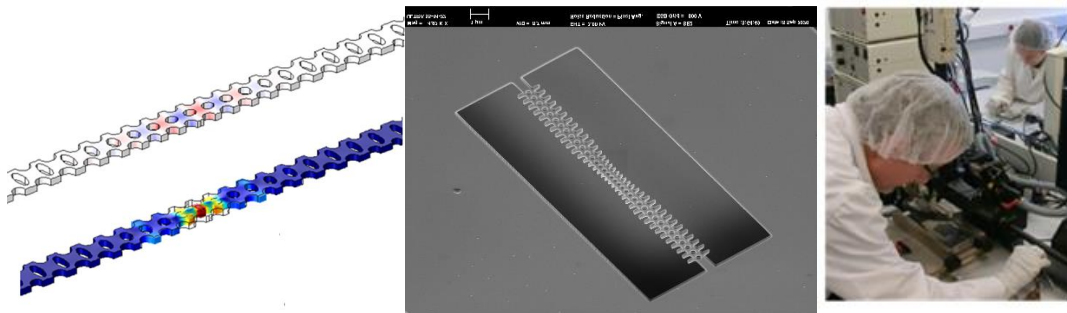


## Microwave photonics with optomechanical cavities

*PhD scholarship position in the “Nanophotonics Technology Center” at Universitat Politècnica de València, Spain*

Cavity optomechanics has recently emerged as a new paradigm enabling the manipulation of mechanical motion via optical fields tightly confined in deformable cavities. Under certain driving conditions with an external laser, the mechanical motion is amplified, ultimately resulting in phonon lasing at MHz and even GHz frequencies. This effect can be used to control and manipulate microwave signals in miniaturized silicon photonic circuits, which could find application in wireless networks or satellite communications.



We are offering a PhD scholarship to continue the work performed in recent years in this topic, with special emphasis of the application of ultra-compact optomechanical cavities to the low-energy all-optical processing of microwave signals for future communications systems and networks.

**Specific requirements:** We look for highly motivated students with a degree in Physics or Telecom/Electrical engineering. Master studies related to optics and nanotechnology will be very valuable. A high level in English is mandatory.

Candidates should send the following documents: motivation letter (1 page) and short CV to Prof. Alejandro Martínez ([amartinez@ntc.upv.es](mailto:amartinez@ntc.upv.es)) and Ms. Isabel Salas ([misalas@ntc.upv.es](mailto:misalas@ntc.upv.es)).

**Starting date:** September 2021.

**Duration:** up to 4 years (renewable on a yearly basis)

**Salary:** equivalent to standard FPI/FPU Spanish PhD grants.

**Additional information on the group:**

[https://ntc.webs.upv.es/plasmonics\\_optomechanics/](https://ntc.webs.upv.es/plasmonics_optomechanics/)

**Location:** <https://ntc.webs.upv.es/>

**Funding:** This contract is supported by the H2020 FET-Open projects THOR, <http://www.h2020thor.eu/> and SIOMO <https://www.siomo-project.eu/>