



# ICFO-UNAM INTERNATIONAL SCHOOL ON THE FRONTIERS OF LIGHT: Biophotonics

October 21, 2019 to October 25, 2019

Queretaro, Mexico

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**ICFO-UNAM International Schools on the Frontiers of Light** is a series of schools organized by ICFO - The Institute for Photonic Sciences (SPAIN) and CFATA-UNAM - the Centre for Applied Physics and Advanced Technology of the Universidad Nacional Autonoma de Mexico (MEXICO). The School aims to inspire the next generation of researchers in light sciences and related technologies.

The first edition will be devoted to **BIOPHOTONICS** and will be held in **Queretaro, Mexico**.

It will feature experts from ICFO and UNAM, and leading international researchers, in an intensive 1-week course directed to young students wishing to enter the vibrant field of Biophotonics.

**Topics:**

**Fluorescence Imaging:** FRET, Confocal, Nonlinear, LSM.

**Super resolution imaging:** STED, STORM, SIM, FCS, Single particle.

**Biomedical applications:** biosensors, OPT, DCS, Photoacustics.

**Advanced Bio-applications:** Optical tweezers, optogenetics, mechanosensing, neurophotonics.

**Nano-bio-photonics:** nanoparticle-based biosensors

**Nonlinear Quantum Biophotonics:** Multidimensional spectroscopy with quantum light.

Participants will gain a strong understanding of basic concepts, an introduction to the current state of the art in these topics, and have the opportunity to mingle with top scientists from leading institutions.

The school is open to a limited number of participants, selected on the basis of academic merit. Thanks to generous support from the OSA, International Travel Fellowships are available to outstanding applicants. Up to two ICFO Student Research Fellowships may be offered to outstanding to advanced undergraduate or masters students accepted into the school.

**Lecturers:**

Turgut Durduran, ICFO

Maria Garcia-Parajo, ICFO

Stefan Wieser, ICFO

Michael Krieg, ICFO

Pablo Loza, ICFO

Roberto Leon-Montiel, Instituto de Ciencias Nucleares, UNAM

Remy Avila, Centro de Fisica Aplicada y Tecnologia Avanzada, UNAM

Ataulfo Martinez, Instituto de Neurobiologia, UNAM

Christopher Wood, Instituto de Biotecnologia, UNAM

Ruben Ramos Garcia, INAOE

Scientific Organisers: Dr. Pablo Loza-Alvarez, (ICFO), Dr. Remy Avila (UNAM) Dr. Robert Sewell (ICFO), Dr. Jorge Luis Dominguez-Juarez (UNAM).