



THE CHINESE UNIVERSITY OF HONG KONG
Department of Electronic Engineering

SEMINAR

Nonlinear micro-/nano-photonic devices and applications

By

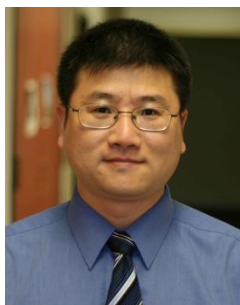
Qiang Lin
University of Rochester

Date: 17 January, 2018 (Wednesday)
Time: 11:00 a.m.
Venue: Room 121 Ho Sin Hang Engineering Building

Abstract:

Micro-/nano-photonic devices offer exceptional capability for controlling light confinement and light-matter interactions, which form the foundation for exploring a variety of nonlinear optical, quantum optical, and optomechanical phenomena. Scaling devices down to a micro/nanoscale results in intriguing device characteristics that do not appear in bulk crystals or conventional waveguides. This, in combination with new material platforms, offers great opportunities for realizing functionalities inaccessible to conventional approaches. In this talk, I will discuss our recent progress along this line, with a focus on silicon, lithium niobate, and silicon carbide based nonlinear micro/nano-photonic devices for controlling photonic quantum states, for producing optical frequency combs, for up- and down-converting light frequencies, and for temperature, molecule, and inertial sensing applications. I will also give a brief overview of the background, discuss some current challenges and opportunities of the fields, and provide my personal outlook.

Biography:



Qiang Lin is an associate professor of Electrical and Computer Engineering and an associate professor of Optics at the University of Rochester. His current research focuses primarily on nonlinear nanophotonics, integrated quantum photonics, and nano-optomechanics. He has published 76 peer-reviewed papers, resulting in an H-Index of 34 and total citations more than 5000 (according to Google Scholar). Prior to joining the University of Rochester in 2011, he was a postdoctoral scholar at Caltech from 2007 to 2010. He received his Ph.D. from the Institute of Optics at the University of Rochester in 2006, prior to which he obtained his B.S. and M.S. in Applied Physics from Tsinghua University, China, in 1996 and 1999, respectively.

ALL ARE WELCOME

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