
SEMINAR: Designing algorithms for photonic platforms

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November 10, 2026

15:00 to 16:00

Blue Lecture Room

Photonics is among the most promising approaches to building a quantum computer. Photonic quantum computing covers different schemes, such as continuous- or discrete-variable encodings, as well as heralded or on-demand photon sources. In this talk, I will first review the current technology landscape and discuss available paths for scaling to a fault-tolerant quantum computer, including a spin-optical architecture proposal based on single-photon emitters. I will then turn to linear optical platforms, which are candidates for near-term demonstrations of quantum advantage through boson sampling. I will present results on designing and running quantum algorithms on these near-term processors, focusing on how they can be used for generative quantum machine learning.

Hosted by: Prof. Dr. Antonio Acín