



THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics
COLLOQUIUM

**Quantum Interferometry:
From Multi-Photon To Entanglement**

by



Professor Zheyu Jeff OU (區澤宇教授)
Department of Physics
City University of Hong Kong

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Time: 4:00 - 5:00 p.m.

Place: L2, Science Centre, CUHK

ALL INTERESTED ARE WELCOME

Abstract

In this presentation, I will first introduce multi-photon interference and demonstrate how it leads to quantum entanglement. I will present recent quantum interference phenomena that exploits quantum entanglement for noise reduction and sensitivity enhancement in phase measurement.

Biography

Professor Z Y Jeff Ou obtained his B.S. from Peking University, Beijing, China, in 1984 and his Ph.D. from the University of Rochester, New York, in 1990 and has subsequently worked at the California Institute of Technology as a Research Associate. He started his academic position in the Department of Physics at Indiana University-Purdue University Indianapolis as an Assistant Professor in 1992 and got his tenure as an Associate Professor in 1999. He was promoted to Full Professor in 2004. He then moved to City University of Hong Kong as a Chair Professor in 2021. Professor Ou's research interests are quantum metrology, quantum state conversion between atom and light, and quantum amplification. Professor Ou served as a member of the Editorial Board for the Journal of the European Optical Society Part B and Chinese Physics Letters. He is a fellow of both American Physical Society and Optica (formerly Optical Society of America).

Enquiries: 3943 6303