Postdoctoral position in Quantum Nanophotonics

Mon, 2017-10-09 16:49 - Gabriel Molina-Terriza [1] **At:** Material Physics Center, Donostia - San Sebastian, Spain
Deadline: 31 October, 2017

Location

Material Physics Center Donostia - San Sebastian 20018 Spain

The group of Prof. Gabriel Molina-Terriza has recently relocated to the Material Physics Center (San Sebastian, Spain). We are looking for highly motivated, talented researchers looking for a post-doctoral position in the area of Quantum Nanophotonics. The successful candidate will work in a state-of-the-art laboratory environment to study the interaction of quantum states of light with subwavelength structures, such as plasmonic nanoantennae, quantum dots and nanodiamonds. The Quantum Nanophotonics group at MPC is collaborating with renowned international research groups to control the quantum properties of small material particles. We are also collaborating with industrial partners to make them suitable to become the next generation of biosensors or to perform very precise measurements of electric and magnetic fields.

The candidates should have a PhD in Physics or Engineering and extensive experimental experience in either of the following techniques: 1) Entangle photon sources based on Spontaneous Parametric Down-Conversion or 2) Characterization of nanophotonics structures with coherent sources of light. Experience with the use of spatial light modulators, programmable logic devices such as FPGAs, and numerical methods to solve electromagnetic scattering will be favourably considered.

You can find more information and instructions to apply in the Jobs offers page of the Donostia International Physics Center: http://dipc.ehu.es/join_us/Postdoc_offer_octubre2017.pdf_2017/20 [2]. This call ihas the Reference 2017/20.

Selected publications from the group:

[1] Quantum control of photonic entanglement with a single sub-wavelength structure, >arXiv:1611.00104 [3]

[2] Measurement and shaping of biphoton spectral wavefunctions, Phys. Rev. Lett. [4] arXiv:1503.08629 [5]

[3] Observation of cooperatively enhanced atomic dipole forces from NV centers in optically trapped nanodiamonds, Nature Physics [6], arXiv:1511.04665 [7]

[4] Angular momentum-induced circular dichroism in non-chiral nanostructures Nature Communications [8]

[5] Twisted Photons Nature Physics [9]

- Postdoc [10]

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