

Postdoc position on Quantum Secure Authentication

The Adaptive Quantum Optics group at the University of Twente is looking for a two-year postdoctoral researcher in quantum optics, for the project SMOKE (Single-Mode Optical Physical Unclonable Keys).

The project

Quantum Secure Authentication (QSA) is the method to quantum-securely identify a physical object, which can then be used as an identification token (key). This method is one of the few near-term applications of photonic quantum technologies and is mentioned as such in the European Quantum Flagship. It was invented and demonstrated by us in Twente. SMOKE strives to widen the application potential of QSA to remotely read out such a key by moving this authentication protocol from the spatial domain to the temporal domain.

This project is funded by a joint grant with Chigo Okonkwo from the Electro-Optical Communication group and Boris Skoric from the Security group at the Eindhoven University of Technology (TU/e). There is considerable scope for the successful candidate to work together with these groups.

Your profile

Candidates must have a PhD in experimental physics or equivalent. Expertise in quantum optics is advisable. The candidate will operate in the research team of Prof. P.W.H. Pinkse, and is expected to contribute his experimental and theoretical skills to the projects within the team. We expect candidates to be proficient in English and to have good professional communication and team working skills, and to be open to interdisciplinary collaborations with scientists from high-tech industry.

The group

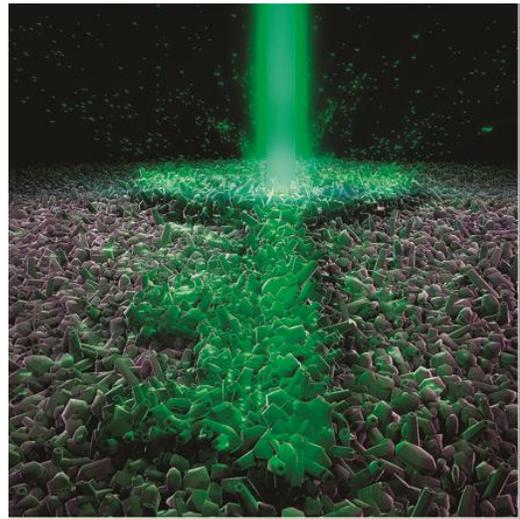
Your research will be performed within the Applied Nanophotonics cluster in the MESA+ Institute for Nanotechnology. We are part of the newly established Centre for Quantum Nanotechnology Twente (QUANT).

Practicalities

We are looking for a candidate to start in spring/summer 2020. The salary will be according to the collective bargaining agreement for Dutch universities with generous fringe benefits such as vacation allowance and end-of-year bonus.

Practicalities

For enquiries please contact Prof. P.W.H. Pinkse, Tel. 053 489 5904 or by email: P.W.H.Pinkse@utwente.nl



Artist impression of the readout of a physical unclonable key.