Donostia International Physics Center

DIPC PhD STUDENT GRANTS

The Donostia International Physics Center DIPC is currently accepting applications for PhD students. This is a unique opportunity for highly motivated students, recently graduated from the University in physics or related fields, to develop a research career joining some of the DIPC high-profile research teams.

DIPC PhD grants last for just 12 months. An extension of the grant may be accepted just in some exceptional cases. DIPC PhD grants are intended to support the student during the first steps of his/her research career. Further financial aid to continue the PhD research project after this period should be obtained from other institutions.

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

Applicants are advised to hold, or be in the final year of a master's degree in physics, chemistry or material science.

Next review of applications is scheduled for April 4th. Applications 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 (60%)
- Adequacy of the candidate's scientific background to the project (20%)
- Statement of interest and 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.

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PhD OPENINGS

- ***Electronic and transport properties of graphenic nanostructures***

  Contact person: Dr. Aran Garcia-Lekue (wmbgalea@lg.ehu.es)
  Reference: 2014/3

  Many of the interesting properties of graphene are directly related to the size and shape of the nanostructures, as well as to the homogeneity of their edges. Accordingly, there is an increasing interest in studying confined graphenic stuctures, such as nanoribbons or nanoislands. Besides, recent experimental reports on the controlled growth of graphenic nanostructures on metallic surfaces has opened a promising new route to explore their emerging properties.

  Within this scenario, we propose to perform theoretical and computational studies on electron transport properties across graphenic nanostructures. We propose to study the influence of different relevant aspects such as geometry, edge-effects or magnetic and spin-dependent effects. With this aim, we will employ simulation tools based on the density functional theory (DFT). Besides, we also plan to use a combination of molecular dynamics and conductance calculations to investigate the influence of dynamical processes on transport properties. In particular, we will apply this procedure to the case of graphene nanoribbons contacted by a STM tip, in order to simulate the junction formation/breaking.