ICFO

INSIGHT SEMINAR | Training Schrodinger's Cat: Quantum Control in Molecular Physics and Quantum Information Science

CHRISTIANE KOCH

April 04, 2024
12:00 to 13:00
Seminar Room

Control refers to the ability to steer a dynamical system using external fields; quantum control does so by exploiting quantum coherence. One way to think of it is in terms of constructive and destructive interference between different quantum pathways, all connecting the same initial and final states. The desired interferences can be designed spetrally, temporally, or using the picture of dressed states. If the dynamics of the quantum system is too complex to design the interferences by hand, optimal control theory comes to rescue. I will showcase recent applications of these concepts to chiral molecules and AMO platforms for quantum information.

Hosted by: Prof. Dr. Jens Biegert