

PhD course (24 hours)

Course responsible: Prof. Matteo Galli, Prof. M. Liscidini

Title: Generation and manipulation of non-classical states of light for quantum technologies

The course will cover several topics in photon-based quantum technologies, and will be divided into three parts. A first part (8 hours) will focus on the the generation of single-photon states from artificial quantum emitters, such as single quantum dots and color centres; a second part (8 hours) will deal with parametric sources based on nonlinear optical materials/nanostructures for the generation of squeezed states; finally, the last part (8 hours) will describe the efficient manipulation of such non-classical states of light in miniaturzed photonic circuits fabricated by femtosecond laser writing technology.