

# High dimensional quantum logic gates

*Thursday, 1 June 2023 10:50 (35 minutes)*

Transformations on quantum states form a basic building block of every quantum information system and quantum logic gates are one of the basis optical elements for them. In this presentation I will describe how it is possible to generate high dimensional quantum states and their corresponding logic gats. The created gates can be used in many applications such as generating high dimensional quantum Bell States which are a distinctive set of maximally entangled two-particle quantum states. They form the foundation for many quantum protocols such as teleportation, dense coding, and entanglement swapping.

**Presenter:** ,XXXXXXXXXX XXXXX