



Workshop Optical Fibers and Signal Processing

Valencia, Friday 2nd December 2022.

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

SPONSORS



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IPN-Bio
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INTRODUCTION

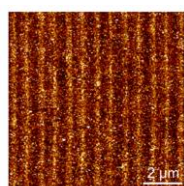
The research group **Optical Fibers and Signal processing (FOPS)** of the University of Valencia organizes the 2022 edition of this workshop, with the participation of the Photonics Research Group (GROC) of the University Jaume I, the Holography and Optical Processing Group (GHPO) of the University of Alicante, and the consortium of the IPN-Bio European 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 **Diffraction 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.



AFM image of periodic
UV-laser photodeactivation
of protein bio-layers.

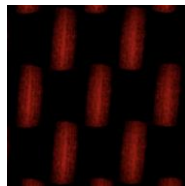


Image of Arabidopsis
thaliana obtained with
lightfield microscope.

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: Dr. Walter Furlan

9:30 In-fiber opto-mechanics

Dr. Miguel V. Andrés
University of Valencia, Spain.

10:05 Real time 3D light microscopy

Dr. Manuel Martínez Corral
University of Valencia, Spain.

10:40 Laser based specialty fiber fabrication

Dr. Michael Fokine
KTH Royal Institute of Technology, Sweden.

11:15 Coffee break

Chairwoman: Dr. Martina Delgado-Pinar

11:45 Multidimensional computational imaging with single-pixel detection and data fusion

Dr. Armin J. M. Lenz
University Jaume I, Spain.

12:20 Supercontinuum as a tool to measure modal parameters of optical fibers

Dr. David Castelló-Lurbe
University of Valencia, Spain.

12:55 Applications and challenges of photonics in fluid mechanics

Dr. Raúl Martínez Cuenca
University Jaume I, Spain.

13:30 Lunch

Afternoon

Chairman: Dr. Antonio Díez

15:30 Development and manufacturing of laser devices, from lab to market

David Montes
European Laser Therapeutics SLU, Spain.

16:05 A physics lab in your pocket

Dr. Juan Antonio Monsoriu
Polytechnic University of Valencia, Spain.

16:40 Ytterbium-doped fiber lasers operating in long-wavelength band

Dr. Yuri Barmenkov
Centro de Investigaciones en Óptica AC, Mexico.

17:15 Photonics for sensing

Dr. María Isabel Gómez-Gómez
Polytechnic University of Valencia, Spain.

17:50 Closing remarks