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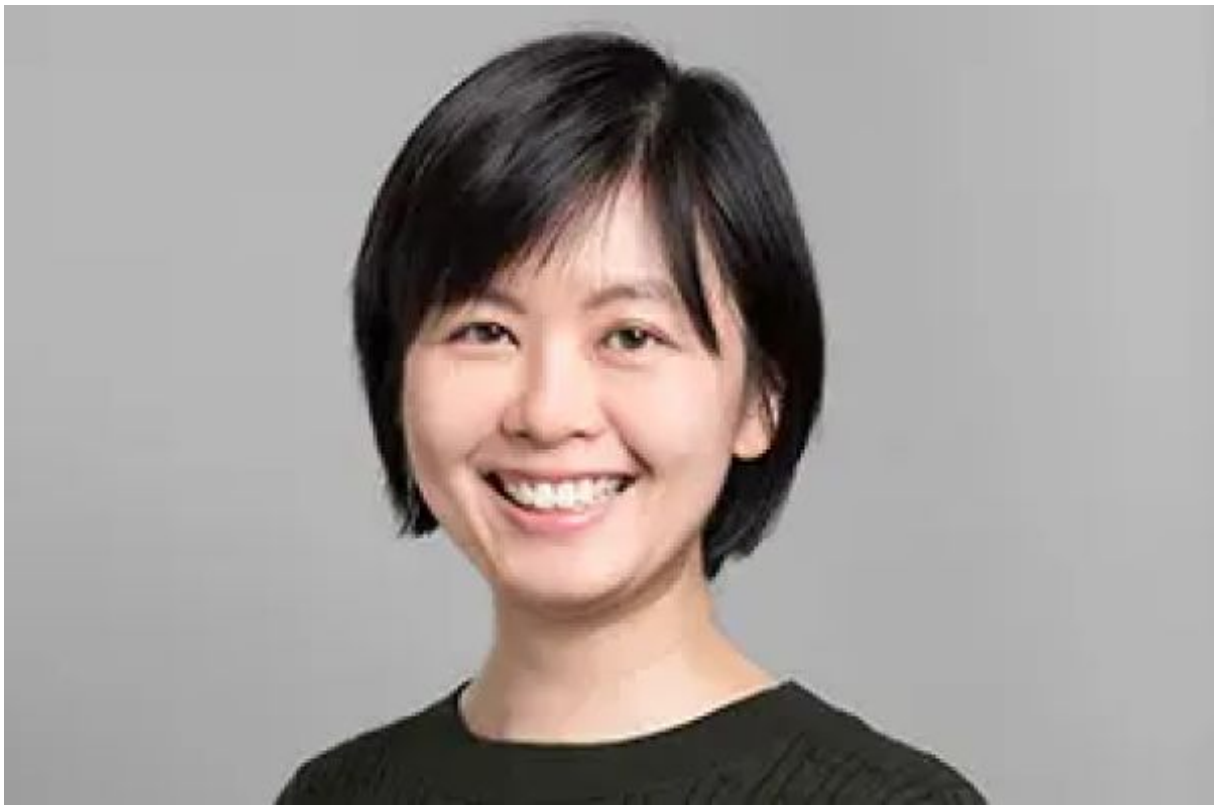

COLLOQUIUM SERIES: Lighting up the brain: Implantable neural probes using wafer-scale integrated photonics

JOYCE POON

April 14, 2023
12:00 to 13:00
ICFO Auditorium

BIO

Joyce Poon is the Managing Director at the Max Planck Institute of Microstructure Physic
, Professor of Electrical and Computer Engineering at the University of Toronto, an
an Honorary Professor in the Faculty of Electrical Engineering and Computer Science
at the Technical University of Berlin. She currently serves as a Director-at-Large f
r Optica (formerly the Optical Society, OSA). She and her team specialize in integrated pho
onics on
ilicon. Prof. Poon obtained the Ph.D. and M.S. in Electrical Engineering from Caltech?
in 2007 and 2003 respectively, and the B.A.Sc. in Engineering Science (physics op
ion) from the University of Toronto in 2002. Recognitions she has received include?

a Canada Research Chair (2012-2019), ECE Department Teaching Award (2017), OFC Top-S ored Paper (2017), the McCharles Prize for Early Research Career Distinction (2013), MIT ?TR35 (2012), and the IBM Faculty Award (2010, 2011). She is an Optica Fellow and a Fellow of the IEEE.

ABSTRACT

Optical actuation and imaging of genetically targeted neuron types have emerged as powerful tools to map neural circuits. I will present silicon photonic integrated circuits operating in the visible spectrum that substantially miniaturize today's microscopy and fiber optic tools to enable unique multiphysical and multifunctional interfaces to the brain.

Hosted by: Prof. Dr. Gerasimos Konstantatos