

Commission Internationale d'Optique · International Commission for Optics

CORRELATION OPTICS 2025 IN UKRAINE

The conference program has included 24 invited talks, 52 regular orals and 132 posters.



Prof. Claudia Yu. Zenkova has been co-chair of the meeting.

Despite obvious difficulties, the conference, co-sponsored by the ICO, has been held last September 8-12, 2025 in Chernivtsi, Ukraine.

The reports were presented by about 120 researchers from Australia, Brazil, Canada, Czech Republic, Denmark, Finland, France, Germany, India, Israel, Italy, Japan, Kazakhstan, Poland, Republic of China, Republic of Korea, Romania, Slovenia, Slovakia, Spain, Switzerland, United Kingdom, United States of America and Ukraine. The main topics were, among others:

- Singular Optics
- Nanooptics
- o Informative content optical fields
- o Correlation devices & diganostics
- o Interferometry and microscopy
- New applications in biomedicine
- o Methods and computer algorithms
- o Educational processes
- o Green engineering

Keynote online speakers of the conference were: Prof. Sir Michael Berry (UK), Prof. Mark Dennis (UK), Prof. Jung-Young Son (Korea), Prof S. Hanson (Denmark), Prof K. Bliokh (Japan), Prof Xinzheng Zhang (China), Prof A. Dieterlen (France), Prof. M. Alonso (USA), Prof T. Omatsu (Japan), Prof. A. Shevchenko (Finland), Prof. E. Galvez (USA), Prof. G. Gbur (USA), Prof Wei Wang (UK), Prof. L.Marucci (Italy).

More than 55 graduate, post-graduate and PhD students took part in the meeting in person, and the special session for young scientists out of the official conference program was carried out with the participation in person of Prof. Alexander Demchenko (Taiwan/Ukraine) and Dr. Igor Kashtanov from Slovak Republic and Vasyl Ryukhtin from Czech Republic as online speakers.

A group of awarded students attending the conference in person.



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Panel discussions with students attending the meeting at the Yuriy Fedkovych Chernivtsi National University .

The best student poster presentations were awarded to the following Ukranian attendants from the Yuriy Fedkovych Chernivtsi National University, Ukraine (YFCNU):

Mykyta Kitsan for the contribution entitled "FSO communica-tion system with singular multiplexing of channels" and Artur Koniakhin for "Polarized light scattering modelling by eye cornea cells".

The second award corresponded to Alina Korop from YFCNU for "An Extension of MNPBEM toolbox for the Simulation of Decahedral Silver Nanoparticles' Electromagnetic Properties" and to B. Bardovskyi, M. Volodko & Ye. Avdiakov (ex aequo) from National Technical University (NTU) of Ukraine "Igor Sikorsky Kyiv Polytechnic

Institute", for "Investigation of adhesive properties polymer and paper printed substrates treated with corona discharge".

The third place diploma was awarded to: Vladyslav Melnyk from YFCNU for "A Simple GRU Approach to Predicting Chaos in 1-D, 2-D and 3-D Systems", Vladyslav Korotenko from NTU for "Automated quality control for intaglio printing through a matrix model of color intensity distribution" and Yicheng Tuo from Xi'an Technological University, China for "Influence of rotational errors on the optical transfer matrix in polarization imaging systems".

Complete information about the conference can be found on the official website:

https://icco.chnu.edu.ua/

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European Optics Congress Celebrated in Delft

The ICO/IUPAP Early Career Scientist Award in Optics was delivered during the meeting



The ICO award was delivered to Prof. Bhavin Shastri by the ICO Secretary General, Prof. Humberto Michinel.

The European Optical Society Annual Meeting, EOSAM, is a major international scientific conference and exhibition covering all aspects of optics and photonics.

The 13th EOSAM was organized in Delft, The Netherlands, 24-28 August 2025 by The European Optical Society, EOS, in close collaboration with The Delft University of Technology, TU Delft. EOS is an international society member of the ICO.

EOSAM covers all aspects of optics and photonics within several topical meetings and sessions. It is attended annually by around 500 top researchers, key leaders, students, and industry experts from over 30 different countries all over the world.

EOSAM is a great platform for presenting the most recent research results, connecting and catching up, as well as bridging the gap between research, education, and industry.

Each year EOSAM moves into different optics and photonics hubs better serving the local communities and at each time creating a unique EOSAM experience for the attendees. EOSAM has been organized since 2006 in France, UK, Germany, the Netherlands, Italy, and Portugal.

During the award ceremony of the conference, the ICO/IUPAP Early Career Scientist Award in Optics Medal 2020 was awarded to Prof. Bhavin Shastri, Cana-da "For his pioneering contributions to Neuromorphic Photonics". The Medal and diploma were delivered by the ICO Secretary General, Prof. Humberto Michinel.

The Next year, EOSAM 2026 will take place in Tampere, Finland, 24-28 August 2026, organized by The European Optical Society, EOS, in close collaboration with Photonics Finland (EOS National Society Member), Tampere University, and PREIN Flagship.

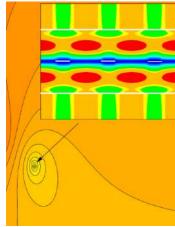
Group photo of the attendants to EOSAM 2025 celebrated in Delft, The Netherlands.



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Computational Electromagnetics Issue

Analytically grounded full-wave methods for advances in computational electromagnetics



Graphene strip grating in a gain material slab laser by Tatiana Zinenko, Jiri Ctyroky and Alexander Nosich.

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The Royal Society published last August on Philosophical Transactions of the Royal Society A, a theme issue compiled and edited by Mario Lucido, Kazuya Kobayashi, Alexander Nosich, Carlos Pérez-Arancibia & Ana Vukovic. The publication is entitled "Analytically grounded full-wave methods for advances in computational electromagnetics" and is a collection of original research and review papers focused on developing a class of analytically grounded full-wave methods and their applications in computational electromagnetics.

These methods are notable for their guaranteed convergence, meaning that the approximate solution obtained by discretizing and truncating the equation governing the problem at hand converges to the exact solution with larger discretization orders. Hence, they do not require post-validation.

Highly accurate solutions are reconstructed with a low computational cost, allowing a precise and exhaustive parametric analysis of various critical structures and important physical phenomena.

The obtained solutions deliver trusted physical results without false effects and can serve as a reference for validating general-purpose commercial software.

Amongst other topics, important analytical tools are presented such as Wiener-Hopf methods, the Nyström scheme and related techniques, Wiener-Hopf analysis of radar cross sections, wave scattering from graphene-covered dielectrics, asymptotic models of electromagnetic wave scattering, scalar wave diffraction by cavities, PML-BIE methods, Helmholtz-Galerkin techniques in scattering problems, Dirichlet-Neumann operators for nonlinear media, analytical regularization methods and full-wave analysis in multiple scatteintegral-equation problems. methods and efficient integral equation

This issue is available to buy in print. The publication and full information can be found online on the website of The Royal Society Publishing:

bit.ly/TransA2303

Forthcoming events with ICO participation

Below is a list of forthcoming events with ICO participation. For further information, visit their official websites listed below.

17-21 November 2025 RIAO-OPTILAS 2025.

Santa Cruz de la Sierra, Bolivia Contact: Omar Ormaechea oormachea@upb.edu https://riaof.org/riao-optilas-2025/

24-28 August 2026

XIV Annual Meeting of the EOS

Tampere, Finland
Contact: Elina Koistinen
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6-10 July 2026 OPTIQUE. Congrès de la SFO.

Dijon, France
Contact: Florence Haddouche
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