State Key Laboratory of Terahertz and Millimeter Waves
香港城市大學 City University of Hong Kong

IEEE (HK) Section AP/MTT

Seminar on

Mode Managements and Applications in Waveguides

By

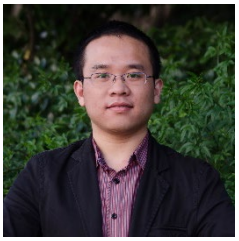
Dr Qingqing Cheng
University of Shanghai for Science and Technology

Date: 27 July 2021 (Tuesday)
Time: 11:00 am to 12:00 noon (Hong Kong, UTC+8:00)
Onsite (with limited seats) with Live streaming
Address: Room 15-202, 15/F, State Key Laboratory of Terahertz and Millimeter Waves, Lau Ming Wai Academic Building, City University of Hong Kong
Registration (Deadline: 26 July 2021, 12:00 noon (Hong Kong, UTC+8:00)):
https://cityu.zoom.us/meeting/register/tJwkd-2grTgtGNbqWjEo5BuX9Maa1NFrTHhy

Abstract

Our research interests contain metasurface devices and topological photonics. We classify the two interests as having or not coupling in adjacent units. We first consider no coupling phenomena in metasurface units. We demonstrated a functional device composed of silicon metasurfaces for the terahertz frequencies in transmission mode, and we experimentally demonstrate achromatic Airy beams and achromatic focusing. We next consider the coupling in adjacent waveguides. We revealed a novel phenomenon in topological pump observed in arrays of nonparaxial optical waveguides where the quantum-optical analogy becomes invalid. We observed an asymmetric topological pump according to the celebrated Rice-Mele model when the injected field transfers from one side of the waveguide array to the other side whereas the reverse process is unexpectedly forbidden.

Biography



Qingqing CHENG, 1987, associate professor at University of Shanghai for Science and Technology. He has won [1] National Excellent Doctoral Dissertation Award Nomination in Optics (2017), [2] “Chenguang Scholar” in Shanghai (2017), [3] “JIN GuoFan” Youth Scholar at China Instrument and Control Society (2019), and [4] "Rising-Star" honor in Shanghai (2021). His publications include Nature Communications, Phys. Rev. Lett., Laser Photonics Rev., Science Bulletin and Nanophotonics etc. He has made three oral presentations at CLEO and several invited reports from domestic conferences. He was approved by the National Natural Science Foundation of China in 2016 and 2018, with a total funding of more than 1.3 million.

***** ALL ARE WELCOME *****

Enquiries:

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