

Offers from the Biophotonics group - (optics, sensors, thermal effects, cells)

Record number : OPR-786

Overview

RESEARCH DIRECTION

Paul G. Charette, Professeur -
Interdisciplinary Institute for
Technological Innovation

INFORMATION

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ADMINISTRATIVE UNIT(S)

Faculté de génie
Département de génie chimique et de
génie biotechnologique
Département de génie électrique et de
génie informatique

LEVEL(S)

2e cycle
3e cycle
Stage postdoctoral

LOCATION(S)

3IT - Institut interdisciplinaire d'innovation
technologique
LN2 - Laboratoire Nanotechnologies et
Nanosystèmes

Project Description

Our team studies photonic systems and investigates specific physical properties for biomedical applications (but not limited to).

Our team carries out work taking into account all the steps necessary to obtain an actual working prototype or a proof of principle of a physical phenomenon: sample fabrication in a clean room; numerical simulation (Matlab/Python/Comsol); optical/electrical characterization.

We have several experimental setups for plasmonic imaging, fluorescence imaging, or pump-probe characterization.

We are open to candidates' suggestions to discuss and exchange with them on a possible research topic in agreement with our field and the candidate's interest.

Some examples of projects currently being carried out in the team:

Study of thermal and optical effects in pulse regime

Analysis of cellular organization on nanostructured substrates.

Study and realization of biological sensors based on plasmonic effect and fabricated on silicon.

Realization of optical guide

Optical-quantum coupling and fundamental study

Detection of bacteria

More information on our group page:

<https://www.usherbrooke.ca/ln2/recherche/photonique-integree/equipe-biophotonique>

This project can accommodate one or more students in the following programs:

- Postdoctoral fellowship
- Doctoral thesis
- Research-type master's thesis
- 3rd cycle research internship

Discipline(s) by sector

Funding offered

To be discussed

Sciences naturelles et génie

Génie chimique, Génie électrique et génie électronique

The last update was on 12 March 2024. The University reserves the right to modify its projects without notice.