

PhD Contract MINECO-FPI 2013

A fully funded PhD Fellowship-Contract in Quantum Information and Strongly Correlated Systems is available to work under the supervision of Prof. Miguel A. Martin-Delgado at the Departamento de Física Teórica I, Facultad de Ciencias Físicas, Universidad Complutense (Madrid, Spain). It covers a period of 4 years: 2-year fellowship plus 2-year contract. The Fellowship-Contract is funded by the Research Grant FIS2012-33152 of Ministerio de Economía y Competitividad (MINECO) of Spain, and pays the standard stipend for living expenses in Madrid (gross about 1650 EUR) as well as the full fees for an PhD student.

RESEARCH GROUP: Grupo de Información y Computación Cuánticas, Universidad Complutense Madrid (UCM), Spain. Webpage: <http://www.ucm.es/info/giccucm/index.php/GICC.html>

We offer an active and stimulating research environment, enhanced by strong international collaborations. The group holds financial support from a STREP European Grant FP7 Program, CAM grant from Madrid government (Research Consortium QUITEMAD = QUantum Information TEchnologies MADrid), in addition to the Spanish research grant from MINECO and others.

REQUISITES:

- We are looking for a highly motivated candidate. The ideal candidate would be self-motivated and curious, with an interest in doing theoretical or mathematical work. Ideally they will have a good undergraduate degree in a related discipline - physics, mathematics, or the information sciences - and good analytical and possibly numerical skills.
- Optimal Degrees: Physics, Informatics, Mathematics or Engineering.
- Good academic marks are desirable, as well as Quantum Physics and/or Computer Science background.
- English at a good level (spoken, written).

PhD TRAINING: the candidate will take university courses of the Master on Fundamental Physics (<https://sites.google.com/site/masterfisicateorica/>), which includes courses such as 'Quantum Information and Computation' (<http://www.ucm.es/info/giccucm/index.php/GICC.html>) taught by members of the group. These studies are at the Facultad de Físicas de la Universidad Complutense de Madrid. This will be complemented with additional training courses, summer schools etc. from the research consortiums in which the group is involved.

LINES OF RESEARCH: generically, the focus is on Quantum Information and Computation and their relations with Strongly Correlated Systems in Condensed Matter and Theoretical Physics. Among other more specific topics, they may include:

- Quantum Error Correction and Fault-Tolerant Quantum Computation
- Topological Quantum Computation
- Topological Orders in Condensed Matter: Anyon Physics, New Quantum Phases of Matter.
- Quantum simulations based on cold atoms in optical lattices, ion traps etc.
- Simulations of Strongly Correlated Systems
- Quantum Field Theory and Renormalization Group Methods
- and many other topics available in the arxiv by the members of the group over the years.

TYPE OF FELLOWSHIP-CONTRACT: MINECO-FPI position. A 4-year contract.

Aproximate net salary 1400 EUR/month. It is provided with a 3-month stay to another research center during the PhD period, social security, payments of academics fees and the like.

<http://www.idi.mineco.gob.es/portal/site/MICINN/menuitem.dbc68b34d11ccb5d52ffeb801432ea0/?vgnnextoid=68eb71d255dcf310VgnVCM100001d04140aRCRD>

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Duration: Currently open: Telematic application from 26th August to 10th September 2013

About Madrid: <http://en.wikipedia.org/wiki/Madrid>

Information: Interested applicants should submit (to the email addresses below): A Curriculum Vitae, including full address, a contact phone number and e-mail address, scanned copy of the academic transcripts (with marks), as well as a short statement of about 200 words or so explaining why they are interested in the position.

* CONTACT:

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