Ciencia
y Tecnología

24

17 a 21 de **junio**

UIMP

Universidad
Internacional
Menéndez Pelayo

ESCUELA

VII International School on Light Sciences and Technologies

Core: Light in Communications, Sensing and Lighting

Cursos de verano **Santander**

Horario y dirección de contacto

Mañana de L a V: 9.00 a 14.00 h

Santander
Campus de Las Llamas
Avda. de los Castros, 42
39005 Santander
Tlf.: 942 29 87 00

Madrid
C/ de Isaac Peral, 23
28040 Madrid
Tlf.: 91 592 06 31 / 33

A partir del 17 de junio

Mañana de L a V: 9.00 a 14.00 h
Tarde de L a J: 15.30 a 18.00 h

Santander
Palacio de la Magdalena
39005 Santander
Tlf.: 942 29 88 00

alumnos@uimp.es
www.uimp.es

Patrocinio

GOBIERNO de CANTABRIA

Colaboración

ERZIA · ARAGÓN PHOTONICS · OPTICA · SAC semicrol · COPSESA · ACORDE · OZ Optics · prysmian · SPIE. · CELESTIA · ZTI

Este curso es susceptible de ser reconocido como formación permanente del profesorado para el personal docente de los centros que imparten las enseñanzas reguladas en la Ley Orgánica 2/2006, de Educación, en base al artículo 21 y 29 de la Orden EDU/2886/2011, de 20 de octubre, por la que se regula la convocatoria, reconocimiento, certificación y registro de las actividades de formación permanente del profesorado.

Código 650G - ETCS: 2,5

Dirección

José Miguel López-Higuera
Professor in Electronics and Photonics and Head of the Photonic Engineering Group
University of Cantabria, Spain

Secretaría

María Ángeles Quintela Incera
Associate Professor
Photonics Engineering Group
University of Cantabria

Photonics is the science and technique of generating, controlling, propagating, storing and detecting light waves and photons, which are particles of light. Photonics is the field of Light Sciences and Technologies. Light plays a vital role in our daily lives and is being an imperative cross-cutting discipline of science in the 21st century. It has revolutionized medicine, made possible international communication via the internet, enabled sustainable development and provided solutions to global challenges in education, energy, environment and agriculture. It continues to be a key discipline to link cultural, economic and political aspects of the global society. Today, it is widely accepted that the present century will depend as much on Photonics as the 20th century depended on electronics.
The United Nations Organization (UN) has recognized the **key or essential** role of Light Sciences and Technologies to raise global awareness and proclaimed 2015 as the International Year of Light and Light-based Technologies (IYL 2015). Aware of the key role of Photonics in the economies and in the societies of the XXI century, the UIMP has decided to create the **"International School on light Sciences and Technologies (ISLIST)"**.
This International school is envisioned to be a worldwide top International forum (third week of every June) on Light Sciences and Technologies in the framework of a "special top university" that is recognized as the "university of universities" and in a privileged environment "the Royal Magdalena Palace" in Santander, Cantabria, Spain. Each edition of this international school will have an intensification or main core in a specific application area and additional current hot topics. **Light in communications, sensing and lighting** is the core of this 2024 edition: VII-ISLIST.
It must be noticed that by changing the consecutive core, students and professional have the opportunity to receive and share knowledge, technique, visions, experience etc. several times from about 50 different top international lecturers, along their career. It is envisioned as a key value of ISLIST and it was, certainly, corroborated objectively from answers, of the previous edition attendee's surveys as you can observe on the final reports.

Goals

International School on light Sciences and Technologies (ISLiST), has been conceived as a great opportunity **to**: i) **review, actualize** and **improve** the knowledge of **scientists, professionals and technicians**; ii) **contribute** to the education and to **enhance** the motivation of students (specially of **PhD students**); iii) **offer** an ideal frame for **networking** and also to contribute to the education of the **citizens; iv) ensure** that **policymakers, entrepreneurs**, and other "key actors" will be aware of the problem-solving potential of Photonics.

Apertura matrícula
Desde el día 8 de abril de 2024
(plazas limitadas)

Solicitud online

Lunes 17

10.15 h Opening Ceremony

Opening Lecture

11.00 h The Next Generation of Optical Communications: will be massively Parallel

Peter Winzer
Founder and Chief Technical Officer, CTO, Nubis Communications

12.10 h Next Generation of Photonics Integrated Circuits as key for communications and sensing

Michael Leeby
Chief Executive Officer,,CEO, Lightwave Logic, San Francisco, USA

Light in Communications

15.30 h Programable Integrated Photonic Circuits: what?, why? and when?

José Capmany
Director, iTEAM Institute, Technical University of Valencia, Valencia, Spain

16.40 h Microwave Photonics

José Capmany

Martes 18

Light in Communications

09.30 h Hollow Core Optical fibres: a revolution-nary technology for optical commu-nications, quantum applications and laser delivery

Francesco Poletti
Head of Group, Optoelectronic Research Centre, University of Southampton, UK

11.00 h Optical communications in space: Currents and trends

Elisabetta Rugi Grond
CEO, Thales Alenia Space, Switzerland, Switzerland Director, LIFI Research Development Centre, University of Strachclyde, Scotland, UK

12.10 h Optical Wireless Communication - a green wireless communication technology with high potential and great prospects

Ton Koonen
Emeritus professor, University of Technology, Eindhoven, Netherlands

Light in Communications

15.30 h Round Table I

Light in Communications: Challenges to face on Optical Communications

Michael Leeby
Ton Koonen
Elisabetta Rugi Grond
Peter Winzer

Moderación
José Miguel López-Higuera

Miércoles 19

Light in Sensing

09.30 h Sensing Using Light: doctrinal conception, currents and trends

José Miguel López-Higuera

11.00 h Optical Fibre Sensors for Radiotherapy Dosimetry: Challenges and Opportunities

Sinead O'Keeffe
University of Limerick, Ireland, Optical Fibre Sensors Research Institute, Ireland

12.10 h Cold atom quantum sensors for field applications

Vincent Menoret
Head of Quantum Sensors R&D , Exail Quantum Systems, Institut d'Optique d'Aquitaine, Talence, France

Light in Sensing: Laboratory On Site

15.30 h Advanced photonic and optofluidic devices fabricated in glass using femtosecond lasers for Lab-On Chip sensors

Roberto Osellame
Director, Institute of Photonics and Nanotechnologie-CNR, Milano, Italy

16.40 h Lab On Fiber: a key enabling technology for precision medicine

Andrea Cusano
Head, Optoelectronic and Photonic Group Università degli Studi del Sannio, Benevento (UniSannio), Italy

Jueves 20

Light in Sensing

09.30 h Optical sensing technologies for key environmental measurands in the I4.0 era

Kennet Grattan
OBE, FREng, Royal Academy of Engineering, Director of Instrumentation & Sensors Research Centre, City University of London, UK

11.00 h Engineered surfaces and devices for the display and imaging industries

Valerio Pruneri
Head, Optoelectronic Group, Instituto de Ciencias Fotónicas, ICFO, Barcelona, Spain

12.10 h Distributed Acoustic Senors (DAS) for Seafloor Seismic Monitoring: from earthquakes to tsunamis

Sonia Martín López
Co-Head of Photonics Engineering Group, of Alcala de Henares, Spain

Light in Sensing and Lighting

15.30 h Round Table II

Challenges to face in optical sensing technologies and lighting

Kennet Grattan
Roberto Osellame
Mariana Figueiro
Director, Light and Research Center, (LHRC), Icahn School of Medicine, Mount Sinai, NY, USA
Mark Rea
Former Director, Lighting Research Cener Rensselaer Polytechninic Institute. Now at Icahn School of Medicine at Mount Sinai, New York, USA

Moderación
José Miguel López-Higuera

Viernes 21

Light in Lighting

09.30 h Light's effects on human health, well-being, and behaviours

Mark Rea

11.00 h Principles of Indoor and Outdoor Lighting for Healthy Environments

Mariana Figueiro

12.15 h Closing Remarks