



VNIVERSITAT  
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## Workshop

# Optical Fibers and Signal Processing

FOPS 2016 is a joint workshop with groups PROMETEO/2016/079 and PROMETEOII/2015/015. Valencia, Friday 28<sup>th</sup> October 2016.

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

### SPONSORS



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DIGITAL LIGHT



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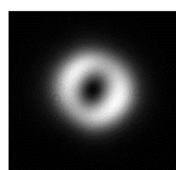
### INTRODUCTION

The research group *Fibras Ópticas y Procesado de Señal* (FOPS, PROMETEOII/2014/072) from the **University of Valencia** organizes the 2016 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.

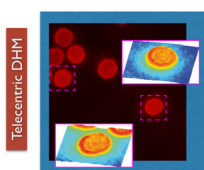
The members of **FOPS group** belong either to the **Institute of Material Science** or to the **Department of Optics** and are organized in three research units: the *Laboratory of Fiber Optics*, the *Modelling and Design of Photonic Components Unit*, and the *Diffraction and 3D Imaging Laboratory*.

The research of the group is focused on:

- Fabrication of photonic crystal fibers and special fiber components for masers 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: Manuel Martínez Corral*

##### 9:30 Fiber light sources for biomedical imaging based on CARS/SRS

Dr. Antonio Díez  
ICMUV, Universidad de Valencia, Spain.

##### 10:05 Principles and applications of Brillouin scattering microscopy

Dr. Emilio Sánchez-Ortiga  
Imperial College London, United Kingdom.

##### 10:40 Development and manufacturing of high power Yb doped laser fibers by vapor-phase doping methods

Mr. Borut Lenardič  
Optacore d.o.o., Slovenia.

##### 11:15 Coffee break

*Chairman: José Luis Cruz*

##### 11:45 Computational imaging: single-pixel cameras and imaging through scattering media

M. Sc. Fernando Soldevila  
INIT, Universitat Jaume I, Spain.

##### 12:20 Poling optical fibers: fundamentals and applications

Dr. Walter Margulis  
Acreo Swedish ICT AB, Sweden.

##### 12:55 Application of PA-LCoS microdisplays in diffractive optics and holography

Dr. Andrés Márquez  
Universidad de Alicante, Spain.

##### 13:30 Lunch at the ADEIT

#### Afternoon

*Chairman: Genaro Saavedra*

##### 15:30 In-vivo optical imaging applications in biology: where diffuse and ballistic light meet

Dr. Jorge Ripoll  
Universidad Carlos III, Spain.

##### 16:05 Optical Coherence Tomography-missing link in medical imaging

Dr. Rainer Leitgeb  
Medical University of Vienna, Austria.

##### 16:40 Optical Biopsy: Noninvasive methods for medical diagnosis

Dr. F. Javier González  
Universidad Autónoma de SLP, Mexico.

##### 17:15 Nonlinear integrated photonics

Dr. Nathalie Vermeulen  
B-PHOT, Vrije Universiteit Brussel, Belgium.

##### 17:50 Closing remarks

##### 18:00 Horchata break