

PhD position in Emission and Detection of Highly Nonclassical Light

Sun, 2017-04-16 11:53 - [Radim Filip](#) [1] **At:** Department of Optics, Palacky University, Olomouc, Czech Republic

Deadline: 30 April, 2017

Location

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Open PhD position

Emission and detection of highly nonclassical light

Department of Optics, Palacky University, Olomouc, Czech Republic

Start: September 1, 2017

End: August 31, 2021

We are seeking a PhD student in theoretical quantum optics and quantum engineering, specifically, for a running project on generation, detection and identification of highly nonclassical light from many coherent emitters (atoms, ions, quantum dots, NV centers etc.).

The PhD student is expected to participate in reaching the research goals of the Center of Excellence. It merges theoretical and experimental activities of the Department of Optics at the Palacky University in Olomouc and the experimental and technological activities at the Institute of Scientific Instruments of the Academy of Sciences in Brno (80km from Olomouc). The theoretical work of PhD student will be focused on extended numerical simulation of coherent interaction of light with many emitters for different experimental platforms, efficient production and detection of nonclassical light and its applications in quantum metrology and quantum communication. Theoretical proposals will be followed by immediate experimental tests, inside the Center of Excellence and in foreign labs. Our research runs in a friendly and collaborative academic environment, including theoretical and experimental physicists in quantum optics, physics of trapped ions and particles, quantum information and classical optics in both Olomouc and Brno. PhD study will be co-supervised by a senior PhD student and a postdoc.

Position summary: Full-time temporary employment. The PhD study is limited to a maximum of four years. A short extension is conditionally possible. Salary monthly 22.000-28.000 CZK before tax and social/health insurance.

Required:

- Master Degree in Physics, Applied Physics, Applied Mathematics, or equivalent
- fluency in English, oral and written

Important experience:

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- quantum physics

Helpful experiences (one is sufficient):

- quantum optics, physics of atoms, ions and solid state emitters
- quantum metrology and communication

Contact Prof. Dr. Radim Filip ([filip \[at\] optics \[dot\] upol \[dot\] cz](mailto:filip@optics.upol.cz)) directly by email. If you are highly interested in, then include your CV, contact to one reference person and your Master thesis, if available.

The application deadline is April 30, 2017, however, an extension is possible. Apply immediately and if you right person, you can start an internship before the PhD study very soon.

Contact person: Prof. Dr. Radim Filip, [filip \[at\] optics \[dot\] upol \[dot\] cz](mailto:filip@optics.upol.cz), <http://muj.optol.cz/filip/> [2]

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