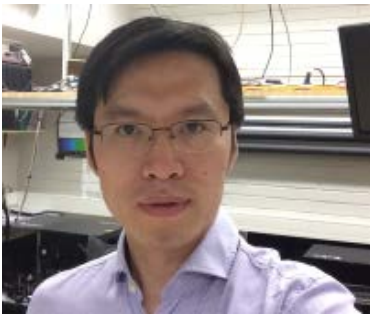




THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics
COLLOQUIUM

Nonlinear Photonic Metasurfaces

by



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Date: October 4, 2019 (Friday)

Time: 4:00 - 5:00 p.m.

Place: L2, Science Centre, CUHK

(Light refreshments will be served at [SCNB 1/F lobby](#) from 3:30 to 3:50 p.m.)

ALL INTERESTED ARE WELCOME

Abstract

Compared to conventional optical elements, two dimensional photonic metasurfaces, consisting of arrays of antennas with subwavelength thickness, enable the manipulation of light-matter interaction on a more compact platform. Using metasurfaces, the polarization, phase and amplitude of light can be controlled by spatially variant meta-atoms with a subwavelength lateral resolution. Many exotic phenomena in linear optics such as imaging with ultrathin flat lenses, optical spin Hall Effect, highly efficient holography etc., have been successfully demonstrated. However, growing demand for integrating more functionalities into an optoelectronic circuit also relies on the availability of tailored nonlinear optical properties of metasurfaces. In this talk, I will discuss the latest progress in optics with nonlinear photonic metasurfaces, particularly in device fabrication, nonlinear optical chirality, geometric Berry phase and wavefront engineering.

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