



FPI PHD FELLOWSHIP IN OPTICAL NETWORKING

The Optical Networking Area of the **Centre Tecnològic de Telecomunicacions de Catalunya (CTTC)** offers a Fellowship (FPI) from the **Spanish Ministry of Science and Innovation (MICINN)** to carry out a PhD Thesis associated to the Fundamental Research Project "Design and evaluation of intelligent optical networks based on hybrid nodes with Ethernet and wavelength switching" (DORADO). Project code: TEC2009-07995.

The aim of the DORADO project is to investigate Wavelength Switched Optical Networks (WSO), Connection-Oriented Ethernet (COE), and Generalized Multiprotocol Label Switching (GMPLS) technologies as the basis for cost-efficient, high-speed, flexible and dynamic optical transport networks. This is done from an integrated approach that includes technological aspects of modelling, design, performance evaluation and experimentation in the ADRENALINE Testbed® of both optical communication systems and optical networks. The following list summarizes the main scientific and technical objectives that will be addressed:

- Spectrally-efficient transmission systems based on optical OFDM. Investigation of all-optical OFDM transmission systems to overcome the limitations induced by electronic processing.
- Advanced optical performance monitoring techniques for dynamically reconfigurable transparent optical networks.
- Centralized and distributed RWA algorithms and reservation protocols along with the required extensions to the current protocols for provisioning/recovery of optical services in WSO.
- Grooming and aggregation algorithms for Ethernet, along with the required protocol extensions, for the efficient provisioning/recovery of connection-oriented Ethernet services over WSO.
- Development of an experimentation platform to study the performance of GMPLS-enabled connection-oriented Ethernet transport over WSO.

We are looking for students with a MS degree in Telecommunications or Computer Science, with a good academic record, and a strong motivation for research in optical networks or optical communication systems. The Fellowship-contract has a maximum duration of 48 months (24 months of fellowship tenure + 24 months of work contract tenure). The fellowship stipend will be 1.142€ per month (gross). Online submission of application forms will be open from February 8 to February 22, 2010. Instructions and more information about the submission process are available at the MICINN website:

<https://www.micinn.es/becasfpi/>

<http://tinyurl.com/fpi-cttc-ona>

Interested candidates contact with:

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