



Postdoctoral position on quantum optics of single quantum dots

The Photonics and Semiconductor Nanophysics group at the Eindhoven University of Technology (The Netherlands, www.tue.nl) has an open postdoctoral position on the investigation of quantum interference effects between single photons emitted from semiconductor quantum dots.

Quantum dots (QDs) are semiconductor nanostructures with a three-dimensional confinement potential, resulting in a quantized energy structure and atom-like radiative emission properties. Single QDs represent nearly ideal sources of single photons, for application in photonic quantum information processing. Our group is starting a large effort aimed at developing and investigating quantum photonic integrated circuits, where single photons are generated, processed and detected on a chip. One of our objectives is to demonstrate and optimise quantum interference effects between photons emitted from distinct QDs on a chip. To this aim, the selected candidate will investigate the photons statistics and the coherence properties of QDs coupled to waveguides, and perform photon bunching experiments. He/she may be additionally involved in supervising PhD students working on the other parts of the project.

The appointment will initially be for one year, with a possible renewal subject to funding availability.

We welcome applications from excellent candidates with a strong academic background in physics and a PhD in optical spectroscopy or quantum optics. Please email (max 300 kB) a CV with name and address of two references to: **Prof. Andrea Fiore, email: a.fiore@tue.nl**

