

## Postdoctoral research fellow | Nonlinear interaction of nanoparticles and atoms mediated by light

Thu, 2018-12-13 22:16 - [Radim Filip](#) [1] **At:** Department of Optics, Palacky University, Olomouc, Czech Republic

**Deadline:** 27 December, 2018

### Location

Department of Optics, Palacky University, Olomouc, Czech Republic 17. listopadu 12  
Olomouc 77900 Czech Republic

Place of work: Department of Optics, Palacky University, Olomouc, Czech Republic

Information on the department and its activities is available [here](#).

Work load: 1,0 (full-time, 40 h per week)

Start of job: February 1, 2019

Duration of the contract: 18 months

### Description:

The postdoc will analyse classical and quantum interactions of linear and nonlinear mechanical oscillators, levitating nanoparticles, atoms and ions mediated by their coupling to light. This research will be carried out within the work package WP2 of the project mQ-net supported by the Operational Programme Research, Development and Education. First, the research will focus on quantum interaction between systems separated by a short distance in a laboratory. Afterwards, the study will be extended to interaction between quantum systems separated by at least a few kilometres and connected using optical fibers. The goal is to achieve phase synchronisation of quantum systems and propose implementation of nonlinear quantum operations at a distance using quantum communication. The postdoc will collaborate with the theory group at Department of Optics, Faculty of Science, Palacky University Olomouc led by Prof. Dr. Radim Filip and with the experimental groups at this department and also at the Institute of Scientific Instruments of the Czech Academy of Sciences in Brno involved in this project. Prof. Dr. Radim Filip is a mentor for this position.

### Requirements:

Ph.D. in Physics or an equivalent degree;

specialization in quantum optics and quantum optomechanics;

publication track-record in the field of quantum optics and optomechanics;

ability to communicate in English.

We offer:

non-academic position;

salary 50 000 CZK per month;

modern working environment with state-of-the-art equipment;

catering allowance, 28 days of holiday and additional benefits.

Please send your application per e-mail to [dagmar \[dot\] petrzelaova \[at\] upol \[dot\] cz](mailto:dagmar.petrzelova@upol.cz) and [radim \[dot\] filip \[at\] upol \[dot\] cz](mailto:radim.filip@upol.cz):

CV including a summary of work experience;

letter of motivation;

list of publications;

scan of your university diploma;

recommendation letter prepared by the Ph.D. thesis adviser or current supervisor of the applicant.

Sending the application to the competition the applicant accepts "Information about personal data processing".

Under exceptional circumstances the enunciator reserves the right not to fill a certain position or cancel the tender completely without stating a reason.

Deadline for submitting application is 27. 12. 2018.

Submitted 3 days 11 hours ago by [Radim Filip](#) [2].

- [Postdoc](#) [3]

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