



Job ID: #JOB07/2016

Job Description

Job Title: PostDoc - Ultracold Atomic Gases Theory

Job Summary:

The Quantum Optics group at the Institute of Physics, Polish Academy of Sciences in Warsaw, Poland, is expected to appoint one postdoctoral fellow who will work in a close collaboration with prof. Mariusz Gajda. The research planned aims at studying, on a theoretical ground, small systems of several trapped interacting atoms. Strongly correlated systems, like for instance topological insulators, are of a special importance.

Job Description:

The post doctoral fellow is expected to study different many-body systems from the point of view of high order geometric correlations. Ordered crystalline structures both in Bose and Fermi systems are expected to be seen in a single snapshot picture of the system. The idea of the study is originated in the recent experimental progress in monitoring in situ systems of ultracold atomic gases in optical lattices with a single site resolution. Different systems will be studied: from noninteracting Fermi gases to strongly correlated systems, like for instance topological insulators. Both short range and long range interactions are of interest. Mostly two-dimensional systems will be studied. We are looking for a candidate with interests in quantum mechanical theory including: degenerate quantum gases, strongly correlated systems, spinor and dipolar condensates, mesoscopic systems. Experience in numerical methods of many-body/few-body systems is advantageous. Strong numerical skills are expected from a successful candidate.

Main research field: Physics

Sub Research Field: Quantum mechanics

Career Stage: Early stage researcher or 0-4 yrs (Post-graduate)

Research Profile ([details](#)): First Stage Researcher (R1)

Type of Contract: Temporary - one year with a possibility of extension for the second year

Status: Full-time

Salary: Depends on qualifications
From 5000 to 6000 PLN per month (before taxes).

Contact

More information can be obtained from
prof. Mariusz Gajda (e-mail: gajda@ifpan.edu.pl).

Application details

Application deadline: April 23. Later applications may also be considered.

Required materials:

- Curriculum Vitae
- List of publications
- Names and contact informations of 2 references familiar with candidate research.
- Certificate of Doctor degree in Physics.

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