spectral flow. Moreover, I describe how strong photon-photon interaction can lead to generation of fractional quantum Hall states of light. I address some of the challenges regarding the preparation and detection of these states, in both the optical and circuit-QED architectures.

Host: Jed Pixley

Web: http://www.physics.umd.edu/cmtc/seminars.html

