



INNOVATIVE ECONOMY
NATIONAL COHESION STRATEGY



EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND



Stipend offer nr 5/MPD/10

Position: PhD student in “Physics of future quantum-based information technologies” project

Number of stipends: 12

Institution :

University of Gdańsk, Institute of Theoretical Physics and Astrophysics, Institute of Experimental Physics

In consortium with

- Institut für Quantenoptik und Quanteninformation, Austrian Academy of Sciences;
- Laboratory of Solid State Chemistry, Department of Biotechnology, University of Verona.

Maximum period of stipend agreement: up to 31 October 2014.

Position starts on : 1 October 2010 (first recruitment earlier 17-18 June 2010, second recruitment is planned in September 2010)

Stipend's amount: 3 500 PLN (when in Poland), 5 000 PLN (when abroad).

Pension insurance: included in the stipend.

Key responsibilities include: Active participation in one of the research projects:

1. Quantum communication and quantum techniques.
 - a. Study of novel multi-photon entangled states, and new ways to generate and to analyze entangled states in the experiments.
 - b. Limitations of quantum informational processes.
2. Characterization of information processing by quantum networks with noise.
3. Bound entanglement and quantum information processing.
4. New approach to statistical description of quantum dynamical systems.
5. Spectroscopic characterization of materials for quantum processing.
6. Characterization of fluoride and oxide materials doped with selected Ln ions for purpose of photon down conversion and cascade emission.
7. Modern persistent luminescence and storage materials.
8. Resonance excitation energy and polarization transfer in nanolayers.

Profile of candidates: (for more details see the Web page)

1. MA degree in physics, technical physics, mathematics (or other, with good background in physics).
2. Good command of English.
3. Motivation to conduct state-of-the-art research in theoretical and/or experimental physics.

Required documents:

1. A letter of motivation, explaining (briefly) candidate's interests. This is especially important in case of candidates who studied disciplines other than physics.
2. A copy of candidates MA thesis (in electronic version, preferably in .pdf format file).
3. Authenticated copy of the MA diploma, or an equivalent document proving that the candidate already passed MA exam.
4. Opinion of the candidate's diploma supervisor.
5. Curriculum vitae containing information on:
 - candidate's education and marks he/she obtained during the studies (this should be authenticated by corresponding authorities);
 - candidates previous (if any) scientific career (publications, experience, conferences, etc.);
 - other information which the candidate considers important or favorable.

For more details about the position please visit: <http://iftia9.univ.gda.pl/~MPD>

Principal Investigator: Prof. UG, dr hab. Stanisław Kryszewski

Address for applications: University of Gdańsk,
Institute of Theoretical Physics and Astrophysics,
ul. Wita Stwosza 57,
80-952 Gdańsk, POLAND.

Closing date: 14 June 2010 for the first recruitment. For the second (in September) will be announced later.

Please include in your offer :

"In accordance with the personal data protection act from 29 th August 1997, I hereby agree to process and to store my personal data by the Institution for recruitment purposes".

The granting institution may seek to contact the best candidates only