



Job ID: #JOB40/2017

Job Description

Job Title: Postdoctoral researcher in theory of open quantum systems / quantum control

Job Summary:

The postdoc will be involved in realisation of the project "Theoretical foundations of qubit-based environmental noise spectroscopy - quantum vs classical and Gaussian vs non-Gaussian noise" devoted to theoretical research on using qubits as sensors of environmental fluctuations. This theoretical topic is connected to ongoing experiments on nanoscale NMR imaging and environmental sensing performed around the world using NV centers (and other kinds of qubits).

The postdoc will join a group working on various aspects of decoherence of qubits (particularly, but not only, spin qubits). The main topic of research will be the development of better theoretical understanding of qubit control and measurement protocols, using which one could characterize the environment with which these qubits are interacting.

Job Description:

Required: PhD degree in theoretical physics.

Profile of a candidate for the position:

- Background in quantum open system dynamics/ quantum information theory / quantum metrology (documented by publications and/or reference letters).
- Previous experience with theory of spin qubits (quantum dots, NV centers, etc) will be a welcome (but not a necessary) asset.
- Good spoken and written English.
- Ability to work independently, but also to communicate efficiently with other group members and external collaborators (including experimentalists).

Main research field: Physics

Sub Research Field: Quantum mechanics

Career Stage: Experienced researcher or 4-10 yrs (Post-Doc)

Research Profile ([details](#)): Recognised Researcher (R2)

Type of Contract: Temporary Until end of June 2019, with possibility of extension.

Status: Full-time

Salary: Depends on qualifications

From 4500 to 5500 PLN per month (before taxes).

Contact

More information can be obtained from dr hab. Łukasz Cywiński (e-mail: lcyw@ifpan.edu.pl).

Additional information about the research and the group can be found at:

<http://info.ifpan.edu.pl/~lcyw>

<http://info.ifpan.edu.pl/~lcyw/theoretical-foundations-of-noise-spectroscopy-opus-x/>

Application details

Application deadline: January 15, 2018. Later applications may also be considered.

Required materials:

- Curriculum Vitae
- List of publications
- One page summary of main accomplishments, including a list of 2-3 papers that the applicant considers hers/his most interesting ones.
- Two reference letters from scientists familiar with the candidate and hers/his research submitted by referees directly to jobs@ifpan.edu.pl

All materials should be submitted in electronic form to the address: jobs@ifpan.edu.pl with Job ID in the subject.