



# Job offer in nonlinear photonics, laser physics and nanotechnologies

## Post-doctoral position in frequency comb generation at 2 $\mu\text{m}$

Starting date : From July 2021

Duration : 24 months, up to end of august 2023

Location : Laboratoire Interdisciplinaire Carnot de Bourgogne, Dijon (France)

Funding : Région Bourgogne-Franche-Comté, FEDER, EIPHI Graduate School

The Laboratoire Interdisciplinaire Carnot de Bourgogne offers a post-doctoral position in fiber lasers, frequency comb generation and nonlinear photonics in the mid-infrared. The successful candidate will join the Photonics Department at the LICB and develop new sources of coherent light around the wavelength of 2  $\mu\text{m}$ .

Frequency comb generation is currently one of the most dynamic fields in nonlinear photonics and laser physics, especially because of its numerous application in spectroscopy and time-and-frequency metrology. Most of its developments have been focused on the near-infrared, between 800 nm and 1550 nm. The goal of the project is to generate such combs in the 2  $\mu\text{m}$  region using two complementary approaches : either by generating a frequency comb in a nonlinear on-chip microresonator, or with a pulsed thulium-based fiber laser.

The selected candidate will have a background in nonlinear optics, optical fibers and nanophotonics. He/She will need to be familiar with optical instrumentation (lasers, optical fibers, spectrometers, oscilloscopes, ...), data and signal processing, as well as some experience in numerical simulation of optical propagation (FEM method, nonlinear equation solving). A strong interaction with other ongoing projects in the lab and with our partners (CEA Grenoble) is expected.

The successful candidate will benefit from the expertise of our lab on nonlinear optics in fibers and nanophotonics, and will be collaborating with nanofabrication centrals. This position is proposed in the framework of the Direc2 project, supported by the EIPHI graduate school.

For additional information, please contact :  
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