Joint CQSE & CASTS Seminar
「Jun. 12, 2020 (Friday)」

- Time: 14:30~15:30
- Place: Rm716, New Physics Building
- Speaker: Prof. Ming-Chang (Mark) Lee
  PRC, IPT, and EE of NTHU
  國立清華大學光電研究中心、光電所、電機系
- Title: Integrated Si Photonics Platform Potentially Applied for Quantum Photonics Chips

▲ Please wearing a mask whenever social distancing is impractical. Social distance: 1.5m indoors.

**Sponsored by Center for Quantum Science and Engineering (CQSE) 量子科學與工程研究中心 and Center for Advanced Study in Theoretical Sciences (CASTS) 理論科學高等研究中心, NTU**
Integrated Si Photonics Platform Potentially Applied for Quantum Photonics Chips

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Abstract
Integrated Si optoelectronics and photonics are the key technology platform for developing large-scale integrated optics for various applications. For example, multi-channel integrated Si/Ge transceivers are recently demonstrated for over 200Gbps data transmission aiming at data centers, high-performance cluster computers, and cloud servers. Meanwhile, these technologies are also exploited for implementing compact sensor chips for biological and chemical detection. In this talk, I will introduce several key Si photonic components developed in my group and fabricated in a CMOS research lab in Taiwan, including MEMS tunable resonators, high-speed Si modulators, Si/Ge heterojunction waveguide photodetectors and ultra-low voltage Si/Ge SAM avalanche photodiodes. Also, I will introduce our recent developed SiN based photonics for implement low-loss quantum photonic chips with device footprint less than 1 cm².