



MAX-PLANCK-GESELLSCHAFT

IMPRS UFAST Focus Course Introduction to Quantum Optics Frank Schlawin

Abstract:

This course will provide an introduction to basic quantum optics. A particular focus will be placed on light-matter interactions and the derivation and analysis of simple models such as seminal Jaynes Cummings model. We will explore the crossover from weak to strong light-matter coupling, and of experimental signatures thereof. If time permits, based on discussion with the participants, more specialised topics could be introduced, such as many-body cavity QED or quantum metrology.

Topics include:

- Electromagnetic field quantization
- Quantum states of light
- Jaynes-Cummings model
- Purcell effect
- Input-output relations

25th – 29th August 2025 9:30 – 12:30 Building 900 Seminar room O1.020



Register on Geventis I-UF FC1









