

## CALL 23-2024-1 Researcher on Network algorithms

### Who are we looking for?

The Packet Optical Networks and Services (PONS) Research Unit is searching for interested candidates in a Researcher position.

For more information about the PONS Research Unit click here (<https://www.cttc.cat/packet-optical-networks-and-services-pons/>).

We are looking for a highly motivated, enthusiastic, empathic person, with passion for research and desire to learn and explore new technologies, aiming at significantly improving her or his professional career in a stimulating environment and within a dynamic and internationally recognized research group.

The successful candidate will join the PONS research unit to carry out research in topics and participate in projects tackled by the RU related to design and modelling of multi-granular ultra-wide band (UWB) wavelength division multiplexing (WDM) and spatial division multiplexing (SDM) networks for 6G xhaul communications.

### What do we offer?:

- We offer an indefinite contract of scientific technical activities until the end of the UNICO-5G I+D: Programa de Universalización de Infraestructuras Digitales para la Cohesión - 2021 in which CTTC is participating. Once this project will finish, you will join other projects in the same research line (PONS), subject to budget availability.
- Annual gross salary according to the profile of the candidate.
- Full-time contract: 7,5 h/day. Flexibility
- **Expected professional category:** R1/R2.  
Exceptional candidates may be considered even if they do not meet all the requirements. In this case the professional category will be based on the qualifications and experience of the applicant according with CTTC professional categories procedure(<https://www.cttc.cat/wp-content/uploads/2023/09/Update-professional-categories.pdf>).
- Tenure track: Career progression with possibility of stabilization trough a permanent structural contract
- Prospect start date: January 1<sup>st</sup>, 2025
- Continuous training, access to lab facilities, state of the art infrastructure and polyvalent working spaces, participation in scientific events and R&D projects, complementary skills development.
- **We have great benefits for employees:**
  - Paid time off: vacation (33 working days per year), holidays, sick and parental leave and more
  - Up to 3 days of Telework per week (2 fixed + 1 upon request). Other requests may be studied to accommodate special needs.
  - Flexible working hours for work-life balance
  - Tax-free optional benefits: restaurant ticket, nursery ticket, transport pass, private health insurance for employees and family.
  - Career path promotion (either professional category and/or annual gross salary)
  - Annual productivity upon performance
  - Possibility to complement the salary with personal grants

## Qualifications and Experience

- We are looking for a highly motivated, enthusiastic, energetic person, aiming at significantly improving his or her career perspectives in both public and private sectors. The successful applicant must hold a PhD degree in Telecommunications, Electrical Engineering, computer science, or closely related fields.
- **Required qualification/skills/experience:**
  - Design of optical node architectures/models
  - Optical resource allocation algorithms for dynamic operation
  - Optical Network performance evaluation using simulation modelling tools
  - Excellent publication record in journals and conferences
  - Excellent communication skills in English, both written and spoken
- **Other skills that are valuable, but not mandatory are:**
  - Spatial Division Multiplexing (SDM) and Ultrawide band (UWB) networks
  - Hands-on experience in simulation tools for optical networks
  - Programming skills in one of Matlab, Python, Java, or C/C++ languages
  - Hands-on experience on experimental demonstrations

Even if you do not meet all the requirements, we encourage you to apply.

The candidates' past performance but also future potential will be considered as criteria for selecting researchers.

## How to apply?

All applications must include:

1. A complete CV, including a list of publications and the contact details of two potential referees
2. PhD degree
3. Cover letter stating the motivation and suitability of the candidate.

The application documents must be submitted in pdf format through this online application.

\*ONLY APPLICATIONS VIA [WEB](#) WILL BE TAKEN INTO CONSIDERATION.\*

CVs and any other information gathered during this process will be handled confidentially

## Who are we?

- The Center Tecnològic de Telecomunicacions de Catalunya (CTTC) is a non-profit **public sector** research institution dedicated to fundamental and applied research activities, focused mainly on technologies related to the physical, data link and network layers of communication systems and Geomatics.
- CTTC received the "**HR Excellence in Research**" award in 2015 from the European Commission. This is a recognition of the Institute's commitment to develop a Human Resources Strategy for Researchers ([HRS4R](#)), designed to bring the practices and procedures in line with the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers ([Charter and Code](#)).
- The CTTC is located in the beautiful [Mediterranean Technological Park of Castelldefels](#), a science park that houses the Polytechnic University of Catalonia, research institutions, innovative companies and startups. The PMT-UPC is located 10 minutes' walk from the beach and the city center of Castelldefels, also close to childcare centers, public schools and the best international schools. It can be reached by car, train (RENFE) and various bus lines.
- We have 2 buildings on campus, with state-of-the-art facilities, comfortable work spaces, meeting rooms, and multipurpose spaces, as well as social spaces.
- The institute has a **multicultural environment** with more than 130 members (scientific, technical and administrative staff) from all over the world.

CTTC offers and promotes a diverse and inclusive environment and welcomes applicants regardless of age, disability, gender, national origin, race, religion, or sexual orientation.

The CTTC seeks to increase the presence of women in those areas where they are underrepresented and therefore explicitly encourages them to stand as candidates.

It is also committed to increasing the number of people with disabilities in its workforce and therefore encourages their applications.