INSTITUTION: University of Warsaw, Faculty of Physics

CITY: Warsaw, Poland

POSITION: Postdoc

DISCIPLINE: Physics, Theoretical Nuclear Physics

POSTED: 16/04/2012

EXPIRES: 14/05/2012

KEY WORDS: nuclear structure, pairing, particle-transfer reactions

DESCRIPTION:

The candidate must hold a PhD degree in theoretical nuclear physics and declare his/her willingness to continue scientific research in this domain of physics. The employment is offered for 12 months and can be later extended. The project relates to the description of nuclear two-particle transfer matrix elements within the energy density functional method and will be realized within a large international collaboration of the ERA-NET NuPNET grant SARFEN. It is devoted to the determination of the ground-state-to-ground-state two-particle transfer matrix elements using the state-of-the-art methods for describing paired ground-state wave functions. In well-bound nuclei, the self-consistent solver HFODD will be used with the particle-number symmetry restored using either the approximate Lipkin method or the exact particle-number projection. Modern separable-pairing interactions in both isospin channels and a possibility of the full isospin mixing in the particle-hole and particle-particle channels will be implemented. For weakly bound, neutron-rich nuclei, the HOSPHE self-consistent solver in the PTG basis will be augmented by the capability of performing the exact particle-number projection.

The candidate should provide to Faculty of Physics, University of Warsaw, ul. Hoża 69, 00-681 Warsaw, room 101, the following documents:

1. Application for the position;
2. CV (including e-mail address);
3. Information about candidate’s scientific career;
4. List of scientific publications with citation number;
5. Research plan;
6. Copy of PhD diploma;
7. At least 2 reference letters from professors or senior staff members familiar with the candidate (including his/her PhD supervisor). The opinion letters are confidential and have to be mailed directly to the Faculty of Physics;
8. Reference letter of the future senior collaborator at the Faculty of Physics University of Warsaw indicating the perspectives of scientific research;

The documents listed above as 2, 3, 4, 5 and 9 have to be emailed as pdf or doc files to the address: [Sekretariat.IFT@fuw.edu.pl](mailto:Sekretariat.IFT@fuw.edu.pl).

The candidates will be evaluated by 18.05.2012. The candidate may be asked for a qualification interview with the commission appointed by the Council of the Faculty of Physics.