NANOPHOTONICS TECHNOLOGY CENTER

UNIVERSITAT POLITÈCNICA DE VALÈNCIA

PhD position on nano-electro-opto-mechanical systems (NEOMS)

"Nanophotonics Technology Center" (Universitat Politècnica de València, Spain)

Nano-electro-opto-mechanical systems (NEOMS) are nanoscale elements enabling the controlled and coherent interaction of electrons, photons and phonons. NEOMS can be integrated on silicon chips, which ensures its coexistence with silicon electronics and photonics whilst providing new functionalities in the classical and quantum realms. The Horizon Europe project MAGNIFIC will develop a new generation of NEOMS based on nanocrystalline silicon to be used in wireless and satellite communication networks.

We are offering a PhD position at the Nanophotonics Technology Center (https://ntc.webs.upv.es/) to work in the design, fabrication, and characterization of the electrical and optical interfaces of silicon NEOMS. The final goal is to build NEOMS to perform microwave-to-optics conversion and electro-optical modulation for application in photonically-driven GHz wireless systems. Research activities will be performed within a European project and in collaboration with different European institutes, universities, and companies.

Candidates must have a degree in physics or electrical/telecommunications engineering. Other profiles may be considered. Master studies related to optics, telecommunications and/or nanotechnology are very valuable. English is highly recommended. Salaries will be according to the usual values in Spain.

If interested, send a motivation letter (1 page) and a short CV to Prof. Alejandro Martínez (amartinez@ntc.upv.es) and Ms. Isabel Salas (misalas@ntc.upv.es).

Starting date: January/February, 2023.

Additional information on the group: https://ntc.webs.upv.es/plasmonics_optomechanics/

Location: https://ntc.webs.upv.es/contacto/

Application deadline: 1st of December, 2022