



VNIVERSITAT
ID VALÈNCIA

Workshop

Optical Fibers and Signal Processing

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

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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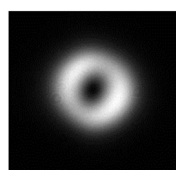
INTRODUCTION

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

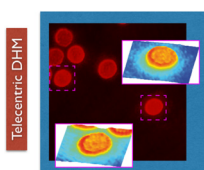
The members of **FOPS group** belong either to the **Institute of Material Science** or to the **Department of Optics** and are organized in three research units: the *Laboratory of Fiber Optics*, the *Modelling and Design of Photonic Components Unit*, and the *Diffraction and 3D Imaging Laboratory*.

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

Dr. Borut Lenarčič
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