

Community

News

Preview: ICO World Congress of optics and photonics 2022

25th Congress of the International Commission for Optics (ICO) and the 16th Congress of the International Society on Optics Within the Life Sciences (OWLS) in Dresden, Germany

<https://doi.org/10.1515/aot-2021-0054>

Postponed from 2020, the joint General World Congress of the International Commission for Optics (ICO) and International Society on Optics Within Life Sciences (OWLS) will be celebrated from 5th to 9th September 2022 in Dresden, Germany. The Technical University Dresden is proud to host the World Congress of Optics and Photonics ICO-25-OWLS-16-Dresden-Germany-2022.

The International Commission for Optics, ICO, was established in 1947. It acts as Affiliated Commission 1 (AC1) of the International Union of Pure and Applied Physics IUPAP. It is also an Affiliated Member of the International Science Council (ISC). The mission of ICO is to contribute to the progress and diffusion of knowledge in the fields of optics and photonics on an international basis.

To fulfill its mission, ICO maintains contacts with local communities through its territorial committees, with international society members, and with optical scientists in all countries, welcoming all new contacts. Together with the other societies involved, it contributes to the coordination of international activities in optics and photonics such as in particular scientific meetings. The governing body of ICO is its General Assembly, usually held every three years during an ICO Congress that includes an international conference on optics and photonics.

In 2022, there will be a celebration of 60+ years innovation with the Laser, the return of world congress of ICO to Germany after 30+ years, and 30+ years of International Society on Optics Within Life Sciences (OWLS) – Light in

Life Sciences, Medical Optics and Biophotonics with its 16th International Conference on Optics Within Life Sciences (OWLS-16).

“Progress of Society with Light” is the main theme of ICO-25/OWLS-16

More than 40 Nobel prizes in the field of optics and photonics is sufficient evidence of the scientific contribution of this domain. Due to its industrial and scientific background Dresden, as one of the scientific excellence-hubs in Germany, is virtually predestined to address two key-fields of Progress of society with light:

- Optics and photonics for semiconductor production
- Optics and photonics in medicine and life sciences

Light has the potential to recognize the origins of diseases, to prevent them, or to cure them early and gently. This is one of the central topics of OWLS, which was founded at the ICO-15 Congress in Garmisch-Partenkirchen in 1990. Therefore, a special commemorative event of the 30 years anniversary of the foundation of OWLS in Germany will be organized.

The hosting city Dresden is known as Germany’s Jewel Box, because of its Baroque center. Let yourself be inspired by the ICO-25/OWLS-16 in Dresden for new ideas, their translation into progress for society and to foster developing countries. Please explore www.ico25.org for information on ICO-25/OWLS-16-Dresden-Germany-2022.



Dresden is famous for its baroque buildings. One hosts The Mathematical-Physical Salon, one of the world's oldest collections of historical instruments. © Copyright: Sophie Pfeffer.

Community

EOS news

Review: EOSAM 2021 in Rome

The European Optical Society Annual Meeting, EOSAM, is a major international scientific conference covering all aspects of optics and photonics. It is attended by top researchers, key leaders, students, and industry experts. Each year EOSAM moves into different optics hubs better serving the local communities and at each time creating a unique EOSAM experience for the attendees. EOSAM was previously organized in France, Scotland, Germany, the Netherlands, and planned for Portugal (but was held online due to the pandemic).

This year, EOSAM was held on September 13–17 in Rome, Italy. EOS organized it in close co-operation with the Società Italiana di Ottica e Fotonica, SIOF, the Italian optical society Branch member of EOS, and the Università di Roma La Sapienza. For the first time, EOSAM was held in a hybrid format, successfully mixing online attendees with onsite participants. With over 350 on-site attendees and 180 online attendees, from 33 countries worldwide, this hybrid format was a full success and worth to be repeated in the future!

Onsite participants benefited from an exceptional venue. The meeting was held in the premises of Università di Roma La Sapienza, in the center of Rome. The conference rooms surrounded the old cloister open onto an inner courtyard. The cloister arcades welcomed an industrial exhibit of 14 booths, the poster sessions, the welcome reception, the numerous coffee breaks, and the everyday lunches. All these activities reinforced the exchange between the attendants. EOS indeed pays a special attention to the interaction between participants by promoting networking opportunities. One of the nicest was the memorable gala dinner served in the century-old rooms of the Centro Palazzo Rospigliosi conference center.

The quality of the conference was served by the quality of the scientific presentations, 445 in total. These presentations were shared among topical meetings, TOM, and sessions covering most fields of optics and photonics:

- TOM 1 – Silicon Photonics and Guided-Wave Optics
- TOM 2 – Computational, Adaptive and Freeform Optics
- TOM 3 – Optical System Design, Tolerancing and Manufacturing
- TOM 4 – Bio-Medical Optics

- TOM 5 – Resonant Nanophotonics
- TOM 6 – Optical Materials: crystals, thin films, organic molecules and polymers, syntheses, characterization and devices
- TOM 7 – Thermal radiation and energy management
- TOM 8 – Nonlinear and Quantum Optics
- TOM 9 – Optics at Nanoscale (ONS)
- TOM 10 – Optical Microsystems (OMS)
- TOM 11 – Waves in Complex Photonic Media
- TOM 12 – Optofluidics
- TOM 13 – Ultrafast Optical Technologies and Applications
- TOM 14 – Advances and Applications of Optics and Photonics
- EU Project Session
- Early Stage Researcher Session organized by SIOF
- Grand Challenges of Photonics Session

ICO and Student Awards 2021

Recognitions of scientific works at all stages of scientific career are always stirring moments. EOSAM is no exception: the opening ceremony started with the ICO award ceremony. The Prize winner, M. Guizar-Sicairos, gave an exciting plenary talk entitled “Harnessing coherence and computational imaging for nanoscale structure characterization using X-rays”.

Several student prizes, corresponding to different Topical Meetings, we also awarded during the closing ceremony.

- **The best student poster presentation** (sponsored by Zeiss): *Tunable and polarization-insensitive metamaterial absorber in the visible spectrum* by Benjamin Asamoah (University of Eastern Finland)
- **The best student presentation** (sponsored by EOS): *100-W, 100-MW, 50-fs thin-disk laser oscillator based on Yb:YAG* by Jakub Drs (University of Neuchâtel)
- **The best student presentation** (sponsored by Evatec): *Spontaneous photon pair generation in nonlinear metasurfaces* by Tomás Santiago-Cruz (Max Planck Institute for the Science of Light)
- **The best student presentation** (sponsored by Buhler): *In-vivo fabrication of bioelectronic interface via polymerization of conjugated oligomers* by Giuseppina Tommasini (Istituto di Scienze Applicate e Sistemi Intelligenti & Consiglio Nazionale delle Ricerche)
- **The best student presentation** (sponsored by RhySearch): *Ultra-broadband stochastic resonance of light*

enabled by memory effects in the nonlinear response by Kevin Peters (AMOLF)

- **The best student presentation** (sponsored by Nikon): *Tuning photothermal dynamics in gold nanoparticle-loaded agarose gel for plasmon-enhanced drug release* by Andrea Schirato (Politecnico di Milano & Italian Institute of Technology)
- **The best student presentation** (sponsored by ICO): *Sub-light-cycle control of relativistic plasma-mirrors* by Marie Ouillé (Laboratoire d'Optique Appliquée)

EOSAM 2021 was a memorable event made possible by the involvement of a whole community. EOS would like to give special thanks to the local EOSAM chairs, Concita Sibilica

and Alessandro Belardini, the Topical meeting chairs, and all the attendees who contributed to such a friendly and warm atmosphere. EOS also deeply thanks the EOSAM 2021 sponsors who greatly contributed to the quality of the meeting: Optoprim, Fastlite, NKT Photonics, Toptica Photonics, Optoman, Fluence Technology, Activefiber Systems, American Elements, A.P.E, GLOPhotonics, Bühler, ICO, Nikon, RhySearch, SIOF, Trumpf, UniNe, Zurich Instrument, FemtoEasy, Thorlabs, WZWOpticag, Layertec, Evatec, Zeiss.

EOSAM is the European yearly event that brings together the photonics community. Don't miss the next EOSAM in September 2022 to find out about the latest advances in optics and photonics in a convivial atmosphere.



The old cloister offered a wonderful arena for networking, the industrial exhibit and great food (Copyright EOS).



EOSAM 2021 Group photo, just before the Gala dinner (Copyright EOS).

Community

Conference calendar

The conference business is returning! Still, regulations in response to the worldwide pandemic may lead to delays, cancellations or hybridization of events.

The pandemic may offer new opportunities as well. Please visit the website of a conference you missed. Some offer on-demand viewing of the meeting. And most often, it is for free!

2022 January

Photonics West

San Francisco, CA, USA
22–27 January 2022
<https://spie.org/pw>

SPIE AR|VR|MR

San Francisco, CA, USA
23–25 January 2022
<https://spie.org/x137983.xml>

SPIE Advanced Lithography + Patterning

San Jose, CA, USA
27 February–3 March 2022
<https://spie.org/alp>

March

Optical Fiber communication

San Diego, CA, USA
6–10 March 2022
www.ofcconference.org

High-Brightness Sources and Light-Driven Interactions Congress

Compact (EUV & X-ray) Light Sources
High-Intensity Lasers and High-Field Phenomena
Mid-Infrared Coherent Sources
Budapest, Hungary
23–25 Mar 2022
www.osa.org/en-us/meetings/osa_meetings/high-brightness_sources_and_light-driven_interacti/

April

SPIE Photonics Europe

Strasbourg, France

3–7 April 2022
<https://spie.org/PE>

Biophotonics Congress: Biomedical Optics

Fort Lauderdale, FL, USA
24–27 Apr 2022
www.osa.org/en-us/meetings/osa_meetings/biophotonics_congress_biomedical_optics/

Laser World of Photonics

Munich, Germany
26–29 April 2022
www.laser.de

May

AKL'22

Aachen, Germany
4–6 May 2022
www.lasercongress.org

CLEO

San Jose, CA, USA
15–20 May 2022
www.cleoconference.org

June

Photonics for Quantum 2022

Rochester, NY, USA
6–9 June 2022
<https://spie.org/conferences-and-exhibitions/photronics-for-quantum>

DGaO Tagung

Gent, Belgium
7–10 June 2022
www.dgao.de

LASYS

Stuttgart, Germany
21–23 June 2022
www.messe-stuttgart.de/lasys/

July

SPIE Astronomical Telescopes+ Instrumentation

Montréal, Québec, Canada
17–22 July 2022

<https://spie.org/conferences-and-exhibitions/astronomical-telescopes-and-instrumentation>

International Conference on Ultrafast Phenomena
18–22 Jul 2022
Montreal, Quebec, Canada
www.osa.org/en-us/meetings/topical_meetings/ultrafast_phenomena/

September

LANE 2022 Conference on Photonic Technologies
Fürth, Germany
4–8 September 2022
<https://www.lane-conference.org>

ICO 25 and OWLS 16
Dresden-Germany
5–9 September 2022
www.ico25.org