

Expression of Interest

Contact Person/Scientist in Charge

- **Name and surname:** INMACULADA PASCUAL VILLALOBOS
 - **Email:** pascual@ua.es
- Universidad de Alicante**

Department / Institute / Centre

- **Name of institution:** UNIVERSITY INSTITUTE OF PHYSICS APPLIED TO SCIENCES AND TECHNOLOGY (IUFAcyT) – GROUP OF HOLOGRAPHY AND OPTICAL PROCESSING
- **Address:** Carretera Alicante - San Vicente
- **Province:** Alicante

Research Area

- Physics (PHY)

Brief description of the institution:

The University of Alicante (UA) was created in 1979. Today it educates and trains more than 36.000 students -2.500 of them are international students - and offers more than 80 undergraduate and 96 postgraduate programmes: consequently it is proportionally one of the fastest growing universities in Spain. The UA houses 227 research groups in Social and Legal Sciences, Experimental Sciences, Technological Sciences, Human Sciences, Education and Health Sciences and 15 Research Institutes (Water & Environment, Materials, Electrochemistry, Biodiversity, Chemical Processes and Organic Synthesis, and Modern Languages, among others). Thus, the UA employs over 2.400 researchers/ professors and has a complex management /administration structure of 1.300 people, which involves an annual budget of 175 million Euros.

UA is a young and dynamic university with vast experience in implementing EU funded projects in different programmes and areas, with presence in more than 60 countries worldwide. In the last 10 years, UA has successfully acted as coordinator of many Tempus, Alfa, Edulink projects involving Third Countries and Lifelong Learning and Framework Programme (FP, DG Research) Projects. Moreover, the participation in FP has been increasing in the last years, taking part in 25 5th FP, 26 6th FP, 45 7th FP projects (13 of them coordinated by UA), and 6 in H2020.

It is worth underline the big effort performed by UA in order to meet the commitment with the principles set out in the European Charter for Researchers and in the Code of Conduct for the Recruitment of Researcher

Brief description of the Centre/Research Group:

Professor Inmaculada Pascual, from the Holography and Optical Processing group in the University Institute of Physics Applied to the Sciences and the Technologies (IUFACyT), welcomes postdoctoral candidates interested in applying for a Marie Skłodowska-Curie Individual Fellowships (MSCA-IF) at this University.

Since 2009 the IUFACyT performs high quality research in Physics and in its applications to Sciences and Technologies. This idea of application in other fields of knowledge is based in the fact that Physics has provided and still provides a solid conceptual base and a theoretical structure on which other experimental sciences and a lot of technologies have been developed. IUFACyT gathers more than 50 researchers pertaining to diverse areas of knowledge of the University of Alicante ("Applied Physics", "Optics", "Earth Physics", "Systems Engineering and Automatic", "Signal Theory and Communications" and "Didactic of the Experimental Sciences"). These researchers belong to three centres of the University of Alicante: Polytechnical School, Faculty of Sciences and Faculty of Education, and are integrated in five different departments.

<https://iufacyt.ua.es/en/groups-investigacion/holography-and-optical-processing.html>

Project description:

The Holography and Optical Processing group has been working in holographic related research for more than 25 years, initially in holographic recording materials and in applications in holographic optical elements. More recent work lines are optical storage and optical information processing, holographic memories, study and characterization of liquid crystal displays and spatial light modulators, wavefront shaping and diffractive optics, theoretical models of electromagnetic radiation propagation and light-matter interaction in optical materials, Physics education, non-linear Physics. Between these contributions, we can mention research in light-sensitive polymers and their application as holographic register materials. Novel compositions and techniques including nanocomposites and liquid crystals combined with photopolymers are one of the focus. The research group has always ongoing financed projects from the Spanish Science Ministry and the regional government. We encourage projects related with optical organic materials and their applications, with programmable wavefront engineering and application of liquid crystal displays and spatial light modulators, diffractive optics applications, and holographic related technologies with application to see-through devices for VR/AR imaging, solar energy harvesting and sensors.

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Applications

- CV
- Letter of motivation
- An initial draft of the research proposal you plan to submit with MSCA (2-3 pages max.)

Candidates are invited to submit their Expression of Interest to Dr. Inmaculada Pascual (pascual@ua.es) by 15 July 2019