



VNIVERSITAT
ID VALÈNCIA

Workshop

Optical Fibers and Signal Processing

Valencia, Friday 14th November 2025.

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

SPONSORS



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Organizers

Miguel V. Andrés
Manuel Martínez

Organizing Committee

Genaro Saavedra
José Luis Cruz
Antonio Díez
Walter D. Furlan

Scientific Committee

Miguel V. Andrés
Enrique Tajahuerce
David Castelló
Martina Delgado

INTRODUCTION

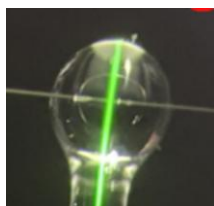
The research group **Optical Fibers and Signal processing (FOPS)** of the University of Valencia organizes the 2025 edition of this workshop, with the participation of the Photonics Research Group (GROC) of the University Jaume I, and the Holography and Optical Processing Group (GHPO) of the University of Alicante.

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.



Acoustic spherical micro-resonator and microfiber for the excitation of optical WGM resonances



Image of a PCB connector captured with a light-field camera.

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

Chairwoman: Dr. Martina Delgado-Pinar

9:30 Extended depth-of-focus microscopy through use of liquid lenses

Dr. Manuel Martínez-Corral
University of Valencia, Spain.

10:05 Fundamentals and applications of forward stimulated Brillouin scattering (FSBS) in optical fibers

Dr. Antonio Díez
University of Valencia, Spain.

10:40 Synchrotron light under pressure: The Sr₂FeIrO₆ ambient-structure case

Dr. Juan Ángel Sans
Polytechnic University of Valencia, Spain.

11:15 Coffee break

Chairman: Dr. David Castelló-Lurbe

11:45 Gas and fibre optics: opening new horizons

Dr. Luc Thévenaz
École Polytechnique Fédérale de Lausanne, Switzerland.

12:20 Computational electro-optic frequency comb spectroscopy

Dr. Vicente Durán
University Jaume I, Spain.

12:55 Nonlinear processes in multimode optical fibers

Dr. Jesper Lægsgaard
Technical University of Denmark, Denmark.

13:30 Lunch

Afternoon

Chairman: Dr. Genaro Saavedra

15:30 Ultrafast laser processing of polymers and photopolymers: From thermal effects to surface structuring.

Dr. Andrés Pérez Bernabeu
University of Alicante, Spain.

16:05 Towards multipoint sensing of ionizing through inorganic scintillators

Dr. Óscar Esteban
Universidad de Alcalá, Spain.

16:40 Mueller-matrix imaging microscopy

Dr. Juan Manuel Bueno
University of Murcia, Spain.

17:15 Ad-hoc photonic sensors for advanced monitoring

Dr. Luis A. Sánchez
Calsens S.L., Spain.

17:50 Closing remarks



REGISTRATION: Please, send an e-mail to Amparo Pons (amparo.pons-marti@uv.es). Deadline: 9th November 2025