

Quantum Technologies with Photons

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My career to date has not followed a traditional academic trajectory, but has maintained strong themes of photonics and quantum technologies throughout. The seminar will be guided by this arc, beginning with a discussion of several major quantum technologies in the process of commercialisation. It will then focus on the details of a couple of these technologies. Specifically this will be the light matter interface, particularly relevant for quantum networks, and quantum states of light, and how this impacts quantum key distribution. I will discuss a few material systems; ions, quantum dots and diamond impurities, and I'll highlight how they might fit into nascent technologies. Finally I'll talk about the aspirations of my current company, Nu Quantum.