Artificial Intelligence Photonics 2023

11.Sep - 14.Sep 2023

Cod. Z21-23

Mod.:
Face-to-face

Edition
2023

Activity type
Workshop

Date
11.Sep - 14.Sep 2023

Location
Carlos Santamaría Zentroa

Languages
English

Academic Validity
40 hours

Web
https://aiphotonics.dipc.org/

Organising Committee

Description

Photonics is gaining traction in the artificial intelligence area in close competition with mature technologies such as microelectronics and developing platforms such as memristive systems. On the one hand photons are viewed more and more as optimum information processing and transporting carriers for their versatility, speed and energy economy that make them apt for hardware implementations. On the other hand, AI in general and machine learning in particular have revealed as phenomenal tools capable to solve complex problems that can boost the development of photonics in aspects concerning, for instance, new materials, inverse design, and even law discovery.

The integration of both disciplines is a two-way street where the benefits are incalculable. Bringing together the international communities involved in artificial intelligence and photonics can only be in their mutual benefit and that of science in general.

ORGANIZING COMMITTEE:

Cefe López (DIPC, ICMM-CSIC)

Aitzol García-Etxarri (DIPC, Ikerbasque)

Javi Aizpurua (DIPC, CFM-CSIC)

David Gacía (ICMM-CSIC)

Objectives

This workshop aims at bringing together the communities of artificial intelligence and photonics to foster interaction and joint development and establishing a cooperative community.

Course specific contributors

Directed by

Cefe López Fernández

ICMM-CSIC, Prof. Inv.

Prof. López has a background in semiconductor physics and over thirty years' experience in materials science. His specialization in photonic materials covers preparation and characterization of nano- and micro-structured materials especially those based on self-assembly. Colloidal materials have been a dear subject of study with emphasis on the order/disorder balance and led to exceptional contributions in photonic crystals and photonic glasses. Introduction of non-linear properties such as optical gain greatly adds to these materials' potential giving rise to systems such as random lasers. Investigating random lasers, he found that certain ingenious realizations facilitate their coupling and their organization in networks.

Teachers

Thomas Bocklitz

Daniel Brunner

FEMTO-ST, CNRS

Miguel Cornelles Soriano

University of the Balearic Islands

Sylvain GIGAN

Sorbonne Université

Antonio Hurtado Villavieja

University of Strathclyde

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Serge Massar

Université libre de Bruxelles, Professor

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Dimitrios Psaltis

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Damien Rontani

Giovanni Volpe

University of Gothenburg

Roberta Zambrini

IFISC (UIB-CSIC)

Registration fees

REGISTRATION FEES	UNTIL 05-09-2023
Registration Fee Waiver	0 EUR
Student Registration Fee	250,00 EUR
Regular Registration Fee	350,00 EUR

Place

Carlos Santamaría Zentroa

Plaza Elhuyar, 2. 20018- Donostia / San Sebastián

Gipuzkoa