

***Grisolía Ph.D. grant position on
Photonic Integrated Circuits for Ultra-High
Capacity Multicore-fibre Transceivers***

Nanophotonics Technology Center

Universitat Politècnica de València, Spain

We are offering a Ph.D. position at the Nanophotonics Technology Center (NTC) in Valencia, Spain, to research design solutions and micro-nano fabrication techniques for a Photonic Integrated Circuit (PIC) transceiver targeting ultra-high capacity optical transmission. This Ph.D. permits the candidate to gain world-class experience in the design of photonic systems, including state-of-the-art simulation tools, hands-on exposure to design-for-fabrication techniques, and experience in leading edge Silicon Photonics micro-nanofabrication equipment, including back-end services. The Ph.D. is supported by a grant from the regional government body, *Generalitat Valenciana*, in the framework of the highly competitive *Santiago Grisolí*a predoctoral Program 2024 (DOGV 9710).

The specific research and training objectives of this *Grisolí*a predoctoral research include the development of novel optical device architectures, advanced optical coupling techniques and experimental laboratory work in the NTC world-class facilities. The Ph.D. candidate would work in an international team alongside telecommunications engineers, material physicists and micro-nanofabrication engineers.



Requirements:

- University degree in Telecommunications, Electrical Engineering, Physics or related field from a **University or Institution outside the European Union** obtained **after 1 January 2019**. Master studies related to photonics, telecommunications and/or nanotechnology will be very valuable.
- Candidates must be able to **enrol in the doctoral programme in Telecommunications of the Universitat Politècnica de València**. This programme has received the Quality Award from the Spain Ministry of Education, Culture and Sports since 2003.

- Experience in the design and characterization of photonic integrated devices and/or fiber communications skills is welcome. Hands-on experience in simulation analysis software (RSoft, Comsol, VPI Photonics, etc.) would be a plus.
- Written and oral communication skills in English. Skills in Spanish will be a plus.

Offer main characteristics:

- Three-year pre-doc *Grisolía* grant from the regional government body, *Generalitat Valenciana*, and an extra fourth-year contract in the postdoctoral orientation period (POP). Additional provision of 1,600€ funding the first year intended for travel and settling expenses in Valencia.
- Opportunity to professional growth in a leading research group with many international collaborators and strong experience in National and European projects. Possibility of predoctoral research stays in the framework of the Ph.D.
- Access to the NTC micro-nanofabrication facilities including the 500 m² cleanroom in close cooperation with our fab technicians.
- Other benefits for being part of Universitat Politècnica de València: nice university community, excellent public transport network (metro, tram, bus, bike), free parking, fitness and sports facilities, very close to the beach.

If interested, send a motivation letter and a short CV to our HH.RR. manager Ms. Isabel Salas (misalas@ntc.upv.es). Technical inquiries regarding the scientific work can be addressed to: Prof. Maria Morant (mmorant@ntc.upv.es), Prof. Roberto Llorente (rllorent@ntc.upv.es). Interviews for the position will begin immediately after the application deadline below.

Relevant dates:

- Application deadline: **September 15th, 2024**
- Contract signing and onboarding: **November 1st, 2024**

Further information:

Nanophotonics Technology Center overview: www.ntc.upv.es

Universitat Politècnica de Valencia: www.upv.es