

COMMISSION INTERNATIONALE D'OPTIQUE · INTERNATIONAL COMMISSION FOR OPTICS

## **EDUCATING IN OPTICS & PHOTONICS**

ETOP gathers a community that is shaping the future of optics and photonics education



Prof. Imrana Ashraf attended ETOP 2025 and presented her work on innovative approaches to optics outreach across Pakistan.

A group of attendants to the welcome reception at ETOP in Glasgow, Scotland, UK in May 2025. Source: ETOP's facebook site.

**ETOP**, the Education and Training in Prof. Ashraf was honored to present a Optics and Photonics conference, is talk on "Innovative Approaches to held every two years, and gathers a global Optics Outreach: Engaging Communicommunity dedicated to advancing the ties Across Pakistan," which was selected teaching of optics and photonics. under the Change Champion category. Participants attend ETOP with diverse In her talk, she showcased how her team educational backgrounds, disciplines, and professional roles, and the meeting effective tools to conduct interactive, yields a vibrant exchange of ideas, hands-on optics sessions—particularly for experiences, and innovations in education across all levels-from secondary school to graduate programs, as well as large groups of students and bring vocational and industry training.

According to Prof. Imarana Ashraf, resource-limited settings. representative of Pakistan's ICO territo- The conference featured a rich program ry: "this year's event was particularly of presentations, plenaries, panel enriching. It offered a fantastic platform discussions and workshops, all designed to reconnect with old friends and to to inform and inspire professors, forge new connections with inspiring students, teachers, and professional individuals. The conference atmosphere was vibrant, with thought-provoking share effective strategies and tools for conversations that sparked fresh ideas, strengthening my commitment to optics education."

is leveraging webcams as low-cost, girls in remote public-sector schools across Pakistan. These sessions engage abstract optics concepts to life, even in

trainers. Its mission is to explore and teaching optics and photonics in ways that prepare learners for the future of science, technology, and industry.



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# ding optics.



Example of a didactic experiment developed by the Active Learning Optics (ALO) Group led by Prof. Imrana Ashraf in Pakistan.

Practical demonstrations ETOP is not only a platform for learning are vital for understand- but also a community that shapes the future of optics and photonics education through collaboration and shared vision.

> The Active Learning Optics (ALO) group led by Imrana Ashraf in Pakistan, focuses on empowering underrepresented communities, particularly in Pakistan's northern areas and women's universities, through interactive lectures, hands-on experiments, and workshops that simplify complex ideas and spark curiosity about optics.

> They remain motivated by their passion for education and science, despite challenges such as teaching optics to large groups, often exceeding 300-400 students, which poses several problems, like a limited time for sessions, resource constraints, such as insufficient equipment or ensuring active participation and engagement, among other issues.

Addressing these challenges involves:

- Careful planning to maximize the use of available time.
- Implementing innovative strategies to simplify complex concepts.
- Utilizing cost-effective tools and technology to enhance demonstrations.
- Encouraging interactive activities to maintain student engagement.

Using the Iriun Webcam app, they connected mobile cameras to laptops, projecting live feeds onto large screens for real-time viewing. This innovative setup allowed them to deliver highquality demonstrations to large audiences, overcoming logistical challenges. Witnessing students' curiosity and excitement drives their commitment to spreading knowledge across Pakistan.

**Prof. Imrana Ashraf** is the official representative of the ICO Territory of Pakistan





Two volunteers present practical demonstration developed by the ALO group in Pakistan.

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### **Light Conference in Changchung, China**

The Light Conference was endorsed by the International Commission for Optics

The Light Conference took place from June 10 to 12, 2025, at the Northeast Asia International Conference Center in Changchun, China, as part of the Changchun broader International Optoelectronic Exposition. The event, gathered leading scientists, researchers, and professionals from around the world to explore cutting-edge advancements in photonics and optical science. The conference commenced on June 10 with the formal opening of the Changchun International Optoelectronic Exposition at 9:00 AM in Ruyi Hall. Participants then toured the extensive Optoelectronics Exhibition and attended the initial poster session along the Changbai Hall corridor, which highlighted the latest research contributions from various institutions.

The official Opening Ceremony of the Light Conference began at 13:30 in Changbai Hall, chaired by Prof. Luc Thévenaz. After the welcome remarks, Prof. Xi-Cheng Zhang (University of Rochester, USA), Co-Editor-in-Chief of Light: Science & Applications, delivered an inspiring address titled 'How Light Attracts Brilliance'.

A view of the Northeast Asia International Conference Center in Changchun, China.



Awards Ceremony followed, recognizing outstanding achievements including the Top Ten Social Impact Events in China's Optics (Light10) and editorial excellence across several roles. The Plenary Session I, chaired by Prof. Chunlei Guo, featured two prominent keynote speakers: Prof. Deren Li (Wuhan University) talked 'Spatio-temporal Intelligence for SDG'. Prof. Siddharth Ramachandran (Boston University) lectured on 'Long-lived Photons in Forbidden States: the influence of light's topology on its propagation characteristics'.

After a short coffee break and poster viewing, the session continued under the chairmanship of Prof. Pietro Ferraro and Prof. Giulio Cerullo (Politecnico di Milano) and Prof. Zefeng Wang (National University of Defense Technology) talked respectively on 2D Semiconductors for Ultrafast Photonics and hollow-core fiber gas lasers. The day concluded with a networking dinner.

The second day began with Plenary Session II, chaired by Prof. Fei Ding: with plenary talks by Prof. Sune Svanberg from Lund University (Environmental, Ecological, and Agricultural Applications of Laser Spectroscopy) and Prof. Min Gu form the University of Shanghai for Science and Technology (Optical Super-Big Data Storage: Greener and Smarter).

The final day, held in Huashan Hall, featured a plenary Session chaired by Prof. Xi-Cheng Zhang with- Prof. William Renninger from University of Rochester talking on Advances in Ultrashort Pulse Generation and Prof. Chaoyang Lu (University of Science and Technology of China) lecturing on Quantum Computing.

An Awards Ceremony honored the Best Paper and Best Poster, followed by a closing speech that officially marked the end of this successful international gathering, endorsed by the International Commission for Optics.

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### ISC studies participation in scientific organizations

The deadline to respond the survey is 5 August 2025

#### International Science Council



### **Contacts**

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The ISC (International Science Council), the IAP (Inter-Academy Partnership) and the SCGES (Standing Committee for Gender Equality in Science), have launched a global qualitative survey to understand how scientists experience participation in scientific organizations—such as academies, unions, and societies—across career stages, disciplines, and regions.

The survey explores pathways to participation, organizational cultures, perceived benefits and barriers, and the factors that shape access to leadership, visibility, and recognition. Developed with input and review from a high-level Expert Panel convened by the ISC, IAP, and SCGES, the survey reflects diverse expertise and ensures scientific integrity and relevance. By gathering diverse perspectives, the study will provide actionable insights to foster more inclusive, equitable, and representative scientific communities.

Participation is welcome from all individual scientists affiliated with scientific organizations, including academies, unions, societies, science councils, and young scientist organizations.

This project adheres to international ethical standards for research involving organizations. Before beginning the online survey, you will be asked to confirm your informed consent.

The survey does not collect any identifying information such as names or contact details. It does collect some personal data (e.g. gender, career stage, country) to support meaningful analysis. All responses will be anonymized and all data will be stored securely and treated with strict confidentiality.

The project is overseen by a dedicated Taskforce and an independent Expert Panel. Together, they ensure ethical integrity and robust data protection.

All responses must be submitted through the online survey link. Responses sent by email or in other formats will not be accepted.

All questions are optional and the estimated time to complete in full is 50 minutes

The survey is available online on the website:

https://www.surveymonkey.com/r/scientific\_organizations\_survey

### Forthcoming events with ICO participation

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

### 24-28 August 2025 XIII Annual Meeting of the EOS

Delft, The Netherlands Contact: Elina Koistinen elina@europeanoptics.org

Web: https://www.europeanoptics.org/

### **17-21 November 2025** RIAO-OPTILAS 2025.

Santa Cruz de la Sierra, Bolivia Contact: Omar Ormaechea oormachea@upb.edu

Web: https://riaof.org/riao-optilas-2025/

#### 6-10 July 2026

OPTIQUE. Congrès de la SFO.

Dijon, France

Contact: Florence Haddouche

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