

International Commission for Optics-ICO

Activities' Report - Year 2021

Delegate/Paolo De Natale

1. Introduction

ICO, founded in 1947, is now more than 70 years old, and it is composed of 53 territorial committee members and 7 international society members. It is an affiliated Commission of the International Union for Pure and Applied Physics, IUPAP, and an affiliated member of the International Science Council, ISC.

2. Activities carried on by the Italian Delegate within ICO during 2021 relevant for Italy and for CNR and with an impact on the Italian scientific community

The main activity carried on in 2021, strategic for Italy and CNR, was the election of the Executive Members of ICO Committees. This was done, for the first time, due to COVID restrictions, with a fully virtual procedure, without any possibility to discuss in person with candidates and representatives of other Nations. This unusual procedure implied a long sequence of calls and telephone calls to better know and efficiently select candidates, in the interest of the Territory represented. In addition to the President, Secretary, Treasurer and Associate Secretary, eight VicePresidents were elected. On 20th October the new bureau met online and make some important decisions as nominating the new chairpersons for the ICO committees., who are: Prof. Leszek Sirko for the ICO award committee, Eric Rosas for the Regional Development in Optics committee, Dr. Gilles Pauliat for the ICO-IUPAP Young Scientist Prize in Optics committee and Prof. Nathalie Westbrook for the Gallieno Denardo Award committee. In addition, the winners of the 2021 ICO awards were announced. The ICO Prize 2021 has been given to Prof. Bo Zhen (University of Pennsylvania, US), “for his pioneering research on optical bound states in the continuum, exceptional points, and other topological states in photonics”. The ICO-IUPAP Young Scientist Prize in Optics has been awarded to Giulia Fulvia Mancini, University of Pavia, Italy, “for contributions to imaging and scattering of nanostructured materials using highharmonic soft X-ray sources and research on extreme ultraviolet imaging” and the Galileo Galilei Medal Award 2021 has been given Prof. Dr. Victor Ivanovich Balykin from the Dept. of Laser Spectroscopy, Institute of Spectroscopy, Troitsk, Russia for “his outstanding contributions to the laser cooling, trapping, control and manipulation of the mechanical motion of atoms”.

This is the full list of members of the ICO Bureau:

ELECTED VICE-PRESIDENTS

J. Czarske, P. Ferraro, Q. Gong, N. Kundikova, K. Minoshima, S. Otero, L. Sirko. N. Westbrook

IUPAP DELEGATE

C. Cisneros

ICO EXECOM

President: J. C. Howell

Secretary: H. Michinel,

Past-president: R. Ramponi Treasurer: J. Niemela

APPOINTED VICE-PRESIDENTS

G. von Bally (OWLS)

K. D. Choquette (IEEE)

Y. Ismail (OPTICA)

C. Londoño (SPIE)

G. Pauliat (EOS)

E. Rosas (RIAO)

A. Wagué (LAM)

3. Evaluation of the participation in terms of benefits and membership cost

ICO is a truly International Organization, especially important in witnessing the value and importance of Science and Optics in Developing Countries, in view of an ever-growing participation of these Countries to the International scientific community. In this perspective, the role of Italy is important to spread knowledge, examples, collaborations around the world. In short, scientific diplomacy can be strategic in strengthening relationships with those that are, at present, Developing Countries.

4. Evaluation of Italians' attendance and how to improve interest and involvement

This was still a transition year, due to COVID restrictions, virtualizing most of the events and meetings. However, an important Conference was held in Italy. Indeed, EOSAM Conference was held on Sept. 13- 17 in Rome, Italy. EOSAM is the European yearly event that brings together the photonics community. EOS organized it in close co-operation with the Società di Ottica e Fotonica, SIOF, the Italian optical society Branch member of EOS, and Università di Roma - La Sapienza. For the first time, EOSAM was held in a hybrid format, successfully mixing on-line attendees with on-site participants. With over 350 on-site attendees and 180 on-line attendees, from 33 countries worldwide, this hybrid format was a full success and worth to be repeated in the future.

5. Italian experts with important roles within the Union or within related Commissions and Programs (if known)

See list of ICO Bureau Members at point 2.

6. Conclusions

In 2021, ICO has formally requested to become independent from IUPAP, from which it has till now depended. Having a direct relationship with ISC, the International Science Commission, can further strengthen, for the future, the role of Optics and Photonics at worldwide level

Signature
Paolo De Natale

Place and date

Firenze, May 19th, 2022