



Minicourse: Principles for experiments in quantum optics

19 - 28 November 2024

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The main topics to be covered in this course are:

Class #	Date	Topic
Class 1	19/11	Introduction.
		Classical models of light
		Statistical properties of light. (Measuring statistics of different light sources)
		Photons. Intensity correlations
Class 2	21/11	Quantum models of light
		Quantum optical representations.
		Quantum correlations
		Quantum noise: Basic measurements and techniques.
Class 3	22/11	Nonlinear optics
		Entangled photon pairs sources (SPDC)
		Characterization of photon pairs sources. (¿Can we have an SPDC source?)
Class 4	26/11	Quantum sensing with entangled photons (Virtual state spectroscopy, ETPA and ghost imaging.)
Class 5	28/11	The concept of squeezing
		Squeezing experiments.

Tuesday 19/11	Thursday 21/11	Friday 22/11	Tuesday 26/11	Thursday 28/11
14-16	14-16 hs	14-16 hs	14-16 hs	14-16 hs