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Workshop

Optical Fibers and Signal Processing

FOPS 2017 is a joint workshop with groups PROMETEO/2016/079 and PROMETEOII/2015/015. Valencia, Friday 20th October 2017.

Venue: Fundació Universidad-Empresa, (ADEIT), Plaza Virgen de la Paz, No. 3, Valencia.

SPONSORS



PROMETEO 2016/079
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DIGITAL LIGHT



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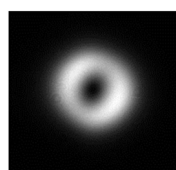
INTRODUCTION

The research group *Fibras Ópticas y Procesado de Señal* (FOPS, PROMETEOII/2014/072) from the **University of Valencia** organizes the 2017 edition of this workshop, with the participation of the groups PROMETEO/2016/079 from the University Jaume I and PROMETEOII/2015/015 from the University of Alicante.

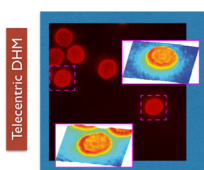
The members of **FOPS group** belong either to the **Institute of Material Science** or to the **Department of Optics** and are organized in three research units: the *Laboratory of Fiber Optics*, the *Modelling and Design of Photonic Components Unit*, and the *Diffraction and 3D Imaging Laboratory*.

The research of the group is focused on:

- Fabrication of photonic crystal fibers and special fiber components for lasers and new light sources, sensors and microwave photonics,
- Modeling and design of microstructured optical fibers and photonic devices as integrated microresonators and silicon waveguides, and
- 3D integral imaging systems, high resolution scanning microscopy and design of new diffractive elements.



Radially polarized cylindrical vector beam fiber laser



Digital Holographic Microscopy detects morphological changes in red-blood cells.

GOALS

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

PROGRAM

Morning

9:00 Registration and welcome

Chairman: Antonio Díez

9:30 Far-field integral microscopy

Dr. Manuel Martínez-Corral
Dep. de Óptica, Universidad de Valencia, Spain.

10:05 In-fiber acousto-optics: recent advances

Dr. Miguel V. Andrés
ICMUV, Universidad de Valencia, Spain.

10:40 Synthesis of nanoparticles by ultrashort lasers: methods and applications

M. Sc. Carlos Doñate
INIT, Universitat Jaume I, Castellón, Spain.

11:15 Coffee break

Chairman: José Luis Cruz

11:45 Sensitivity enhancement of coated and uncoated optical fibers towards development of biosensors

Dr. Ignacio Del Villar
Universidad Pública de Navarra, Pamplona, Spain.

12:20 Volume holography for optical applications

Dr. Cristian Neipp
Universidad de Alicante, Spain.

12:55 Nonlinear propagation in multicore and multimode fibers and its applications

Dr. Elham Nazemosadat
Chalmers University of Technology, Sweden.

13:30 Lunch at the ADEIT

Afternoon

Chairman: Walter Furlan

15:30 Digital lensless holographic microscopy: a tool to study the micro-world in 4D

Dr. Jorge García-Sucerquia
Universidad Nacional de Colombia. Sede Medellín.

16:05 Dissipative solitons in fiber lasers

Dr. José María Soto-Crespo
CSIC, Instituto de Óptica, Madrid, Spain.

16:40 Theory and applications of optical and acoustical metamaterials

Dr. Daniel Torrent
University of Bordeaux, France.

17:15 Pulse-preserving supercontinuum and passive reshaping of ultrashort pulses in optical fibers

Dr. Oleksiy V. Shulika
Universidad de Guanajuato, Salamanca, México.

17:50 Closing remarks

18:00 Horchata break