FOPS

Optical Fibers and Signal Processing Group (FOPS)

VNIVERSITAT DE VALÈNCIA

Workshop

Optical Fibers and Signal Processing

Valencia, Friday 22nd November 2019.

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

SPONSORS

GENERALITAT VALENCIANA

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FOPS
Universitat de València

GROC Photonics Research Group
Universitat Jaume I

GHPO
Universitat d'Alacant

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Scientific Committee
Miguel V. Andrés
Pedro Andrés
Manuel Martínez
Jesús Lancis
Augusto Beléndez
José Luis Cruz

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INTRODUCTION

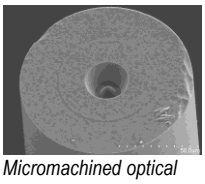
The research group **Optical Fibers and Signal processing** (FOPS) of the University of Valencia organizes the 2019 edition of this workshop, with the participation of the Photonics Research Group (GROC) of the University Jaume I and the Holography and Optical Processing Group of the University of Alicante.

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

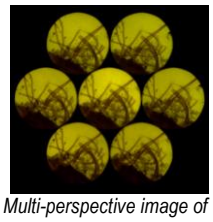
- The **3D Imaging & Display Laboratory** (3DID Lab),
- The **Laboratory of Fiber Optics** (LFO),
- The **Diffractive Optics Group** (DiOG).

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.



Micromachined optical fiber: chemically edged core.



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: Pedro Andrés

9:30 Recent advances at the 3DID Lab
Dr. Manuel Martínez-Corral
Dep. of Optics. University of Valencia, Spain.

10:05 Advances in fiber grating fabrication at LFO
Dr. José Luis Cruz
ICMUV, University of Valencia, Spain.

10:40 Single lens 3D depth camera
M. Sc. Leticia Carrión-Higuera
Photonicsens S.L., Valencia, Spain.

11:15 Coffee break

Chairman: Walter D. Furlan

11:45 High fidelity acoustic sensing using optical fibers: A new tool in geophysics
Dr. Hugo F. Martins
Instituto de Óptica, CSIC, Madrid, Spain.

12:20 Photometry and radiometry applied to the industry
B. Sc. Elena Sanjuán Sánchez
Candeltec S.L., Valencia, Spain.

12:55 Design of fiber lasers for sensing networks
Dr. Rosa Ana Pérez-Herrera
Universidad Pública de Navarra, Pamplona, Spain.

13:30 Lunch

Afternoon

Chairman: Genaro Saavedra

15:30 New devices for 3D computational imaging
M. Econ. César Gil Algora
Doitplenoptic S.L., Valencia, Spain.

16:05 Optical biosensors based on diffractive gratings of biomolecules
Dr. Miquel Avella-Oliver
IDM, Universidad Politécnica de Valencia, Spain.

16:40 Structured-illumination scanning microscopy (SISM)
Dr. Emilio Sánchez Ortiga
Dep. of Optics. University of Valencia, Spain.

17:15 Broadband tuning of a long-cavity all-fiber mode-locked thulium-doped fiber laser using an acousto-optic bandpass
Dr. Miguel Bello-Jiménez
IICO, Universidad Autónoma de San Luis Potosí, México.

17:50 Closing remarks

REGISTRATION: Please, send an e-mail to Amparo Pons (amparo.pons-marti@uv.es). Deadline: 15th November 2019