**JOB OFFER**

**Ph.D. student in the project PRELUDIUM BIS – ST (National Science Center)**

**Project leader: prof. dr hab. Wiesław Laskowski**

**Requirements:**

1. MSc degree in physics

2. Interest in foundations of quantum mechanics and quantum information.

3. At least basic knowledge of quantum information theory.

4. Experience in programming (Python or Matlab, Wolfram Mathematica).

5. Motivation to scientific work.

**Description of the tasks:**

We are looking for a Ph.D. student to work on a thesis devoted to quantum entanglement theory. The proposed dissertation title is: "Physical limitations on creating and observing strictly quantum correlations." In the project, we will investigate how fundamental physical constraints affect the possibility of creating correlations of a strictly quantum nature and how to observe them. With this respect, we shall consider the aspects of a limited supply of time, energy, and restrictions due to the range and type of interactions. In a more futuristic context, we shall consider limits imposed by the reference frames themselves. The candidate will be responsible for the theoretical work (analytical calculations and numerical simulations), take part in writing publications, presenting obtained results at conferences and seminars, and take an internship at an abroad university.

**Scholarship:**

Ph.D. students will receive a stipend in the gross amount of 5.000,00 PLN till the month of mid-term assessment and in the amount of 6.000,00 after the month when the mid-term evaluation will be performed (the period of receiving the scholarship is 48 months).

**Other benefits:**

1. six months of an internship at the Institute for Quantum Optics and Quantum Information, Austrian Academy of Sciences;
2. additional funds for participation in conferences, research visits, etc.

**Required documents:**

Applications consisting of:

1. cover letter,
2. academic curriculum vitae,
3. contact details of one of the previous supervisors or another scientist who can provide references for the candidate,

should be sent to: wieslaw.laskowski@ug.edu.pl

**Application deadline:** 06.07.2022, 00:00