

City University of Hong Kong  
Department of Electrical Engineering &  
Optics (formerly OSA) Student Chapter  
Jointly present a Seminar on

## Silicon Neuromorphic Photonics and Applications

by

### Professor Chaoran Huang

*Department of Electronic Engineering  
Chinese University of Hong Kong*

- Date : **19 November 2021 (Friday)**
- Time : **10:00 am – 11:00 am**
- Venue : **Y5-202, Yeung Kin Man Academic Building & Zoom**  
City University of Hong Kong
- Registration : Please register [HERE](#) by **Nov. 17, 2021**.
- Note : Due to social distancing requirements, we may not be able to accommodate all audience on site. Confirmation email on your mode of attendance (& Zoom link if needed) will be sent to you before the talk.

### Abstract

Disruptive artificial intelligence (AI) technology is revolutionizing the information age. Traditional AI technologies based on electronics are with intrinsic bottlenecks in terms of bandwidth and latency. Photonics provides a potential for a new AI computing paradigm with extremely high bandwidth and low latency. Meanwhile, silicon photonics provides an unprecedented platform for large-scale and low-cost optical systems and now extends its impact into computing. This talk will introduce our recent work on silicon photonics-based AI hardware and its applications in high-performance computing and telecommunications. This talk will provide an intuitive understanding of why and how photonic AI hardware can play a unique role in advancing those new domains of applications.

### Biography



Chaoran Huang is an assistant professor at the Chinese University of Hong Kong (CUHK). Before joining CUHK in 2021, she was a postdoctoral research associate at Princeton University. Her ongoing work is dedicated to developing integrated photonic hardware for neuromorphic computing and related applications. She was the recipient of the 2019 Rising Stars Women in Engineering Asia. She has published more than 50 peer-reviewed research papers. Her research work has been presented as a postdeadline paper at 2020 OFC, was featured in the special issue of Optical Neural Networks by OSA Optics and Photonic News, and was selected as Spotlight articles by several journals.

~~~~~ All are welcome ~~~~~