DIPC POST-DOCTORAL POSITIONS

The Donostia International Physics Center DIPC is currently accepting applications for post-doctoral appointments. This is a unique opportunity for highly motivated junior researchers with a recent PhD degree in physics or related fields to join some of the DIPC high-profile research teams.

Interested candidates please send an updated CV, a brief statement of interest, and contact information to postdoc@dipc.org. Reference letters are welcome but not indispensable. The particular position(s) to which the candidate is applying should be stated as well.

Next review of applications is scheduled for March 1st. Applications must be received before this date and will be evaluated by a Committee designed by the DIPC board on the basis of the following criteria (with point weights indicated in parentheses):

- CV of the candidate (40%)
- Adequacy of the candidate's scientific background to the project (40%)
- Reference letters (10%)
- Others: Diversity in gender, race, nationality, etc. (10%)

Evaluation results will be communicated to the candidates soon after. Positions will only be filled if qualified candidates are found.

JOB OPENINGS

- ***First principles calculations on nanostructures***

Post-doctoral position, contact person: Andrés Ayuela (swxayfea@sw.ehu.es). Reference:2009/14.

The candidate will use ab-initio electronic structure calculations to study physical properties (magnetic, optical and electrical) of condensed matter and to relate them to their chemical composition and atomic structure. Research will be carried on in one or some of the following projects: (1) Extension of our present Mn doped quantum dots works, (2) Study of the coupling between magnetism and magnetoelasticity (3) Further work on phases and nanostructures in cements and concrete.

- ***TDDFT study of the energy loss of swift ions in solids***

Post-doctoral position, contact person: Andrés Arnau (andres.arnau@ehu.es). Reference:2009/15.

The candidate will use first-principles methods based on time dependent density functional theory (TDDDFT) to study the electronic excitations produced by the passage of swift ions through different kind of solids. The main goal is to understand and explain the observed different behaviours for slow ions in metals, semiconductors and insulators. One of the most challenging aspects is the description of the so called threshold effect and its relation with the existence of energy band gaps in the excitation spectrum. In particular, protons, antiprotons and He projectiles will be considered as projectiles, while Al, Au, Si, Ge and LiF as targets. Some steps in the development of the methodology will be also need to complete the project.

- ***Theoretical studies of electronic transport in nanostructures***

Post-doctoral position, contact person: Sebastián Bergeret (sebastian_bergeret@ehu.es). Reference:2010/1.

The candidate will study transport and equilibrium properties of hybrid structures consisting of superconducting (S), normal (N) and ferromagnetic (F) metals. Research will be carried on one or some of the following research lines: 1) study of the dynamics of the triplet component in S/F junctions; 2) Electron cooling in S/N nanostructures; 3) Non-local transport in superconductors. The candidate should have a good background in quantum field theory, superconductivity and in non-equilibrium physics.

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