Optical Quantum Computing in High Dimensions

Chih-Sung Chuu, Professor, Department of Physics, NTHU

Abstract — High-dimensional quantum computing presents an opportunity to simplify circuit complexity and improve algorithm efficiency. In this talk, I will share our recent findings on demonstrating Shor's algorithm using a single photon in 32 dimensions. Furthermore, I will introduce an innovative single-photon source for implementing high-dimensional quantum computing.