FOPS

Optical Fibers and Signal Processing Group (FOPS)

VNIVERSITAT DE VALÈNCIA

Workshop

Optical Fibers and Signal Processing

Valencia, Friday 27th November 2020.

Venue: *Salón de Grados Lise Meitner, Facultad de Física, Campus de Burjassot, Valencia*.

Online: https://eu.bbcollab.com/guest/7d8dfeb061de4daebe48e0c2d4aa4f23

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PROMETEO/2020/029

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INTRODUCTION

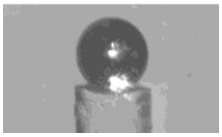
The research group **Optical Fibers and Signal processing** (FOPS) of the University of Valencia organizes the 2020 edition of this workshop, with the participation of the Photonics Research Group (GROC) of the University Jaume I and the consortium of the IPN-Bio project.

The members of **FOPS group** are organized in three research units:

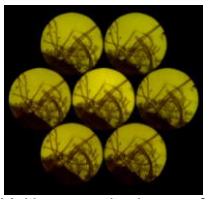
- The **3D Imaging & Display Laboratory** (3DID Lab),
- The **Laboratory of Fiber Optics** (LFO),
- The **Diffractive Optics Group** (DiOG).

The research of the group is focused on:

- Three-dimensional computational imaging. Application to the capture and display of macroscopic and microscopic scenes.
- Fabrication, modeling and design of photonic crystal fibers and special fiber components for lasers and new light sources, sensors and microwave photonics.
- Development of new diffractive optical elements for different applications like intraocular and contact lenses, optical trapping, and optical encryption.



Microbubbles generated at the tip of an optical fiber.



Multi-perspective image of a marine 3D microscopic sample.

GOALS

- Dissemination of group activities.
- Strengthening and promotion of scientific collaborations.
- Review of research lines and recent advances.
- Strengthening the collaboration between research groups and industry, particularly in the *Comunitat Valenciana*.

PROGRAM

Morning

9:00 Registration and welcome

Chairman: José Luis Cruz

9:30 Optical generation and characterization of acoustic waves in optical fibers and microresonators
Dr. Antonio Díez
LFO, ICMUV, Universidad de Valencia, Spain.

10:05 Computational imaging with single-pixel detection: applications in scattering media
Dr. Enrique Tajahuerce
GROC, Universitat Jaume I, Spain.

10:40 Novel photonic architectures by nanoimprinting unconventional materials
Dr. Agustín Mihi
ICMAB, CSIC, Spain.

11:15 Coffee break

Chairman:Walter Furlan

11:45 Lightfield and wavefront phase acquisition
José Manuel Rodríguez Ramos
Wooptix S.L. La Laguna, Spain.

12:20 Distributed Optical Fiber Sensors in Photonics Engineering Group of Alcala University
Dr. Sonia Martín-López
Instituto de Óptica, CSIC, Spain.

12:55 Lab-on-fiber technology: A nanospectroscopic approach based on the plasmonic effect
Dr. Joseba Zubía and Dr. Ángel Ortega-Gómez
Universidad del País Vasco, Spain.

13:30 Lunch

Afternoon

Chairman: Genaro Saavedra

15:30 Dark-field 3D imaging through Fourier lightfield microscopy
Dr. Manuel Martínez-Corral
3DDI Lab. Universidad de Valencia, Spain.

16:05 Control of mechanic and thermal energy by advanced artificial materials
Dr. Daniel Torrent
GROC, Universitat Jaume I, Spain.

16:40 Modification of the optical properties of the cornea for the correction of presbyopia
Dr. Diego Montagud
DIOG, Universidad Politécnica de Valencia, Spain.

17:15 Optical microresonators: tiny sensors for tiny changes
Dr. Martina Delgado-Pinar
LFO, Universidad de Valencia, Spain.

17:50 Closing remarks

REGISTRATION: Please, send an e-mail to Amparo Pons (amparo.pons-marti@uv.es). Deadline: 25th November 2020

This year the capacity of the workshop room is limited. Please, indicate if you are going to attend in-person when sending the e-mail