

ICO: Optics & Photonics for a better World

Towards ICO-26

The International Commission for Optics
Commission Internationale d'Optique



SEPTEMBER 2024

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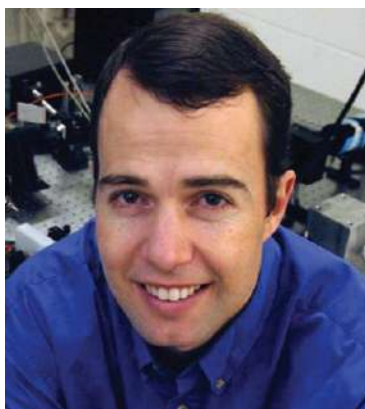
PART I:

ICO PERIODIC REPORT

TRIENNIAL REPORT OF THE ICO 2022-2024

John C. Howell, ICO President 2021-2024

Introduction



We live in an era of change, some good, some bad and some deeply alarming. During my tenure as president, we passed through an epidemic and now live in an endemic of Covid19. We have seen the sustained global average temperature of the Earth exceed 1.5C of pre-industrial temperatures for more than a year. We have seen two major wars start without conclusion. We have witnessed extreme heat and extreme flooding on massive scales. We also have witnessed the birth of chatgpt, a revolutionary, artificially intelligent, broad-based, large language model.

We have observed remarkable photos from the James Webb telescope showing us chemical structures of ancient stars, the environments of black holes, the study of exoplanet atmospheres and gained insights into star formation. The future depends on what we do now. Now, more than ever, we need to work together, forgive one another and strive for a bright future. We need to work on technologies that will aid in water scarcity, improved agriculture and turn back climate change to name a few. I believe the International Commission for Optics can play an important role in improving our world.

The International Commission for Optics (ICO) was born as a commission within International Union of Physics and Applied Physics (IUPAP) in 1947. It has grown to serve 56 territories and 7 optical societies. As of 2022, we became a category 1 member of the International Science Council and partner organization with IUPAP. With this change, we explored our mission and directives. At the General Assembly held in Dresden Germany new directives in information and education were considered.

Despite these changes, the ICO faces some severe constraints. It is a resource-limited organization that could strengthen its mission. While it is known as an independent and impartial body that can aid scientists in developing countries, it also lacks significant funding and manpower. The annual dues collected only amount to a few thousand dollars and the entire organization is run by volunteers with significant time restraints. This limits what can be achieved.

Owing to the limitations, we placed our priorities on helping African scientists, especially junior researchers, to improve their “capacity building”. In 2023, the

bureau meeting was collocated with Optics and Photonics Africa 2023 (OPA2023) held near Kruger National Park and organized by Yaseera Ismail, the associated vice president from Optica. The conference had over 100 participants from around the globe. The purpose was to bring scientists, especially, junior scientists to present their research as well as discuss ways to better the physics programs within Africa.



Participants at OPA2023 near Kruger National Park in South Africa

One of the highlight programs that came from OPA2023 was to develop a low-cost multi-spectral camera that can be used in a variety of important, world-changing ways. Such cameras Hyper/Multi spectral cameras are integral to improving agricultural yields, reducing water usage, pest and parasite monitoring, and observing plant health. Their uses extend to plastics recycling, pharmaceutical quality control and non-invasive health care to name a few. Students who have engaged in the project learn the physics of imaging, 3D modeling, 3D printing, electronics, Python programming, motion control, feedback, image processing and in some cases artificially intelligent image analysis. For developing countries whose aim is “capacity building”, these are critical skills. For about \$120 a student can build a camera and perform original research using items that can be purchased from local vendors or often over Amazon.

Students from South Africa, Ecuador and the US have collaborated to work on this project. The hope is that when there is a well-tested and running system, the system can be used more broadly by posting instructional videos, how-to tutorials, python codes and papers. We hope by the general assembly of ICO 26, we will have a working model that can be widely adopted. The world can be a place of hope for the future as we watch young people work together towards common meaningful goals.

John C. Howell

ICO President 2021-2024

INTERNATIONAL SCIENCE COUNCIL LIAISON



The ICO has participated in 2023 for the first time as a category one full member in the recent mid-term meeting of the esteemed International Science Council (ISC). The ISC, recognized as the paramount scientific organization worldwide, brings together scientific unions from every field, making this achievement a momentous occasion for the ICO and the entire optics and photonics community. Held Paris last May 2023, the mid-term meeting of the ISC served as a global gathering of eminent scientists, researchers, and representatives from various scientific unions.

This strategic alliance between ICO and the ISC holds tremendous significance. By becoming a Category one full member, ICO solidifies its position as a key player on the international scientific stage, ensuring that the voice and expertise of the optics and photonics community are amplified and integrated into the broader scientific discourse. The participation of ICO provided a platform for fruitful exchanges with scientific unions from diverse disciplines.

The engagement with the ISC enables ICO to actively participate in shaping the global scientific agenda, influencing policies that transcend the boundaries of optics and photonics. By collaborating with scientific unions from different domains, ICO can foster interdisciplinary collaborations, leveraging the power of optics and photonics to address complex global challenges.

This event paves the way for future collaborations, partnerships, and joint initiatives between ICO and other scientific unions within the ISC network. Such collaborations will foster cross-pollination of ideas, accelerate scientific progress, and create synergistic opportunities for advancing knowledge and innovation. ICO is committed to upholding its reputation as the foremost international organization in optics and photonics, promoting excellence in research, education, and technological advancements.



Round table during the mid-term meeting of the ISC celebrated in Paris in 2023



**International
Science Council**

The global voice for science

Governing Board Communiqué Q3/2024

24 SEPTEMBER 2024

Dear ISC Members,

As the ISC returns to normal speed after the summer vacation of the Secretariat, I would like to take the opportunity to wish you well and to address some important financial matters in the run-up to the [2025 General Assembly](#) in Oman.

Approval process for the 2025-2028 budget

You will be aware that, in line with the Statutes, the ISC operates within the framework of a multiannual budget which is approved by the General Assembly, while the annual budgets are approved by the Governing Board and shared with the Members for information.

The current multiannual budget runs from 2022 to 2024 inclusive. It happens that the next General Assembly will take place in January 2025, rather than in the fourth quarter of 2024, as would normally have been the case. We will therefore enter the next planning period without an approved multiannual budget. To deal with this irregular situation, and with the advice of our auditors, the Governing Board proposes to operate to a provisional budget until it can be approved by the membership at the General Assembly at the end of January. This provisional budget will be shared with the Members in November as part of the documentation for the General Assembly.

Regarding the basis of the budget for the next planning period, it is vitally important for the stability of the ISC that the overall income from membership dues does not decline, neither as a result of the revision of the dues structure (see below), nor due to fluctuations in the relationship of national to global GDP, on which the dues of our Category 2 Members are based. The ISC is having very good success in raising external funds for specific projects, which also help to cover some of its core costs (for example, some 18% of staff costs in 2023 were covered through external grants), but membership dues are foundational. It should also be noted that the Council has been limiting its expenditure this year in order to maintain a safe level of reserves, even while requests from the Members and external partners for the ISC to do more have increased.

For this reason, the Governing Board is asking Members to maintain the current dues structure and their respective levels of dues in 2025, while the dues structure is being revised. This will allow the Secretariat to maintain operational capacity and deliver on its commitments to its Members, while a unified and fair dues structure is put in place.

Revision of the ISC membership dues structure

Following the adoption of revised Statutes and Rules of Procedure in March 2024, the Governing Board mandated the Committee for Finance, Compliance and Risk to establish a Working Group to revise the ISC dues structure. The Working Group composition and its mandate will be available on our website in October. We are very grateful to the members of the Working Group for taking on this important and delicate task. The Working Group will present its progress at the General Assembly in January 2025 and will consult with the membership at several moments during the process, with the aim of presenting a proposal for the approval of the membership before the end of 2025. It should be noted that the aim of the revision of the dues structure is principally to unify the parallel dues systems of former ICSU and ISSC members and develop a fair and sustainable dues structure.

Strategic plan

Mandated by the Governing Board, and drawing on the significant input from the Members from earlier consultations, the Secretariat is preparing a draft Strategic Plan for 2025-2028 for consideration by the Governing Board. Our aim is to share it with the Members in early October. I will use the [Zoom sessions with the Members on 2 and 3 October](#) to present and discuss the plan, and written feedback will be welcome until 21 October. The final draft will then be shared with the documentation for adoption at the General Assembly.

General Assembly, Oman, January 2025

Preparations for the General Assembly (GA) are proceeding well, and the detailed draft agenda for the science programme can now be seen on the [GA webpage](#).

- Member representatives are encouraged to [register](#) by completing the online registration form by 30 November.
- Member organizations that would like to organize a side event during the open programme on 29 January, please [express your interest to organize a side event](#) by 30 September.

Looking forward to seeing you at the quarterly meeting on 2 or 3 October. Sincerely,



A handwritten signature in black ink that reads "Peter Gluckman".

Peter Gluckman
ISC President



**International
Science Council**

The global voice for science

The Third ISC General Assembly 26–30 January 2025, Oman

Agenda of the formal General Assembly meeting 29-30/01/25

Note: This outline agenda presents the standard and foreseen main elements of the General Assembly six months in advance of the meeting, as required by the ISC Rules of Procedure. The detailed first draft agenda will be shared with Members in September 2024.

Opening

1. Opening and welcome by president
2. Adoption of the agenda
3. Adoption of the minutes of previous General Assembly
4. Appointment of Resolutions Committee and Tellers
5. Voting procedures

Reporting

6. President's report
7. Secretariat report
8. Reports from Standing Committees, including financial report
9. Report from Fellowship Council
10. Reports from Regional Focal Points
11. Other reports (tbd, including follow up on resolutions of previous GA)

Strategy and implementation

12. Strategic Plan: Presentation and adoption
13. Financial matters
 - I. Revision of dues structure
 - II. Budget for coming period
14. Regional presence

Governance

15. Minor modifications of Statutes and Rules of Procedure
16. Presentation of new Governing Board members

Closing

17. Adoption of resolutions
18. Presidential address
19. Date and place of next meetings
 - I. 2026 Membership Meeting
 - II. 2028 General Assembly
20. Any other business
21. Close of General Assembly

ICO NEWSLETTERS 2024

The ICO Newsletters are published every three months and the full version is available online at the website of the ICO: <https://e-ico.org/node/21>. We present the first pages of each issue published in the period 2022-2024, listed in inverse chronological order, from issue 140 (July 2024) to the first one of the current period (130, January 2022).

By clicking on each image of the electronic book, a link with the full contents of each newsletter will be displayed in a web browser. For more information about the ICO Newsletter, please contact the by email the ICO Secretariat at the following address: secretariat@e-ico.org. The ICO Secretary deeply acknowledges all the authors of the contributions received in the period.



130 NEWSLETTER

No. 130 April 2024

139 NEWSLETTER

No. 139 January 2024

ICO NEWSLETTERS 2023

OCTOBER 2023



NEWSLETTER

COMMONWEALTH INTERNATIONAL ORGANIZATION INTERNATIONAL COMMISSION FOR OPTICS

Nobel Prize to Attosecond Science

ICO celebration 2023
Nobel Prize in Physics
awarded for experiments
on attosecond pulses



Four years ago, Anne L'Huillier received the Nobel Prize in Physics for her experiments on attosecond pulses. This was a historic moment for the field of attosecond science.

The Nobel Prize in Physics 2023 has been awarded to Anne L'Huillier, who, together with Ferenc Krausz and Pierre Agostini, was awarded for their experiments on attosecond pulses. This was a historic moment for the field of attosecond science.

comprehensive insight to progress for producing isolated attosecond pulses. Pulse characterization techniques mentioned from more consideration to the full characterization of the electric field, and experimental generation combined with characterization related to their control the limit of single-cycle laser pulses.

Prof. Dr. Lutz Preuss
International Commission for Optics
President, European Optical Society
No. 137 October 2023

ICO NEWSLETTER

JULY 2023



NEWSLETTER

COMMONWEALTH INTERNATIONAL ORGANIZATION INTERNATIONAL COMMISSION FOR OPTICS

The ICO Bureau will meet in South Africa

IMPORTANT NOTICE
Paper meeting: 10th-12
September, September 10-12
September 10-12



Four years ago, Anne L'Huillier received the Nobel Prize in Physics for her experiments on attosecond pulses. This was a historic moment for the field of attosecond science.

The next meeting of the ICO Bureau will be held in South Africa, Pretoria, from 10-12 September 2023. The meeting will be held in the field of optics and photonics for the first time.

Prof. Dr. Lutz Preuss
International Commission for Optics
President, European Optical Society
No. 137 October 2023

ICO NEWSLETTER

APRIL 2023



NEWSLETTER

COMMONWEALTH INTERNATIONAL ORGANIZATION INTERNATIONAL COMMISSION FOR OPTICS

Low Cost Optics Against Tuberculosis

Two universities in India
are developing a low cost
optical device for
tuberculosis diagnosis



Four years ago, Anne L'Huillier received the Nobel Prize in Physics for her experiments on attosecond pulses. This was a historic moment for the field of attosecond science.

Tuberculosis is a serious public health concern worldwide, and early detection is crucial for effective treatment. However, conventional diagnostic techniques for diagnosis are often expensive and inaccessible in low-income settings.

The microscope is based on a laser CW laser (650 nm) and a detection system. The new device is an important step towards cost-effective tuberculosis diagnosis for developing countries.

Prof. Dr. Lutz Preuss
International Commission for Optics
President, European Optical Society
No. 137 October 2023

ICO NEWSLETTER

JANUARY 2023



NEWSLETTER

COMMONWEALTH INTERNATIONAL ORGANIZATION INTERNATIONAL COMMISSION FOR OPTICS

Optics Outreach Blooms Again in Pakistan

**Our future is bright if we let
science bloom in 2023**



Four years ago, Anne L'Huillier received the Nobel Prize in Physics for her experiments on attosecond pulses. This was a historic moment for the field of attosecond science.

The COVID-19 pandemic has added a different set of challenges to the ongoing efforts to improve the quality of education in Pakistan. The need for optics outreach is more urgent than ever.

Prof. Dr. Lutz Preuss
International Commission for Optics
President, European Optical Society
No. 137 October 2023

ICO NEWSLETTER

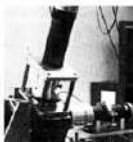
ICO NEWSLETTERS 2022

OCTOBER 2012



Nobel Prize for Entangled Photons

IOG celebrates 2022 Nobel Prize in Physics awarded for groundbreaking experiments on quantum entanglement

[illegible]

mean signal around 10,000 counts, 10% to 15% of the count rate by signal intensity of the detector and half is lost when using the gradient along which the signal is measured. The gradient settings were made to maximize experimental efficiency. Perhaps, future work is necessary to still the observed correlation between increasing the *Time-From-Initial-Settings* of the analysis. Again, due to the fact that the settings of the analysis at a time far compared to the start time of the phantom, we showed that the *Time-From-Initial-Settings* of the analysis had little impact on the results. The importance of the *Time-From-Initial-Settings* was quickly understood when the community. It was awarded the *2005-2006* award.

16 *Pharmacol Ther* 1990; 43: 1-10

John Howard
President of the ICC

1973 *Microgaster*

No. 119 OCTOBER 2020

JULY 2011

SPECIAL ISSUE: ICO 75th ANNIVERSARY

Important personalities from KDD's recent history tell us some of their memories in this special issue.



Announcements are a time for introspection. As we celebrate 75 years as an organization, we can look back on our accomplishments and the challenges we have faced. We see the role we play in education, communication, agriculture, education, design, quality control, engineering, and many facets of science and technology. As we look forward, we at ICCC see many significant challenges on the horizon. We are committed to addressing these challenges through our efforts in education, research, and engineering. We are committed to addressing these challenges through our efforts in education, research, and engineering. We are committed to addressing these challenges through our efforts in education, research, and engineering.

World Science Council. We believe this newly established connection will aid in our efforts to work collaboratively on challenging topics, foster science programs of developing countries and establish genuine connections.

We are partnering with researchers in Africa to develop science learning programs for high school and university students. We recently partnered with Florida to help in providing experimental demonstration kits for a dedicated teacher of many gifted young people within the country.

We look forward to many exciting breaks through, opportunities and future collaborations in the future and hope you will join with us in helping make the world a better place.

Johns Horvath
ACQ President



ACKNOWLEDGMENTS

NO. 133 MAY 1973

4 APRIL 2017



Next ICO-25/OWLS-16 in Dresden, Germany

ICO-25 • 5 - 9 September 2022 • OWLS-10

"We hope everyone will have a fascinating and enjoyable time at the general meeting."

[illegible]

all over the world will advance the dissemination of knowledge in the fields of optics and photonics and will be instrumental in promoting The paper submission deadline was extended to April 24, 2022. Among the topics offered are:

- Optical Engineering & Design
- Material Processing & Fabrication
- Display and Vision
- Optical MEMS and Microoptics
- Optical Sensing and Measurement
- Computational Photonics
- Optical Information Processing
- Quantum and Machine Optics
- Simulacra Optics & High Power Lasers
- X-Ray and Hard X-ray Optics
- Planarization and Metamaterials
- Nanophotonics & Nanoscopy
- Fiber Optics & Communications
- Conductors and Silicon Photonics
- Microscopy, Biomedical Spectroscopy
- Biomedical Optics
- Optical Communications
- Spectroscopy and Optoelectronics
- Optics for Inertial Devices

Prof. Dr. Jürgen Carst
 CEO V&P, A Chair of 220-3, Optics & Photonics
<https://www.vap.uni-erlangen.de/>

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No. 131 APRIL 2022

JANUARY 2022



IEEE Photonics Society & IEEE SIGHT **IEEE SIGHT**
Bring Humanitarian Projects to Light Special Interest Group on Nondestructive Technology

Find more information at:

Photonics connects the world through the Internet and provides practical and cost-effective solutions to some of the world's most vexing problems. Optical fiber links are the backbone of the global data network, and optical communication systems will play a key role in meeting the growing demand for bandwidth. Optical technologies play a key role in medicine, from simple diagnostics and monitoring to advanced treatment options and research. Biometric light sensing technologies promote the development of sustainable approaches to fight hunger and to protect life on land and in rivers, lakes, and oceans. Modern lighting provides important opportunities to improve quality of life with efficient and green solutions. And, light-based technologies are critical for monitoring and predict-

undiscovered communities around the world that benefit from technology as they seek to take on new development challenges. Projects funded by IEEE SIGHT address poverty, hunger, health and wellbeing, quality education, clean water and sanitation, affordable housing, climate action, sustainable communities, responsible consumption & production, etc.

In 2022, the Society's IEEE SIGHT programming is set to meet with citizens in Africa, Latin America, India, and the broader Asia/Pacific region, with a particular focus on enabling optics and photonics solutions in developing markets. For instance, IEEE SIGHT

If a technical group, NGLD, would
occasionally deliver presentations and speak
into the Internet on these projects or
participate in online collaborative
development efforts, please email
Phyllis@ingeneering.org for
further action.

To reach its members through the utilization of technology and applying their related studies to address local and global issues, the IEEE Ph.D. Consortium of Experimental Communities of Officers (IEEPCO) has become a network of scientists and engineers who represent the laser, optoelectronics, and photonics community, has begun an American Laser Consortium, the IEEE Sponsored Laser Consortium (IEEE SLC), and the IEEE SLC/Ph.D. Consortium (IEEPCO) program to address such public, international, and patent issues, the largest national professional organization dedicated to laser technology and photonics. Furthermore, IEEPCO has become an interdisciplinary solution that makes a long-term difference in the lives of

tion. Additionally, 2001 projects were funded in the areas of: (1) Space Science and Technology; (2) Space Inhabitation; (3) Sustainable and Renewable Energy; (4) Space Transportation; (5) Space Station; and (6) Space Exploration. For example, when the two sons of the Chunchi Inclusion Center at Kijungri University in Korea, student leaders of University's IEEE Photonics Student Chapter and IEEE Student Branch, created a miniature flight prototype in conjunction with the Korea Space Agency (KSA), the IEEE Photonics Society supported the prototype project. The project was a student-led effort to help educate a new generation of students. The miniature flight, named "KSI" (Korea), measured 10 by 10 centimeters, and weighed one kilogram, which the team was one of the candidates set by the agency. The KSI is designed to be able to launch but also to cut cost once mass produced.

Figure 1. A schematic diagram of the experimental design. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard training program, while the experimental group received a modified training program. The results of the training were compared between the two groups.

MEMBER CONTRIBUTIONS

(in the order of their receipt)

Territorial Committees

Active Learning in Optics (ALO) Group.

ICO Territorial Committee representing Pakistan

In early 2022, Pakistan witnessed a rapid deterioration in its economic condition. Throughout the past year, the nation has grappled with a mounting balance of payment crisis, marked by depleting foreign reserves, ballooning debt, and record-breaking inflation levels.

By the first half of 2023, Pakistan found itself on the brink of a potentially catastrophic economic default. At a critical juncture, the country's reserves could only cover approximately two weeks' worth of imports, owing to the concurrent pressure of debt repayments. In a desperate bid to avert default, the government implemented stringent import restrictions to gain control over dollar outflows. Consequently, the local currency's value plummeted to an all-time low, with a scarcity of foreign currency both in the open market and within banking channels. This scarcity even extended to essential transactions, such as sending funds abroad for purposes like supporting children studying overseas.

While the adoption of an International Monetary Fund (IMF) program and financial support from key allies, including Saudi Arabia, the UAE, and China have provided a lifeline for Pakistan's economy the situation remains precarious. Numerous challenges persist, and if not effectively managed, they pose a serious risk of pushing Pakistan further into economic turmoil. The road to recovery is long, but careful and strategic measures can lead to sustained economic stability.

The impact of the economic downturn hit the middle-income class particularly hard, affecting many students from modest backgrounds at Quaid-i-Azam University, a public sector institution that draws students from across Pakistan. Many of these students had been actively involved in my outreach initiatives, and often volunteer to help me prepare and on the day.

The Active Learning in Optics (ALO) Group had historically relied on self-funding for most endeavors. On any outreach activity day, I need to leave home early to pick up my team of volunteers. The pickup points vary, ranging from Quaid-i-Azam University, which is 30 km away from my home, to volunteers taking Uber from their homes to a designated meeting point. Once assembled, we

load into my car and head towards our destination. However, due to the recent economic crisis, rising fuel prices, and my retirement from my university position, financial constraints posed significant limitations on the scale and scope of my outreach initiatives. Additionally, it has made it harder for my students to help me conduct activities in far off locations and remote areas.

As we were limited in our reach and resources, we commenced 2023 with two *planned* outreach programs at "The Black Hole" catering to different age groups in Islamabad. In early March 2023, a ray of hope emerged with the approval of the SPIE Outreach grant. This support proved to be a blessing, enabling the ALO Group to plan more activities and travel to the remote areas of Khyber Pakhtunkhwa (KPK). As we approach the end of 2023, we can proudly reflect on a highly successful year for the ALO Group, having conducted a total of 10 outreach activities, including four in the remote areas of KPK. The SPIE Outreach grant played a pivotal role in overcoming financial constraints and facilitating impactful educational initiatives, marking a positive turn for the ALO Group in a challenging economic climate.

Optics outreach 2023: At a Glance

S.No	Date	No. of Participants	Venue	Facilitators	Volunteers
1	03-01-2023	25	Quaid-i-Azam University School	Dr. Imrana	Masad Qayyum
2	05-01-2023	25	Quaid-i-Azam University School	Dr. Imrana	Masad Qayyum
3	16-05-2023	200	Phy. Depart. Quaid-i-Azam University	Dr. Imrana	Masad Qayyum
4	18-05-2023	300	International Islamic University Islamabad	Dr. Imrana	Masad Qayyum Osama bin Ijaz M. Ayaz
5	22-05-2023	250	Fatima Jinnah Women's University	Dr. Imrana	Masad Qayyum Osama bin Ijaz M. Ayaz
6	25-05-2023	150	Rawalpindi Women's University	Dr. Imrana	Masad Qayyum Osama bin Ijaz M. Ayaz
7	13-09-2023	300	Mardan Women's University	Dr. Imrana Dr. Raheel Ali	Masad Qayyum Osama bin Ijaz M. Ayaz
8	27-09-2023	300	Swabi Women's University	Dr. Imrana	Masad Qayyum
9	01-12-2023	350	Quaid-i-Azam University	Dr. Imrana Dr. Raheel Ali	Masad Qayyum Nimra Gazanfer M. Sami Shahid
10	08-12-2023	250	University of Swat	Dr. Imrana Dr. M. Zahid	Masad Qayyum Sanwal Farooq

1. Starting 2023 with "The Black Hole" (3rd Jan; 5th Jan)

The ALO group commenced its activities for the year 2023 with two scheduled events on January 3rd and 5th at "The Black Hole." These events were tailored for fifth-year and O-level high school students, respectively. Notably, The Black Hole is an organization dedicated to promoting art, science, and culture. They

organize summer and winter clubs for students from various schools, with a focus on imparting scientific knowledge.



Since the year 2022, ALO has been actively involved in overseeing the optics lab at The Black Hole and has established a long-term collaboration to bring science education to students. For the younger participants, ALO utilized SPIE Explore Optics kits, while the older students engaged with the Photonic Explorer kits, enhancing their learning experience in the field of science.

After receiving the SPIE Outreach Grant, we decided to go forward with **four more activities in May**. Although we originally planned to conduct some of these in remote areas in KPK, the compromised security concerns at the time limited us to schools in the twin cities (Rawalpindi-Islamabad).

2. Celebrating International Day of Light: Our Beautiful Minds (16th May)

Active learning in Optics (ALO) Group organized a one-day Optics workshop at the Department of Physics on QAU campus on May 16th. The event started with an oral presentation titled “See It With Light”, followed by a demonstration on:

- Different kinds of Light Sources: Sunlight, ordinary light, LEDs, and Lasers.
- Properties of light.
- Scattering of Light.
- Reflection, refraction, transmission, and total internal reflection.
- Proving laws of Geometrical optics.
- Finding critical angles.
- Working principle of Fiber optics communication.
- Interference of light.
- Single and double slit diffraction.
- Measuring Stress with polarizers.

In the afternoon, a virtual session was organized for a scientific talk on "Ultra-high repetition-rate fiber lasers: A new horizon in laser micromanaging and microsurgery" by Prof. Parviz Elahi from the Department of Physics at Boğaziçi University, Istanbul, Turkey. Utilizing the Pak-ICTP Alumni forum, Prof. Elahi's

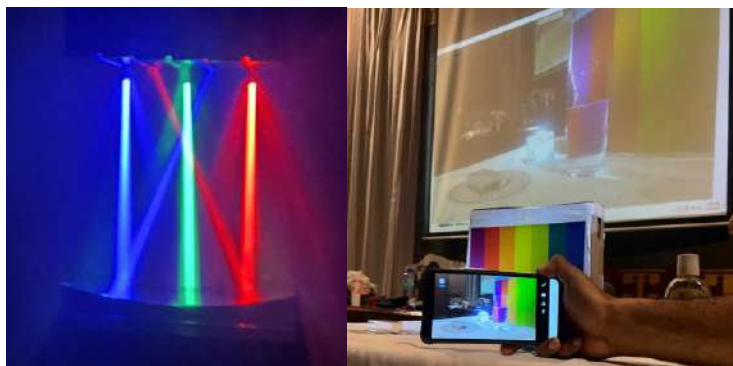
online presentation attracted a significant virtual audience, including many undergraduate students who actively participated in the insightful discussion.



3. Optical Physics Workshop: Islamic International University (18th May)

On the 18th of May, I gathered my team from Zero Point (the point where the distance of Islamabad is 0km), and we set off for the International Islamic University (female campus) in Islamabad. The weather in Islamabad during May is typically dry and hot, and May 18th, 2023 was no exception. However, upon reaching our destination, the scorching heat became inconsequential as we were greeted by a hall packed with over 300 enthusiastic students eagerly awaiting our workshop.

The event kicked off with a warm welcome note from the host, following which I delivered a presentation on the 'Importance of Light and Light-based Technologies,' which extended for almost an hour as I prefer interacting with students during my talks. Afterwards, we conducted demonstrations of various optical phenomena. To ensure that all students, including those seated at the back of the hall, had a clear view, we utilized Iriun Webcam. We capture my actions on a table using a cellphone, which was then projected onto a multimedia screen for enhanced visibility.



Following a brief lunch break, we engaged in an initial Q&A session where students exhibited remarkable interest in the subject. We then organized the students into 10 groups and extended invitations for personalized assistance. My team and I worked closely with each group, providing additional insights, and the activity concluded with the distribution of certificates. To my delight, many girls came up to me expressing their desire to capture the moment with a photo. As my team and I made our way back, the air was filled with happiness and satisfaction.

4. Illuminating Young minds with Light: Fatima Jinnah Women University (22nd May)

For our third optics outreach activity in connection with IDL, we visited Fatima Jinnah Women's University (FJWU) on the 22nd of May. After picking up my students at Faizabad interchange, we reached the university after about an hour's drive. Dr. Waqar, the Head of the Physics Department, welcomed us warmly, having studied in the Department of Physics at QAU.

We were directed to the auditorium where the activity was scheduled to take place. The workshop commenced with a brief introduction to the outreach activity by the class representative of the 7th semester, the senior-most student in the Physics Department at FJWU at that time of the year. The students sat quietly, with only occasional murmurs audible. This reserved atmosphere is something I have often encountered before any activity, regardless of the age group – be it young girls of 6 and 7 years, high school students, or undergraduates in a university.

Prior to formal talks or demonstrations, I always make an effort to help them relax and create a friendly atmosphere for interaction. I want them to understand the difference between a workshop and the usual classroom setting. The event formally began with a talk on 'Light as a Way to Communicate.' Almost immediately, there was a noticeable change in the students' behavior as they began making eye contact with me. I concluded the talk on a positive note and opened the floor for discussion, addressing their questions and comments.

Following the talk, we moved on to the demonstration session using the Iriun Webcam for better clarity. The students were visibly excited and motivated as they observed various optical phenomena and the laws of geometrical optics. After the demonstrations, we invited students to participate in hands-on activities, and they thoroughly enjoyed the session. As always, the day concluded successfully with the distribution of certificates of participation and group photos.

5. One Day workshop on Optics: Rawalpindi Women University

On May 25, 2023, our team visited Rawalpindi Women's University for a one-day workshop on optics. We arrived at 9 am, and everything seemed to be in order for the planned activities in the auditorium. However, Pakistan was experiencing an electricity shortfall exacerbated by the hot summer. Unfortunately, as soon as

I began my talk on Light, the electricity went out, and the Physics department lacked a backup generator, forcing us to pause our activities there.



Initially, we decided to wait for the electricity to be restored and engaged in informal discussions with the students. However, the power outage persisted. Undeterred, the motivated students took the initiative to relocate the entire activity to the Computer Science department's lab, which had a backup power supply from a UPS. I resumed my talk on "Say it with Light," and the students, keen to learn, actively participated in the interactive session, asking questions and sharing their thoughts. Despite the initial setback, the activity proceeded smoothly. I concluded my talk with a question-and-answer session, after which we moved on to demonstrating the fundamental laws of Optics. The students not only observed but also conducted their experiments, making the session hands-on and engaging.



To conclude the day, certificates were distributed, and group photos were taken, capturing the smiles on the girls' faces. The students' enthusiasm and quick problem-solving skills were truly impressive. Despite the unexpected power outage, the outreach activity at Rawalpindi Women's University turned out to be a memorable and successful event, showcasing the resilience and determination of both the organizing team and the students. They turned a challenging situation into an opportunity for learning and collaboration, leaving a lasting positive impression on everyone involved.

6. Outreach Optics activities in Remote areas of Khyber Pakhtunkhwa

Khyber Pakhtunkhwa (KPK), a province in northwestern Pakistan, stands as the country's fourth-largest province by land area and third-largest by population. Peshawar, its capital, serves as the heart of the province. The landscape of Khyber Pakhtunkhwa is diverse, encompassing rugged mountain ranges, valleys, plains surrounded by hills, undulating submontane areas, and dense agricultural farms. The province shares a substantial international border of 1100 km with Afghanistan to the west.

Unfortunately, the conflict and instability in Afghanistan, particularly after the 9/11 attacks, have had negative repercussions for Khyber Pakhtunkhwa. The aftermath of the US invasion of Afghanistan saw a significant influx of Afghan refugees into Pakistan, coupled with a rise in the frequency and scale of terrorist attacks within Pakistan. Despite the end of major fighting in Afghanistan in 2021 and the victory of the Taliban, terrorism has increased due to the rise in militant groups operating from Afghanistan.

On the second anniversary of the Taliban's rule, there were speculations regarding the reopening of schools and universities for girls in Afghanistan, but it has not materialized. Girls' education has long been a subject of debate in Pakistan, with the lowest enrollment rates among Pashtun populations. In Khyber Pakhtunkhwa, more than two million children are out of school, with two-thirds of them being girls.

The Active Learning in Optics (ALO) group initiated educational outreach activities in KPK in early 2019, beginning with a one-day workshop at Mardan Women University. The second activity took place at Swabi Women University in October 2020, followed by a workshop at Sir Syed College in Wah Cantt in December 2021. In April 2022, the group visited Wah Women University, located near the border between Punjab and KPK. In 2023, the plan includes follow-up activities in Mardan and Swabi Women Universities, along with conducting outreach in the University of Swat and Karakoram International University. Despite the challenges in the region, the ALO group remains committed to promoting education and outreach initiatives.

6a. One Day Optics Workshop: Women Univ. Mardan (13th September)

On September 13, our five-member team, which included Dr. Raheel and myself, embarked on our journey from Islamabad at 7 am. The motorway (freeway) travel proved to be exceptionally comfortable and safe, especially when adhering to the speed limit. We exited the motorway at Mardan interchange, patiently waiting for the driver from Mardan University to guide us to the downtown location of the university. Upon our arrival at Mardan Women's University, we were warmly welcomed by the students. Dr. Ambreen Ayub, the Head of Physics, graciously introduced us to the faculty members and invited us to commence the planned activity. Our agenda for the day included two talks: "Introduction to Laser" and

"Working Principle of He-Ne Laser." I initiated the session by discussing the significance of light, delving into its crucial role in human life. Covering the basics of optical phenomena, I concluded with a brief introduction to lasers. Dr. Raheel then took the stage, delving into the intricacies of the He-Ne Laser.



Given the substantial number of attendees, we opted for hands-on demonstrations and experiments, projecting them onto a sizable screen for everyone to grasp. The He-Neon Laser apparatus took center stage as we explained its inner workings, providing a visual feast for the curious minds present. The session concluded on a high note with a cheerful group photo, capturing the collective energy of the day. Around 2 pm, our team wrapped up the event and set course for Islamabad, leaving behind an engaging and illuminating experience that undoubtedly left a positive impact on both the students and ourselves.

6b. One Day Optics Workshop: Swabi Women University (27th September)

On September 27, I embarked on my journey from Islamabad at 7 am to reach Swabi Women University. To assist me in this activity, I picked up my best and only volunteer, Masad Qayyum, at the Islamabad Metro station. Our journey commenced around 8 am as we headed towards Swabi.



Although I had previously visited Swabi University in 2020, they have since moved to a new campus located outside the city. Relying on Google Maps to navigate the unfamiliar route, we traversed bumpy roads, passing through sugarcane fields. The uncertain terrain left us momentarily unsure if we were on the right track. Nevertheless, we successfully reached Swabi University by 10 am. Without taking any breaks, we immediately commenced the activity as the students were already assembled in the hall, eagerly awaiting the start of the interactive talk. The enthusiasm of the students added to the positive atmosphere, making the challenging journey worthwhile.

6c. One-day workshop on Optics and fiber Optics Communications: Swat University (8th December)

The Active Learning in Optics (ALO) Group at the Department of Physics, Quaid-i-Azam University, organized a one-day workshop on Optics and Fiber Optics Communications to commemorate the International Day of Light in 2023. The venue for this event was the Department of Applied Physical and Materials Sciences at the University of Swat, and it took place on December 8, 2023.

On December 7, accompanied by Dr. Muhammad Zahid and my team members, Masad Qayyum and Sanwal, we departed from Islamabad at around 11 am. Dr. Zahid took the wheel, and we reached Swat University at approximately 4:30 pm. Given the distance to our booked hotel, which was about an hour's drive away, we opted to stay at the university's bachelor house for the night.

The next morning, on Friday, we arrived at the activity hall by 9 am. The hall was already brimming with students, and nearly 30 percent had to stand due to the limited seating available. A significant majority, approximately 85%, were female students eagerly anticipating the start of the interactive activity. The Vice-Chancellor of the University extended a warm welcome and presented shields in appreciation. Following the welcome, I delivered a talk on the "Importance of Light," emphasizing its significance in daily life and covering the basics of Optics. Dr. Zahid then presented his talk on "Fiber Optics Communication," providing insights into both theoretical and experimental techniques. The students actively participated in an interactive manner, engaging in a discussion session.

Later, we conducted demonstrations, and towards the end, we invited students onto the stage to operate the apparatus themselves and ask any questions they had. Remarkably, the girls at Swat University demonstrated active participation, surpassing the level of engagement seen from the boys. We departed for Islamabad on December 9, 2023, around 11 o'clock, and reached Islamabad at approximately 5 pm, concluding a successful workshop at the University of Swat.

7. Exploring Wonders of Optics: Quaid-i-Azam University (1st December)

On December 1, 2023, Active Learning in Optics organized its second event at the Department of Physics, Quaid-i-Azam University. The seminar, held at 9 AM, attracted a group of enthusiastic BS students who actively participated in the proceedings. The focal point of the seminar was a talk on the "Laws of Light." The session was designed to be interactive and informative, incorporating live demonstrations and an explanation segment. Dr. Imrana and Dr. Raheel, serving as speakers, shared valuable insights into the laws governing light. The dynamic nature of the seminar allowed for an engaging discussion session, enabling students to interact with the speakers and seek clarification for any doubts they may have had. The event aimed not only to disseminate knowledge but also to foster a collaborative learning environment for the students at Quaid-i-Azam University.

Sociedad Española de Óptica (SEDOPTICA).

ICO Territorial Committee representing Spain

SEDOPTICA is the Spanish Society of Optics (www.sedoptica.es), a non-profit organization founded in 1968 devoted to the promotion of optics and photonics, from basic research to industrial applications. Currently represents around 450 members, organized in different topical committees (Imaging Techniques, Vision Science, Optoelectronics, Spectroscopy, Quantum & Nonlinear Optics, Colour, and Nanophotonics), as well as other transversal committees (Education in Optics, Women in Optics and Photonics Area and Youth Area). Prof. Luis Plaja is the current President, after María S. Millan concluded his term in 2023.

In 2022, the Spanish Society of Optics (SEDOPTICA) conducted a wide range of activities, with a focus on conferences and meetings. Several key awards were launched, including the 8th Justiniano Casas Award for research in optical imaging, the 5th Photon Awards for scientific communication and education, and the 2nd Light Tok video contest, aimed at engaging young researchers. The winners of these awards were recognized for their contributions to both scientific research and outreach.



María Yzuel (left) and Augusto Beléndez (center) talk during the main event of the International Day of Light celebrated in Andalucía in 2023.

The International Day of Color was celebrated on March 21 with a special feature on Radio Nacional de España, where Meritxell Vilaseca and Ismael Galván discussed color perception and its variations across species. Additionally, the 4th International Day of Light (diadelaluz.es) was held on May 16, organized by the University of Valladolid, featuring diverse activities to highlight the importance of light and optics.

SEDOPTICA supported specialized courses, including the Microscopy and Applications Course and the XXXI Introductory Course on Optics Research, organized by the Institute of Optics (CSIC). These courses provided valuable training opportunities, both virtually and in person, with discounts for society members. The Photonic Integration Week returned in March, organized by the UPVfab research group at the Universitat Politècnica de València, and was sponsored by VLC Photonics. This event has become a national reference for integrated photonics, showcasing technological advancements in the field.

SEDOPTICA's Microgrants Program funded five projects, including the Visual Optics Summer School 2023 and initiatives promoting young researchers and educational outreach. These projects reflect the society's commitment to advancing optics research and education. Several conferences and congresses took place towards the end of the year, including the XIII National Color Congress, which awarded prizes to young researchers for their work on color vision.

In 2023, one notable initiative was the complete digitization of the *Óptica Pura y Aplicada* (OPA) journal, celebrating its 55th anniversary. All issues are now freely available on the web, offering a valuable source of scientific content. The Committee for Outreach, Education, and History of Optics (CODEHO) organized several events, including the Introduction to Optical Design Course in April, taught by Sergio Barbero and Enrique Josua Fernández. Additionally, the Optics History Group continued its conference cycle, featuring talks on Allvar Gullstrand and Kepler's refraction law, available on SEDOPTICA's YouTube channel.

The Women in Optics and Photonics Area (MOF) held the II Workshop on Women, Optics, and Photonics in Salamanca, with over 100 participants, and launched the Our Fellow Society Women Speak conference series, covering topics such as visual aids for the colourblind and simulating astrophysical ice in the lab. It also continued its interview series Meet Our Women Researchers.

Regarding specialized meetings, the Optoelectronics Committee hosted the biennial OPTOEL 2023 in Seville, featuring the SPIE-SEDOPTICA awards and recognition for young researchers. The Vision Sciences Committee also organized the Summer School Biophotonics for Eye Research (BER2023) in Jaca, awarding prizes to the best contributions from young researchers.

In 2024, the Young Area stood out with the conclusion of the LúZete Program, which awarded grants for young researchers to participate in national and international scientific events. Researchers from various universities, including the Universitat Autònoma de Barcelona and the Universitat Politècnica de Catalunya, were selected as beneficiaries.

The Optics History Group organized the third cycle of conferences, featuring presentations such as Carlos Alberto Cardona's lecture on optics in *The Last Supper* by Leonardo da Vinci and Juan Luis Sánchez's talk on ocular references in ancient coins. These talks are available on SEDOPTICA's YouTube channel, promoting the dissemination of optics history.

The Women, Optics, and Photonics Area (MOF) continued its Our Fellow Society Women Speak lecture series, featuring Alba Paniagua's presentation on visual correction using smart glasses. Additionally, this area organized interviews with researchers such as Clara Mestre and Olga María Conde. The MOF also translated SPIE educational posters into Spain's co-official languages for distribution in educational centres.

In 2024, the Central Event of the IDL in Spain was held in Castellón, organized by the GROC Optics Group from the University Jaume I (UJI) in Castellón. On May 16th, 2024, the central event of the International Day of Light (IDL) in Spain was celebrated. The event took place at La Lonja del Cànhamo and featured notable attendees, including the rector of UJI, Eva Alcón, and the president of

IDL in Spain, María Josefa Yzuel. Other dignitaries included the mayor of Castelló de la Plana, Begoña Carrasco, the director-general of Science and Research of the Generalitat Valenciana, Rafael Sebastián, and the vice-rector of Research and coordinator of the organizing committee, Jesús Lancis. The event featured a keynote lecture by Augusto Beléndez from the University of Alicante, titled "Holography: Art, Science, and Technology with Light." This lecture highlighted the intersection of art and science through holography, emphasizing its multifaceted applications.

The IDL celebrations extended from May 3rd to 18th, with various activities organized by GROC and the OPTICA Student Chapter of Castellón (OCAS). Among these activities, the Digital Photography Contest on optical phenomena stood out, encouraging participants to explore and capture the beauty of light in different contexts. Additionally, the "Fastest Photon" race was organized, providing a fun and educational experience related to the principles of light.

One of the year's most notable activities was the *5th National Young Optics Researchers Meeting (RNO-J)*, held on July 3, 2024, organized by the SEDOPTICA Young Area. This event, held the day before the *National Optics Meeting (RNO)*, was a key space for training young researchers on topics not typically covered in traditional scientific conferences. The meeting included roundtable discussions on career paths beyond the PhD, with experts from both academia and industry.

The *National Optics Meeting (RNO2024)*, held from July 3-5 at the University of Murcia, brought together 210 participants, offering five plenary lectures and more than 100 oral contributions on diverse topics such as image techniques, nanophotonics, and quantum optics. Additionally, 68 posters were presented. The event concluded with an awards ceremony, highlighting the *Justiniano Casas Award* and the *Ramón Corbalán Award*. Finally, the FOCUS Award recognized young researchers for their master's theses, reaffirming SEDOPTICA's commitment to promoting young research talent in optics and photonics.



Group photo of attendants to the last meeting of the Spanish Optical Society.

Deutsches Optisches Komitee (DOK).

ICO Territorial Committee representing Germany

The DOK unites various German societies and networks in the field of optics and photonics. Its members are from DGaO German Society for Applied Optics – The German Branch of EOS, from OptecNet Deutschland - the innovation network for optical technologies and from the Association for Quantum Optics and Photonics within the DPG German Physical Society.

The following texts were contributed from the various organizations, starting with the highlight of ICO25 & OWLS16 held in Dresden, Germany in September 2022 after a difficult time of preparation due to the Covid pandemic. Further reports cover the 2023 network conference on photonic innovations and the 2024 Annual Conference of the DGaO.

ICO-25-OWLS-16

The General Congress for optics and photonics ICO-25-OWLS-16 of the International Commission for Optics (ICO) and the international society for Optics Within Life Sciences (OWLS) was in-person celebrated at the TU Dresden, Dresden, Germany, 5-9 September 2022. Already August 2017 during the ICO-24 in Tokyo the preparations have started, but the congress was postponed due to pandemic to 2021. After discussions about switching to a virtual congress at the board of ICO, which had led to the abandonment of long-term contracts with agencies, hotels and cooperation partners and after investments over 4 years of preparation time to large losses, a wise decision of ICO was made to pursue a further postponement of a personal congress, while intensifying the international network.



It was a great honor for the ICO territorial committee of Germany to have hosted the General Congress in its country after 30+ years again. The General Congress was sponsored by the ICO, OWLS, and TU Dresden. We gratefully acknowledge the financial co-sponsoring by the DGaO - The German Branch of EOS, Carl Zeiss AG, OPTICA (The society advancing optics and photonic worldwide, formerly OSA), SPIE (The International Society for Optics and Photonics - Connect Minds and Advance Light), Photonics Society of IEEE (Institute of Electrical and Electronics Engineers), IUPAP (The International Union of Pure and Applied Physics) and the City of Dresden. The EOS (European Optical

Society), LAM (African Laser, Atomic and Molecular Physics Network), and RIAO (The Iberian American Network on Optics) have technically co-sponsored the General Congress.

The main theme was "Advancing Society with Light", emphasizing the importance of modern light technology for society. 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 was organized. For the first time in the history of ICO, a joint General Congress was celebrated together with OWLS.



Group photo of some of the attendants to the ICO-25 Congress

Theme "Advancing Society with Light"

The General Congress ICO-25 is the most important scientific and technical meeting on all important topics of optics and photonics around the entire world. The General Congress presented insights into the almost limitless variety of application potentials of light technology, emphasizing crucial innovations such as optical networks for the internet, optical information technologies for advanced artificial intelligence, secure data transmission with quantum key distribution and the quantum computer. Great potential to solving issues on the environment and global energy were highlighted. Perspectives for the disposal of nuclear waste and space debris are opened up, techniques for monitoring air quality and water including detection of micro-plastics and energy-saving lighting by OLEDs were presented. Novel methods providing advanced tools for biomedicine were emphasized, such as optogenetics, Brillouin elastography, advanced smart microscopy as well as the transfer of modern laser and deep learning techniques to clinics. Breakthroughs in fundamental science were presented at the congress, such as laser interferometers for the measurement of gravitation waves, galactic archeology of exoplanets and deformable mirrors for adaptive telescopes.

Three Nobel Prize Laureates at the General Congress in Dresden

Memorable in-person talks by three Nobel Prize winners were presented. Gérard Mourou, 2018 Nobel Laureate in Physics, inspired the audience with the plenary talk "Extreme Light for the Benefit of Science and Society". Sensational

perspectives were outlined on the particle production in empty space to acquire an understanding how the mass of elementary particles is defined. Furthermore, the transfer to medicine was highlighted. An exciting plenary talk, titled “Optical Microscopy: The Resolution Revolution” was presented by Stefan W. Hell, winner of the 2014 Nobel Prize in Chemistry. Optical microscopy has attained single-digit nanometer imaging resolution in the far-field, enabling molecule motion tracking in vivo to elucidate the secrets of life. The 2020 Nobel Prize laureate in Physics, Reinhard Genzel, delivered the fantastic plenary talk, titled “A 40-Years Journey”. The existence of mass singularity at the center of our Milky Way with four million solar mass objects was observed beyond any reasonable doubt, which could only be achieved through the disruptive advances of optical telescopes using adaptive optics and fiber interferometers.

Dresden attracted well-known scientists and young scientists

In addition to the 3 Nobel Prize winners, two other outstanding plenary lectures were presented and discussed. Michal Lipson spoke about „The Revolution of Silicon Photonics“, highlighting novel applications ranging from remote sensing to ultrahigh-bandwidth communications, which is crucial for advancing the internet. Karsten Danzmann presented a sensational talk, titled „Gravitational Wave Astronomy: Listening to the sounds of the dark universe!“. Perspectives on understanding dark matter and hearing the Big Bang by laser interferometers on earth and in space were discussed. Well-known researchers have presented excellent invited talks.

Awards presentations, diversity and support to participation for developing countries

The General Congress planned to support expenses to the presenters or Bureau members from developing countries. Over 25 scholarships were granted based on the available budget of ICO, OWLS, OPTICA, SPIE, IEEE Photonics Society, and IUPAP. Elizabeth Rogan, CEO of OPTICA, spoke about the important topic “Diversity as a strategic driver”. Great efforts have been made to increase the number of female speakers with extraordinary commitment of the international Technical Program Committee (TPC), especially by Wolfgang Osten. In order to foster students OPTICA-SPIE prizes were awarded. 17 best student papers prizes with a donation of 300 Euro each were supported by OPTICA, SPIE and TU Dresden. They were presented by Michal Lipson, 2022 President Elect of OPTICA and Kent Rochford, CEO of SPIE. The DGaO awarded 3 prizes for the best posters during the closing session of the General Congress. Furthermore, the OPTICA-SPIE student chapter Dresden has invited for an evening seminar.

The 5 awards for outstanding scientist were special highlights of the General Congress. Nobel laureates have handed the medals to the honored scientists. Two ICO Prizes were presented to Francesca Calegari with the topic “Attosecond technology for the real-time tracking of electron dynamics in molecules” and Andrea Alu with the topic “Extreme Light-Matter Interactions in Polaritonic

Metasurfaces". Two IUPAP Young Scientist Prizes were awarded to Na Liu with the topic "Controlled multi-motion in high-order plasmonic architectures" and Can Bayram with the topic "Cubic-phase III-nitrides for Next Generation Quantum Devices". The Galileo Galilei Medal was presented to Alexander I. Nosich, Laboratory of Micro and Nano Optics, Kharkiv, Ukraine, with the topic "Microcavity lasers and plasmonic nanolasers on threshold: Essentials and examples of full-wave electromagnetic analysis". His outstanding contributions were achieved in unfavorable circumstances of Ukraine after the Russian occupation of Crimea and especially after the start of the war. Furthermore, the discrimination on the grounds of age is regrettable, as Alexander I. Nosich has informed me that there is no permit to work in France. His awarding at the General Congress was a special moment.

World general congress under extraordinary circumstances

Immediately after the ICO-24 in 2017, the preparations for the General Congress already took place, but had to be stopped in 2020 due to the Covid-19 pandemic. The General Congress was postponed to 2021, but could not be held again. Fortunately, due a wise decision by ICO, no switch to digital presentation happens. However, there were extraordinary circumstances for the in-person General Congress by the war in Europe, shortcomings with flights and travel restrictions, supply chain limitations, etc. Most hurdles were taken together with the commitment of the worldwide network of sponsors and co-sponsors, the TPC especially the program chairs Wolfgang Osten and Alexander Heisterkamp, the fundraising chair Michael Pfeffer, adviser Bernd Kleemann and the unbelievable commitment of the local team, especially of Nektarios Koukourakis and Lars Buettner. The worldwide General Congress was celebrated with 5A (Africa, Asia, Australia, America and Amazing Europe). The total number of participants in ICO-25-OWLS-16 was around 400. For many participants it was the first face-to-face congress in two years with great opportunities for discussions and thinking about joint international projects. Top-quality contributions were presented from 55 countries of all continents (5A): Germany, USA, UK, Japan, India, Spain, Italy, China, Argentina, Mexico, Switzerland, Czech Republic, Netherlands, France, Austria, Australia, Ireland, Poland, Belgium, Canada, Ukraine, Portugal, New Zealand, India, Singapore, South Africa, Taiwan, South Korea, Israel, Hungary, Bulgaria, Romania, Turkey, Colombia, Luxembourg, Russia, Saudi Arabia, Finland, Thailand, Brazil, Sweden, Senegal, Denmark, Iraq, Iran, Greece, Oman, Armenia, Ecuador, Belarus, Lithuania, Latvia, Chile, Philippines, Egypt, and Uganda.

Frank Hoeller, general assembly and social events

The ICO as the umbrella organization with 54 territorial members and 7 scientific organizations has celebrated in Dresden the 75-years anniversary. The city hall of Dresden invited for a reception on Sunday, 4th September. The first mayor Detlef Sittel welcomed the international participants from 5A and highlighted science, industry and art in the capital of Saxony. On Monday, 5th September the General Congress was opened. The outstanding engagement of Frank Hoeller, Associate

Secretary of ICO from 2017 to 2021, for the General Congress was highlighted. The ICO mourns his passing and the participants thought with a moment of silence. To commemorate Frank Hoeller the DGaO exhibited a poster.

After an introduction of the general chair Juergen Czarske of TU Dresden, John Howell, President of ICO, welcomed the participants and outlined the 75 years anniversary of the ICO, which was founded 2 years after second world war. The 60+ years anniversary of LASER and 30+ years anniversary of OWLS was celebrated. The participants of the welcome reception enjoyed a fantastic organ concert in the Church of our Lady (Frauenkirche). A speech highlighted the unique construction, destruction and reconstruction of the Frauenkirche. On Tuesday, OPTICA organized a dinner. On Wednesday, the Rector of the TU Dresden, Ursula Staudinger has given a welcome address. The entire lecturing building (HSZ) was used exclusively for the General Congress.

We acknowledge this crucial support of TU Dresden. At the banquet in the Pulverturm, a historic (gun) powder tower, the exciting history of Dresden was lively demonstrated by jugglers with costumes of August the Strong and Countess Cosel. A guided tour around the Frauenkirche was a further highlight. The General Assembly (GA) debated and approved the strategic plans of ICO. Gilles Pauliat presented at the GA and the closing session the preparations for the next general congress ICO-26 in Dakar, Senegal. Humberto Michinel highlighted at the closing session that ICO became Category 1 Member International Science Council (ISC).

Conclusion

We are pleased to have successfully celebrated the General Congress ICO-25-OWLS-16 in Dresden, thanks to the strong support by the ICO Bureau members and territorial committee, as well as international societies. It was the first postponed congress of ICO and the first merged congress of ICO and OWLS. We believe that ICO-25-OWLS-16 has become one of the most prestigious General Congress in the whole history of the ICO with Three Nobel Laureates, well-known fantastic invited speakers and the highest quality of talks, posters, exhibition and discussions. Many invited speakers have won ICO Prizes before, such as the Nobel Laureate Stefan Hell. We express our acknowledgements to all committee members who contributed to the organization, the preparation, and the execution of the General Congress in Dresden, Germany. On behalf of ICO-25-OWLS-16 we hope everyone had an exciting and memorable time at this extraordinary General Congress.

Juergen Czarske
on behalf of the local team, especially Nektarios Koukourakis and Lars Buettner
General Chair of ICO-25-OWLS-16-Dresden-Germany-2022
and Vice President of ICO

Photonics Innovations, Trends and Networking at the OptecNet Deutschland Annual Conference 2023 (www.optecnet.de)

OptecNet Deutschland e.V. is the non-profit umbrella organization of the nine regional innovation networks for optical technologies and quantum technologies in Germany. It represents around 600 members from companies and research/educational institutions, making it the photonics association with the largest number of members in Germany. The tasks include technology transfer, innovation promotion, nationwide networking, promotion of young talent, public relations and international cooperation.

The 5th OptecNet Deutschland annual conference from April 25th - 26th, 2023 in Fürstentfeldbruck offered numerous opportunities to discuss technology trends and to network in the photonics industry.



Panel discussion on the topic of “Innovation and start-up funding”. Dr. Andreas Ehrhardt, Christoph Sieber, Sabine Maass, Dr. Thomas Wisspeintner, Prof. Dr. Harald Riegel, Dr. Felix Grashon and Nathalie Hoppe. Source: OptecNet Deutschland e.V.

Four specialist sessions on the key topics “Optical Manufacturing”, “Robust Sensor Technology”, “Use of Lasers for Sustainability” and “Quantum Communication” were the focus of the annual conference. An accompanying trade exhibition visualized current innovations of the member companies and offered starting points for new business relationships.

The annual meeting was opened by the board members of OptecNet Deutschland Dr. Andreas Ehrhardt, Dr. Horst Sickinger and Ralf Niggemann. Dr. Andreas Ehrhardt, also Managing Director of Photonics BW, presented current economic figures of the growing photonics industry.

After the opening and three keynote speeches, the parallel sessions “Optical Manufacturing” and “Robust Sensor Technology” began, moderated by Dr. Horst Sickinger, Managing Director of bayern photonics, and Anke Siegmeier,

Managing Director of OptoNet. The topics ranged from localization in additive manufacturing to aspheres in production and measurement technology.

In the session “Robust Sensor Technology”, the speakers addressed, among other things, 3D micromanufacturing and imaging measurement technology for climate and environmental research.

A panel discussion on innovation and start-up funding rounded off the technical part of the first day. Dr. Andreas Ehrhardt and Nathalie Hoppe, Marketing at Photonics BW, invited Sabine Maass, Head of Department at BMWK, Dr. Felix Grasbon, Prof. Dr. Harald Riegel, Rector of Aalen University, Christoph Sieber, CEO Sill Optics, and Dr. Thomas Wisspeintner to discuss the topic “innovation and start-up funding” showing new ways and opportunities.

An evening event in a relaxed atmosphere and opportunities for personal exchange rounded off the first day of the event.

After the welcoming and exciting keynote speeches, Dr. Andreas Ehrhardt led the session “Use of Lasers for Sustainability” with exciting insights into laser material processing for e-mobility, lasers in additive manufacturing and the application for sustainable textiles. Daniel Stadler, NMWP, led through the session “Quantum Communication”, which focused on quantum encryption for cybersecurity, particularly in high-security areas, and quantum technology in space travel. The annual conference concluded with an entertaining lecture by Jonas Betzendahl on the risks and side effects of machine learning”.

125th Annual Conference of the German Society for Applied Optics (DGaO) in Aachen, May 2024 (www.dgao.de)

The 125th annual conference of the German Society for Applied Optics (DGaO) was held from May 21 to May 25, 2024 at the RWTH Aachen, under the leadership of Professor Dr. Carlo Holly from the Chair of Technology of Optical Systems at RWTH Aachen and the Fraunhofer Institute for Laser Technology ILT. In addition to traditional topics, the focus of this year's conference was on laser material processing, digital photonics production, and optics for and with EUV, with the involvement of local institutes.

The conference started with the opportunity to visit the Melaten Campus in Aachen with some insights into the research at the Fraunhofer Institute for Laser Technology (ILT), Fraunhofer Institute for Production Technology (IPT), the Digital Photonic Production (DPP) research campus, and the RWTH Aachen Chair of Digital Additive Production (DAP).

On May 22, 2024 the event was opened by the DGaO President Ricarda Kafka and the Conference Chair Professor Dr. Carlo Holly followed by an extensive conference program with a total of 18 sessions containing 83 short presentations, six main presentations, three additional presentations as part of a symposium on

digital photonics production, a panel discussion, the annual Fraunhofer Lecture, and 23 poster presentations.

Professor Dr. Holly then gave the first main presentation titled "Data Driven Innovation - Connecting the Real and Digital World of Photonics," which provided an extensive overview of current developments in digital solutions in photonics in Aachen. The sessions on day one covered topics such as digital photonics production, model building and simulation, interferometry, additive manufactured optics, interferometric sensors, and applications of 2-photon polymerization. The Interferometry session was opened with a main presentation by Eva Kuhn on the development of ball interferometers at the Physikalisch-Technische Bundesanstalt (PTB). After numerous presentations and discussions, the first day of the conference ended with a poster session with snacks and drinks.

The second day of the conference was initiated by the two main presentations by Professor Dr. Anne Harth about the creation of attosecond pulses, fitting with the recently awarded Nobel Prize and Marco Hanft who presented his strategy for dealing with new trends in the development of optical systems. This was followed by five sessions on topics such as optics for and with EUV, optics design, measurements and characterization of nanostructures, design methods and strip production, and a panel discussion on career perspectives in optics and photonics.

The next item on the program was the good tradition of presenting the DGaO Young Scientist Award. Tim Käseberg from PTB Braunschweig was awarded for his doctoral thesis on "Optical Metrology for Resolving Topological Information of Nanoscale Structures Using Modified Müller-Matrix Ellipsometry", and Johannes May from TU Ilmenau was awarded for his diploma thesis on "Construction of a Phase-Modulated Sideband Interferometer for Holographic Vibration Measurement". The certificates were presented by DGaO president Ricarda Kafka and Professor Dr. Andreas Heinrich, head of the prize committee. As an evening program, the participants had the choice between a scavenger hunt and a guided tour through the historic city center of Aachen. This was followed by networking and dinner at the Ratskeller of the Aachen City Hall in a historical atmosphere.

The next day, the research activities of the Aachen research institutes were the focus of the symposium and the Fraunhofer lecture, in addition to sessions on diffractive optical elements, optical system design, 3D metrology, and innovative camera concepts. During the symposium, three scientists from academic and industrial fields provided detailed insights into optical sensing for laser material processing (M. Kogel-Hollacher, Precitec GmbH & Co. KG), the use of DNNs (differentiable neural networks) for effective laser beam shaping (P. Buske, TOS, RWTH Aachen), and precise laser marking through synchronized cascading (H. Schlüter, SCANLAB GmbH). In particular, the lecture by Paul Buske on the use of DNNs generated great interest and led to lively discussions.

After the symposium and the sessions, the DGaO General Meeting took place in the afternoon, at which the entire board was up for re-election according to the DGaO statutes. The result was the election of a new board, the re-election of Ricarda Kafka as DGaO President, and the official handover of the organization of the next DGaO conference in Stuttgart to Professor Dr. Stephan Reichelt. The Fraunhofer Lecture on Thursday evening was another highlight of this year's DGaO conference. Professor Dr. Constantin Häfner, Managing Director of the Fraunhofer Institute for Laser Technology (ILT) and Commissioner for Fusion Research of the Fraunhofer-Gesellschaft, gave conference participants insights into the activities of the Fraunhofer-Gesellschaft to advance laser-based inertial fusion in Germany. The evening was finally rounded off at the Auditorium Carolina in Aachen with the gala dinner. During the gala dinner, the poster prizes were awarded.



Group Photo of some attendants to the 125th annual conference of the German Society for Applied Optics.

On Saturday morning, two main presentations kicked off the last day of the DGaO conference and the last two sessions on optical metrology and laser material processing. First, Professor Dr. Cornelia Denz, President of the Physikalisch-Technische Bundesanstalt (PTB), provided an excellent overview of PTB's work in optical precision technology for realizing a digital, safe, and sustainable world. This was followed by Jens Gottmann's report on 3D precision structuring of glass by selective laser-induced etching and UKP laser welding. Around noon, it was time to say goodbye again and to look forward to the 126th DGaO Annual Meeting in Stuttgart in June 2025.

Australian & New Zealand Optical Society (ANZOS) member of Royal Society Te Aparangi (RSNZ)

Highlight in Photonic and Quantum Technologies in New Zealand over the last 3 years

In terms of research in optics and photonics, NZ has one Centre of Research Excellence (CoRE) dedicated to optics and photonics: Te Whai Ao — Dodd-Walls Centre for Photonic and Quantum Technologies (DWC) and so represent a significant proportion of the funding available in these countries. In addition, there is the Australian and New Zealand Optical Society (ANZOS) that is a constituent member of Royal Society Te Aparangi (RSNZ). So most activities in optics and photonics in Aotearoa New Zealand relate to DWC or ANZOS.

1. Research Excellence

Our students have been celebrated locally and internationally. For example, Ayomikun Esan won one of the inaugural Amplify Black scholarships from OPTICA in 2022. He also won the RHT Bates Postgraduate Scholarship from the RSNZ in 2023 while Matthew Goodwin won it in 2022. Actually, the last 5 recipients were working on optics-related projects. This year, Caitlin Smith and Maisie Russell received SPIE and OPTICA scholarships, respectively. These international recognitions are quite competitive so we can be proud that our students get so many.

Our researchers have won numerous prizes in the region and worldwide. The result from Amita Deb and Niels Kjaergaard made it to the top 10 list of physics discoveries in 2021, according to Physics World and Niels Kjaergaard won the Hector medal in 2023 from the RSNZ. Professor Cather Simpson won the Commercialisation Icon Award from Kiwinet in 2022 and the inaugural New Zealand Institute of Physics Te Tohu mō te Whaihua i te Mātai Ahupūngao - Physics Impact Award Rod Badcock was celebrated by Kiwinet in 2024, winning the BNZ Researcher Entrepreneur Award for his contribution to an international effort to decarbonise modes of transport. David Hutchinson won the RSNZ Thomson medal in 2022. Numerous researchers are fellows of either SPIE, OPTICA and RSNZ.

2. Outreach and Education

Particularly around the International Day of Light (IDL), One of our focuses was bringing the community back together and rebuilding initiatives post-COVID. The DWC has a strong commitment to reaching underserved communities. We travel to the region and in the Pacific. The Dodd-Walls partnered with 2 museums and while Tuhura (the Otago Museum) has had a photonics section for a few years, the Museum of Technology

And Transport (MOTAT) at Auckland has just opened Te Puawānanga, a science discovery centre with a strong section on light and colours developed in partnership with the Dodd-Walls centre, meaning now both islands have their "light" museum. We participate in events such as the LUMA festival in Queenstown, the science fairs at MOTAT (AKL) and Tauranga, and Polyfest in south Auckland.

For the IDL in 2023, there were events in both museums, and the student chapter in Australia and NZ could get funds from the ANZOS to organise events. Additionally, The DWC is sponsoring the chapters in Otago and Auckland. This year, there was also a simultaneous screening in 3 planetariums (Auckland, Wellington and Christchurch). Finally, we have partnered from the beginning with the quantum shorts initiative in Singapore.

3. Conference activities

The main goal of ANZOS and DWC was to use conferences and symposia to bring the community back together post-COVID, especially to welcome new members who joined during the lockdown periods and had, therefore, no opportunities to meet new colleagues in the region in person. As an effort to rebuild our community, the Australian and New Zealand Conference on Optics and Photonics (ANZCOP) was held online in 2021 in a similar fashion to the photonics online meeting, meaning that hubs met locally to watch the talks online. It was well attended and received as a way for people to finally reconnect. People new to the region appreciated the opportunity to meet local colleagues. ANZCOP 2022 was held in Adelaide in December 2022, co-located with the Australian Institute of Physics Congress. We had record attendance, and it was a good opportunity for the ANZOS to reconnect with the student chapters as well as SPIE and OPTICA. It was also the opportunity for ANZOS to present their first mid-career award. ANZCOP 2023 was another resounding success in Canberra. KOALA is held by the student chapter the week prior to ANZCOP and was strongly attended as well both in Adelaide and Canberra. DWC sent a strong contingent to both KOALA. Overall, our students got many of the presentation prizes. The Dodd Walls symposia are an opportunity for the New Zealand photonics and quantum technology community to gather. They were held in Dunedin in June 2022 and Rotorua in June 2023. They were increasingly well-attended, and we already have a record attendance planned for 2024 in Christchurch.

4. Industry

ANZOS, in collaboration with DWC, SPIE and COMBS (a centre of excellence in Australia), has released a [photonic and quantum technology industry report](#). It follows up on the 2020 report and shows that while photonic and quantum technologies contribute to the economy, there is an opportunity for growth.

International Organizations

OPTICA

Advancing Optics and Photonics Worldwide

Optica, Advancing Optics and Photonics Worldwide, is the society dedicated to promoting the generation, application, archiving and dissemination of knowledge in the field. Founded in 1916, it is the leading organization for scientists, engineers, business professionals, students and others interested in the science of light. Optica's renowned publications, meetings, online resources and in-person activities fuel discoveries, shape real-life applications and accelerate scientific, technical and educational achievement.

Our core values unite the Optica global community:



- **Innovation:** The process of discovery and innovation must be built on accepted scientific methods and engineering practice.
- **Integrity:** A transparent process to ensure that our content is of the highest quality and meets the standards of our community is essential to maintaining integrity and trust with our global membership.
- **Inclusivity:** Innovation and discovery are better fostered in a more diverse, inclusive global scientific community.
- **Impact:** Our work to support the global optics and photonics community must improve the environment for research and development, elevate science broadly, and tangibly benefit humanity.





SPIE-The International Society for Optics and Photonics



SPIE - The International Society for Optics and Photonics, www.spie.org, is recognized globally as a leading authority in light-based research and technologies. Since its inception, SPIE has partnered with researchers, educators, and industry to advance the frontiers of optics and photonics for the betterment of humanity. As an international, not-for-profit educational organization, SPIE supports its members, volunteers, and constituents in pushing the boundaries of light science and technology to address challenges in healthcare, communications, energy, security, astronomy, transportation, manufacturing, and the environment.

SPIE's commitment to excellence and global collaboration has earned it recognition as the foremost professional society in the field. Numerous SPIE Fellows and Members actively participate in activities sponsored by the International Commission for Optics (ICO) each year, with the society itself supporting and engaging in a wide range of programs alongside other international societies.





SPIE is deeply committed to community support and giving. SPIE contributes a significant percentage of its revenue to various initiatives without relying on separate fundraising campaigns. Over 24 million USD has been distributed over the last five years to develop capacity and capability building programs that span the globe. Key initiatives linked to the ICO mission include:



1. **Support for Student Members:** SPIE offers funding for Student Chapters, educational scholarships, and travel support for students to attend and present research at SPIE conferences. In 2024, grants and scholarships for these activities total more than \$207,000 USD.
2. **Outreach Grants:** SPIE grants support outreach activities and events around the world and help promote the awareness of light-based technologies.
3. **SHARE (SPIE Helping Advance Research Everywhere):** Launched in October 2020 with support from Google Scholar, this initiative provides free access to the SPIE Digital Library to researchers in low-income countries. Since its launch, there have been over 1.5 million downloads from researchers in 114 countries.
4. **Photonics and Optics Centre at KNUST, Ghana:** In late 2024, SPIE approved funding for the development of this centre, which aims to address local and regional challenges by building a skilled workforce and developing innovative solutions. The centre will foster national and international collaborations and provide students with the skills to excel in photonics and optics.
5. **Education and Training in Optics and Photonics Conference (ETOP):** Organized and sponsored by SPIE, ICO, OPTICA, and IEEE Photonics, this

biennial conference's proceedings are published as open access articles in the SPIE Digital Library, expanding the conference's impact and reach.

6. **ICTP Winter College on Optics:** SPIE sponsors this annual event, offering participants the opportunity to present their work and awarding Best Paper prizes. Additionally, SPIE provides \$20,000 USD annually to support an optics staff position at ICTP for the Anchor Optics Research Program.
7. **Women in Photonics India:** SPIE provided funding for the Women in Optics and Photonics in India Conference for the last two years; this event aimed to support women researchers in the field by facilitating networking, mentoring, and showcasing their talents. The event saw participation from premier institutions and highlighted the growth of optics and photonics industries in India's start-up ecosystem. The conference featured 200 registrations, 100 poster abstracts, and various thesis presentations.
8. **SPIE Biophotonics Summer School:** Since its inception in 2003, SPIE has been a proud supporter of this global Summer School. In 2025, SPIE will elevate its commitment by taking over the management of this prestigious program in collaboration with its founders. This unique Summer School unites top graduate students in biophotonics from around the world with renowned instructors from leading institutions, creating an intensive environment to develop specialized skills in this critical technology. Alumni of this program have gone on to make groundbreaking contributions to the field.
9. **Meeting of the Global Societies:** SPIE supports global partners through agreements with national optics societies. Build relationships, support non-SPIE activities and increase visibility of optics and photonics around the world. (Pictured below is the meeting of Global Society leaders at Photonics West 2024)



SPIE's dedication to advancing light-based science and technology, coupled with its commitment to global collaboration and community support, continues to drive its mission forward, making a significant impact on the world.

ICO Contact: Carmina Londoño

SPIE Appointed ICO Vice President

The International Year of Basic Science for Sustainable Development (IYBSSD)



During 2022 and 2023 several international events were organized by Founding Unions and Founding Partners, with the aim to promote the role of basic sciences in the achievement of the United Nations 'Sustainable Development Goals'. There were also communication actions at various scales, and incentives for local, regional and national organizations to set up their own events with the same aim. The following MOU was signed to participate:

Memorandum of Understanding Organization of the International Year of Basic Sciences for Sustainable Development (IYBSSD)

Between
International Union of Pure and Applied Physics (IUPAP)
c/o OBERSON ABELS SA
Rue de-Candolle 20
CP 225 CH-1211 Genève 12
Switzerland
Represented by:
Michel Spiro, President

And
International Commission for Optics (ICO)
Institut d'Optique Graduate School,
2, avenue Augustin Fresnel
91127 PALAISEAU Cedex
France
Represented by:
John Howell, President

A. Aim of the agreement

Several international scientific unions wish to act together as the Founding Unions to organize an International Year of Basic Sciences for Sustainable Development (IYBSSD) in 2022, under the aegis of UNESCO and with the collaboration of UNESCO International Basic Sciences Programme (IBSP). Several scientific organizations, the Founding Partners, fully support this initiative.

During IYBSSD, there will be several international events organized by Founding Unions and Founding Partners, with the aim to promote the role of basic sciences in the achievement of the United Nations 'Sustainable Development Goals'. There will also be communication actions at various scales, and incentives for local, regional and national organizations to set up their own events with the same aim. Other international scientific unions and scientific institutions, as Partners, will contribute to and support the organization of IYBSSD.

The purpose of this memorandum of understanding (the "MoU") is to set out:

- the role of the Founding Unions and Founding Partners in the IYBSSD organization;
- the human resources and financial commitment of ICO toward the IYBSSD project;
- the communications about IYBSSD.

A.1 List of the Founding Unions as known at the date of this MoU

- IUPAP which is an international union representing physicists around the world.
- IUPAC which is an international union representing chemists around the world.
- IMU which is an international union representing mathematicians around the world.
- IAU which is an international union representing astronomers around the world.
- IUBS which is an international union representing biologists around the world.
- IUMRS which is an international union representing materials scientists around the world.
- IUGG which is an international union representing geodesy and geophysics scientists around the world.
- IUCr which is an international union representing crystallographers around the world.
- IMA which is an international union representing mineralogists around the world.
- IUVSTA, which is an international union representing physicists, chemists, vacuum scientists and technologists around the world.
- IUHPST which is an international union representing historians and philosophers of science and technology around the world.
- ISC-SCOR which is an international organization representing ocean science around the world.
- ICIAM which is an international union representing industrial and applied mathematicians around the world.
- IGU which is an international union representing geographers around the world.
- ICO which is an international organization whose objective is to contribute, on an international basis, to the progress and diffusion of knowledge in the fields of optics and photonics.

A. 2. List of the Founding Partners as known to the date of this MoU

- IRD is a French public research organization dedicated to sustainable development in partnership with countries from the Global South.
- CERN is an international research organization dedicated to nuclear and particle physics.
- ICTP is an international research and training centre whose aim is to advance scientific expertise in the developing world.

- JINR is a large multidisciplinary international scientific centre incorporating basic research in the field of modern nuclear physics, development and application of high technologies, and university education in the relevant fields of knowledge.
- SESAME is an international research organization for the use of synchrotron radiation.
- EPS is the European federation of national physics societies.
- IIASA is an international, interdisciplinary research institute that conducts policy-oriented research based on systems analysis into pressing world concerns, including on environment, energy security, population, and sustainable development.
- NuPECC is an Expert Committee of the European Science Foundation.
- Rencontres du Vietnam is an organization that aims to helping Vietnamese scientists and those of the Pacific-Asian world to improve their skills and to establish contacts and exchanges with colleagues from the West.
- ISC is a non-governmental organization with a global membership that brings together international scientific Unions and Associations and national and regional scientific organizations including Academies and Research Councils.
- Chinese Academy of Sciences is the linchpin of China's drive to explore and harness high technology and the natural sciences for the benefit of China and the world.
- The SKAO, formally known as the SKA Observatory, is an intergovernmental organization whose mission is to build and operate cutting-edge radio telescopes to transform our understanding of the Universe, and deliver benefits to society through global collaboration and innovation.
- FRQ have the mission to support and promote excellence in research and training of the next generation in the natural sciences, mathematics, engineering, health sciences, human and social sciences, and arts and literature, in order to stimulate knowledge development and innovation. Our mission is in line with the principles of open science, SDGs & EDI.
- EGO, the European Gravitational Observatory has as its purpose the promotion of research in the field of gravitation in Europe.
- INFN is the Italian public research Institute that promotes, coordinates and carries out theoretical and experimental research in the field of sub-nuclear, nuclear and astroparticle physics as well as the technological research necessary for such activities.

Other Founding Unions and Founding Partners may be added to this list during 2021, with the approval of the steering committee (see B.1.).

B. Role of Founding Unions and Founding Partners

B.1. Steering Committee

The Steering Committee is the main organization body of IYBSSD. It overviews and steers the IYBSSD globally. Especially, it approves:

- the international programme for IYBSSD;
- the list of Partners;
- the composition of the International Advisory Committee;
- the International Budget for IYBSSD.

It is composed of one representative from each Founding Union and Founding Partner. Within these representatives, a chair and a vice-chair are designated. For every decision, the chair should look for consensus.

If a vote is needed for a decision, each Founding Union and Founding Partner will have one vote. In the case of a tied vote, the Chair will have a casting vote to break the deadlock. Decisions are taken with a simple majority.

The Steering Committee shall meet at least once a year, in person or online, and is consulted through e-mail by the chair for every important decision regarding the organization of IYBSSD. Answers to these requests must be made within a reasonable time frame, usually 48 hours.

The Steering Committee may approve, on proposal of its chair, the addition of other Founding Unions and Founding Partners beyond the initial list of this MoU.

B. 2. Referent Institution

The Founding Unions and Founding Partners agree that, among them, IUPAP will be the Referent Institution for IYBSSD.

They agree that IUPAP can act as the representative of the Steering Committee toward Partners, Sponsors, contractors, and every authority (especially UNESCO and UN).

As such, they agree that the chair of the Steering Committee is the representative of IUPAP. At the time of the signature of this MoU, the chair is Michel Spiro, President of IUPAP (2019-2023).

As such, IUPAP can sign partnership agreements and Memoranda of Understanding related to IYBSSD with different institutions: other international scientific unions, science academies, international research centers.

IUPAP will receive and manage funds (hereafter, common funds) collected from Founding Unions, Founding Partners, Partners and Sponsors of all kinds. IUPAP will manage the common funds and use them to pay the expenses of the IYBSSD. This should not preclude Founding Unions from organizing and funding events independently as part of the IYBSSD.

IUPAP will set in place a special accountability process in order to separate all IYBSSD operations from its ordinary activity. Steering Committee members will be able to have a view on this accountability on request, and IUPAP will report on the accounts of IYBSSD annually to the meeting of the Steering Committee.

The Founding Unions and Founding Partners agree that IUPAP can select contractors for the preparation and implementation of IYBSSD activities (e.g., international conferences, communication, and fundraising) with the stipulation that they observe appropriate codes of conduct for administration, including calls for proposals, invitations to tender, selection committees, and declarations of conflict of interest. On request, and when suitable, they will share the contact of their own contractors.

B. 3. International Advisory Committee

The International Advisory Committee advises the Steering Committee about the International Programme of IYBSSD and makes proposals for regional and national programmes.

It is composed by representatives from different parts of the world, in agreement with the Steering Committee, especially by representatives of national science academies and their continental networks. They also act as contact persons.

It is chaired by the chair of the Steering Committee.

The International Advisory Committee shall meet at least once a year, in person or online.

B. 4. International High Patronage Committee

The International High Patronage Committee is composed of high-level scientists from all over the world and in every field of basic sciences.

The International High Patronage Committee members advise the chair of the Steering Committee about all matters regarding IYBSSD.

C. Commitments of the Founding Unions and Founding Partners

C. 1. Human Resources Commitment

Each Founding Union and Founding Partner will:

- delegate a representative to the Steering Committee, with the ability to take decisions in the name of the Founding Partner;
- share with the Steering Committee, and especially with its chair, all relevant information that could help in the preparation and implementation of IYBSSD;
- as much as possible, take part in the organization of the international programme of IYBSSD, especially of international conferences;
- share the communication material produced by the IYBSSD International Secretariat with its members and through its networks, with all means at its disposal, including social network accounts, website, newsletters and journals, electronic and in print;
- mobilize its member organizations or its representatives, if relevant, to set up national or regional IYBSSD committees for the organization of national and regional programmes.

C. 2. Financial commitment

The preparation and organization of IYBSSD needs to be funded. This funding will rely on Sponsors, partners and also on Founding Unions and Founding Partners.

The Founding Unions and Founding Partners agree to share contacts of Sponsors that already fund some of their activities and to help as much as possible for fundraising to enable the implementation of IYBSSD.

The Founding Unions and Founding Partners agree that it will be difficult to raise funds effectively from sponsors before the approval of the resolution about IYBSSD by UN General Assembly.

The Founding Partners agree that before this deadline, the preparation of IYBSSD needs to be commonly funded (to cover campaign toward UN national delegations, meetings, participation to science and science policy conferences to advertise IYBSSD and lobby about it, communication, documents production, etc.).

So, they undertake to provide themselves, with the help of Partners, the common funds necessary for the preparation of IYBSSD.

The funding schedule will be, for ICO, before the end of 2022: 2.500 EUR. Payment shall be made upon receipt of invoices sent by IUPAP to The partner at the following address:

International Commission for Optics (ICO)

Institut d'Optique Graduate School, 2, avenue Augustin Fresnel

91127 PALAISEAU Cedex – France

D. Open Access

Founding Unions and Founding Partners agree that IYBSSD is a common good and needs to be widely shared, advertised and campaigned for. They agree that open access is essential to these purposes.

All content and documents produced on purpose for IYBSSD by whatever organization will use a Creative Commons License BY-NC-ND 4.0. This license allows a wide non-commercial and without transformation sharing.

As such, the producers of any content and document must obtain from authors, designers, inventors, whether or not they are its employees, the authorization for such an exploitation (reproduction, representation, adaptation or translation license) without time limitation.

E. Duration

This MoU shall take effect upon signature and remain in force up to six months after the end of IYBSSD, without prejudice to the provisions on termination and continuation of intellectual property obligations after the end of the MoU.

Within six months after the end of IYBSSD, the Referent Organizing Partner will provide a complete financial report. If funding exceeds expenses, the chair of the Steering Committee will propose one or several basic science education projects in developing countries to be funded with the remaining amount.

F. Termination of Agreement

Any party can terminate its participation to this MoU by giving two months' notice, by sending the other party a registered letter with acknowledgement of receipt stating the reasons for the termination. The notice shall commence from the date of receipt of the letter. During the notice period the Steering Committee will use its best efforts to resolve the reasons for the termination or shall provide proof that the termination arises from an impediment resulting from a case of force majeure, in which case the termination shall be withdrawn.

Date:

On behalf of IUPAP
Michel Spiro, President

On behalf of ICO
John Howell, President

ICO BUREAU MEETINGS

Minutes of the first 2022 ICO Bureau meeting

Tuesday 23th August 2022, 17:00-18:20h (CET).

Online meeting using “zoom.us”.

Participants: J. Howell (chair), H. Michinel (secretary) R. Ramponi, J. Niemela, A. Podoleanu, G. von Bally, K. Choquette, J. Czarske, K. Minoshima, E. Rosas, A. Wagué, N. Westbrook.

Apologies: Q. Gong, L. Sirko, S. Otero, C. Cisneros, C. Londoño, P. Ferraro, Y. Ismail, G. Pauliat, N. Kundikova.

1. Call to order, introduction

The meeting starts online at 17:00h with no technical issues and J. Howell thanks the ICO Bureau members for their attendance. The Secretary explains that the agenda and documents for the meeting are available in a shared folder that it is accessible online. He also says that the main goal of the meeting is to revise the agenda and documents for the next Bureau meeting and General Assembly that will take place face-to-face in Dresden.

2. Approval of the agenda and the minutes of the previous bureau

The agenda and the minutes of the previous bureau are presented and the following motion is moved and voted:

Motion 1: To approve the Agenda. Moved by J. Howell, seconded by R. Ramponi, approved unanimously.

3. Revision of the agenda and documents of the ICO GA

The ICO Secretary says that the documents that need approval at the next General Assembly are ready. The ICO treasurer presents the budget, with no important issues or changes noticed. John Howell says that an authorization is necessary to operate the French bank account and the following motion is moved and voted:

Motion 2: To authorize Prof. Pierre Chavel from Intitute d’Optique (France) to operate the ICO bank account in France.

Moved by J. Howell, seconded by J. Niemela, approved unanimously.

The changes in the ICO statutes to adapt to the new ICO status in the International Science Council are presented by the Secretary General. Most of the changes are related with the ICO being no more an IUPAP affiliated commission. For an easier management of the bank account it is also necessary to modify article 5 stating that government and daily issues between general assemblies are carried out by the ICO execom. A comparative table with the changes highlighted is presented and discussed. Finally, the following motion is moved:

Motion 3: To present an updated version of the ICO statutes to the next General Assembly to be celebrated in Dresden. The final version will be attached to this minutes.

Moved by H. Michinel, seconded by R. Ramponi, approved unanimously.

The Secretary informs that the only reports of the ICO committees not received were those of the Education committee and the International Travelling Lecture Program, it is assumed that no activity has taken place in both committees.

4. Report on the ICO-25 status

Prof. Jürgen Czarske gives a description of the status of the ICO-25 congress. He is satisfied with the overall picture, despite the inconveniences generated for the pandemics and the consequent difficulties for travelling. The Secretary asks about the situation of some ICO representatives whose fees have not been waived, as it is the case of Imrana Ashraf from Pakistan. Prof. Czarske will look into the issue and try to solve the problem with the agency that runs the congress. He leaves the meeting at 18:00 as well as Prof. K. Choquette.

5. Any Other Business

The Secretary reports an issue with the Mexican Territorial Committee: more official delegates than allowed have registered for the next General Assembly. Emails have been sent to the addresses registered in order to clarify the Mexican representation. It has also been demanded to the delegates to present a letter from the Mexican Academy of Sciences to identify the members of the Mexican Territorial Committee.

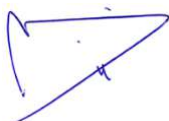
Prof. Eric Rosas says that changes in the Mexican legislation of NGOs are behind this issue and he will speak to the General Assembly. The Secretary of the ICO says that all the delegates registered from Mexico have been invited to support their case in the ICO General Assembly and that the Mexican Territory will have no voting rights until this issue is solved. The following motion is moved:

Motion 4: To decide in the next General Assembly on the Mexican Territorial Committee.

Moved by H. Michinel, seconded by E. Rosas, approved unanimously.

Prof. E. Rosas says that he has not registered for the ICO25 but he wants to attend only to the ICO General Assembly. As Prof. Czarske has left the meeting, the secretary suggest prof. Rosas to contact the organizers of ICO25 to check the possibility of joining only the General Assembly but not the ICO25 congress. Prof. Roberta Ramponi says that traditionally this has been possible. She also points that the fees in this congress have been much higher than in other ICO congresses, probably due to the cancellation problems associated with the pandemics. Prof. Michinel says that it is necessary to establish clear rules concerning the fees for future ICO congresses. It is agreed that this issue will be discussed as an specific point in the next bureau meeting in Dresden.

No other issue were raised and the meeting adjourned 18:20h CET.



Minutes Approved in the ICO Bureau meeting celebrated September 6th, 2022.

APPENDIX: CHANGES IN THE ICO STATUTES**ICO (CURRENT) STATUTES****Article 1 Objective**

The objective of the International Commission for Optics (ICO) is to contribute, on an international basis, to the progress of the science of optics and photonics and their applications. It emphasizes the unity of the cross disciplinary field of optics.

Optics and photonics are defined as the fields of science and engineering encompassing the physical phenomena and technologies associated with the generation, transmission, manipulation, detection, and utilization of light. It extends on both sides of the visible part of the electromagnetic spectrum as far as the same concepts apply. In particular, the ICO promotes international cooperation and facilitates the rapid exchange of information, by encouraging and furthering the organization, on an international basis, of scientific meetings and summer schools. It emphasizes actions for the education and training in optics and photonics internationally. It undertakes special actions for the development of optics and photonics in regions where particular support is needed. It strives to improve the recognition of optics and photonics as fields of science with a significant impact on economy. It works also for the promotion of international agreements on nomenclature, units, symbols and standards.

Article 2 Affiliation

The International Commission for Optics is ~~an Affiliated Commission of the Union for Pure and Applied Physics (IUPAP) and a Scientific Associate of the International Council for Science (ICSU)~~

Article 3 Membership

The Commission has three categories of Members.

3a) Territorial Committee Members, that represent identified optics communities in a set of non-overlapping geographical areas. A Territorial Committee Member should be listed under a name that avoids any misunderstanding about the area represented. The word "territory" does not imply any political position on the part of the

ICO (NEW) STATUTES**Article 1 Objective**

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The International Commission for Optics is **a full member of the International Science Council.**

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3a) Territorial Committee Members, that represent identified optics communities in a set of non-overlapping geographical areas. A Territorial Committee Member should be listed under a name that avoids any misunderstanding about the area represented. The word "territory" does not imply any political position on the part of the

Commission, which seeks to assist scientists in optics everywhere in the world to cooperate on an international level. Each Territorial Committee should receive endorsement of the appropriate authority representing science in its territory, such as an Academy of Science. ~~In addition, it should either (a) be a subcommittee of the body representing the Member in IUPAP, (b) be recognized by the body representing the Member in IUPAP, or (c) if no such body exists be recognized by the council of IUPAP.~~

3b) International Organization members. Such members are membership organizations active in the field of Optics on an international level.

3c) The Commission may also accept organizations active in optics as Associate Members. Associate Members pay no dues and have no voting privileges.

Application for all categories of membership shall be made to the Secretary of the Commission and submitted to the next General Meeting for approval. Applications in the Territorial Committee Member and Associate Member categories may be approved by the Bureau, subject to ratification at the next General Meeting of the Commission.

Article 4 Shares and votes

Each member of ICO has a specified number of shares, which determines its financial contribution as well as its number of votes at the General Meeting.

4a) ~~Each Territorial Committee member whose territory is also a member of IUPAP has the same number of shares, Nv1, in ICO as it has in IUPAP.~~ The number of votes Nv1, which is also the maximum number of voting delegates of the Territorial Committee Member, is determined according to ~~the IUPAP~~ scale, which presently reads as follows:

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4a) The number of votes Nv1, which is also the maximum number of voting delegates of the Territorial Committee Member, is determined according to a scale, which presently reads as follows:

Category	number of shares	number of official delegates and votes
I	1	1
II	2 or 3	2
III	4 to 6	3
IV	7 to 9	4
V	10 to15	5
VI	Over 15	6

4b) The number of shares Ns_2 of an International Organization Member is determined in agreement with ICO during the Membership admission procedure; it may be changed following the same procedures as for membership admission. The International Organization Members are represented by one voting representative carrying a number of votes Nv_2 proportional to the number of shares Ns_2 of the member determined in such a way that the total number of votes of all International Organization Members cannot exceed that of all Territorial Committee Members. The exact method for determining Nv_2 is included in the Rules and Codes of Practice.

Article 5 The Bureau

The Bureau of ICO consists of the following:

- The Executive Committee, consisting of the President, the immediate Past-President, the Secretary, the Associate Secretary and the Treasurer. All members of the Executive Committee, except for the Immediate Past-President, are elected by ICO at the General Meeting.
- The IUPAP representative appointed by the Executive Council of IUPAP under Article 7b of the statutes of the Union, ~~and any Associate Members from IUPAP Commissions.~~
- The other Bureau members, who are traditionally known as Vice-Presidents. Eight Vice-Presidents (at least two of whom are from industry) are elected at the General Meeting by the Territorial Committee Members; in addition, also at the General Meeting, every International Organization Member appoints one Vice-President up to the limit of eight; if there are more than 8

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International Organization Members, eight Vice-Presidents are elected at the General Meeting by the International Organization Members.

The Bureau is responsible for the conduct of the Commission's business between General Meetings. The term of office of the Bureau is three years from October 1st in the year of the election.

The President will be elected for a term of 3 years, normally after having served 3 years as a Bureau Member. In the event the President is unable to continue his/her duties for the elected term, the Past-President (or in case he/she is unable, the Secretary) will act as interim President, or, with the concurrence of the majority of the Bureau, will appoint one of the Bureau Members as interim President.

The Secretary, Associate Secretary and Treasurer will be elected for a term of three years and will be eligible for a second and usually final term of three more years. If either is unable to continue his/her duties for the elected term, the President will, with the concurrence of the majority of the Bureau, appoint a substitute from among the current Bureau Members.

Other Bureau Members will be elected for 3 years and will be eligible for not more than one further term of three years, except as described in the above two paragraphs. The Bureau may fill vacancies occurring in its membership during the interval period between General Meetings, except for the position of Immediate Past President.

Article 6 Finance

In addition to money that may be granted by IUPAP, the International Commission for Optics may possess funds of its own consisting of subscriptions from the Members and special donations or grants. Each member pays a number of shares. Dues are payable on the first day of each year. Certain specific projects may be financed independently of the general resources of the Commission. The unit subscription per share is decided by the General Meeting.

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Article 7 Withdrawal and Resignation

A member whose subscription is more than six years in arrears is to be regarded as having withdrawn. Any Member which has resigned is liable for the unpaid subscriptions up to the end of the year of resignation. Any Member ceasing to belong to the Commission forfeits its rights to ICO assets.

Article 8 General Meeting

The ICO is governed by its General Meeting, which consists of the Bureau (non-voting) and the official delegates appointed by the Members.

The General Meeting of ICO is held every third year. The following business will be carried out at each of these General Meetings:

- (a) election of the Bureau;
- (b) examination of a Financial Statement presented by the Bureau;
- (c) agreement on a provisional budget for future years;
- (d) discussion of questions submitted by the ICO Members, the Bureau ~~or the Executive Council of IUPAP.~~

Any Member, including Associate Members, as well as the ICO President can invite delegates at the General Meeting with no restriction of number. The number of voting delegates is restricted as per article 4.

The President may, with the approval of the Bureau, convene an Extraordinary General Meeting, and shall call such Meetings upon the request of one-third of all ICO Members.

The Draft Agenda for the General Meeting is circulated by the Secretary at least one month before the opening of the General Meeting. Subjects not on the Draft Agenda may be added at the Meeting with the consent of a single majority of the votes of Members represented at the Meeting.

A Member who is unable to send a delegate at a given General Meeting but wishes to vote on appropriate matters appearing on the Agenda may send its vote in writing to the President.

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Alternately, it may give a proxy to another member of the same category. To be valid, votes made in writing and proxies must be received prior to the General Meeting.

Article 9 Other Meetings

The International Commission for Optics may sponsor or co-sponsor international conferences and give financial support (grants or guarantees), as a grant to organizing committees or as a travelling grant directly to participants.

Article 10 Relation with the International Union of Pure and Applied Physics

(See also Articles 2 and 3)

~~The Commission will report concerning its work and its financial position to each General Assembly of the International Union for Pure and Applied Physics and will receive directives from that Assembly. Affiliation of the Commission to the Union can be terminated only by the Union at its General Assembly. In the event of disaffiliation, the special funds of the Commission are to remain its own property, but any unexpected balance of money received from IUPAP shall be returned to that body.~~

Article 11 Duration of the Commission

The life of the International Commission for Optics is not limited. The dissolution of the Commission may be decided by a majority of two-thirds of the votes of the Members voting at a General Meeting. In this event, the assets of ICO will be allocated by the General Meeting to one or more not-profit organizations of closely similar purposes serving the optical sciences.

Article 12 Alterations to the Statutes

Alterations in the Statutes may be proposed by the Bureau of the Commission, by one of the members, ~~or by IUPAP~~. Such proposals must be received by the Secretary of the Commission at least three months before the date of the General Meeting.

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This text will depend on the MoU to be signed with IUPAP

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Amendments or modifications may be adopted only at a General Meeting by a two-thirds majority of the Members taking part in the vote. ~~Alterations of Statutes must be approved by IUPAP, which shall also constitute the final authority in regard to interpretation of Statutes.~~

Article 13 Rules and Codes of Practice

Rules for the conduct of business determine procedures for dealing with matters not specifically laid down in these Statutes. They are meant to give guidance in general terms to the Bureau and to the Members in matters such as, for example, the provision of grants from the funds of the International Commission for Optics for Symposia and Schools.

The rules and codes of practice may not contravene the Statutes of the ICO. They are proposed by the Bureau. The adoption, modification, or abolition of any rule or code of practice shall require either a majority of two-thirds of the members voting at a General Meeting of the Commission, or alternatively a majority of two-thirds of the total number of votes of all Members in a postal vote on a proposal unanimously approved by the Bureau.

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DEFINITIVE VERSION OF THE ICO STATUTES IN ENGLISH AND FRENCH**ICO STATUTES****Article 1 Objective**

The objective of the International Commission for Optics (ICO) is to contribute, on an international basis, to the progress of the science of optics and photonics and their applications. It emphasizes the unity of the cross disciplinary field of optics. Optics and photonics are defined as the fields of science and engineering encompassing the physical phenomena and technologies associated with the generation, transmission, manipulation, detection, and utilization of light. It extends on both sides of the visible part of the electromagnetic spectrum as far as the same concepts apply. In particular, the ICO promotes international cooperation and facilitates the rapid exchange of information, by encouraging and furthering the organization, on an international basis, of scientific meetings and summer schools. It emphasizes actions for the education and training in optics and photonics internationally. It undertakes special actions for the development of optics and photonics in regions where particular support is needed. It strives to improve the recognition of optics and photonics as fields of science with a significant impact on economy. It works also for the promotion of international agreements on nomenclature, units, symbols and standards.

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The International Commission for Optics is a Category 1 full member of the International Science Council.

Article 3 Membership

The Commission has three categories of Members.

3a) Territorial Committee Members, that represent identified optics communities in a set of non-overlapping geographical areas. A Territorial Committee Member should be listed under a name that avoids any misunderstanding about the area represented. The word "territory" does not imply any political position on the part of the Commission, which seeks to assist scientists in optics everywhere in the world to cooperate on an international level.

STATUTS DE LA CIO**Article 1 Objectif**

L'objectif de la Commission internationale d'optique (CIO) est de contribuer, à l'échelle internationale, au progrès de la science de l'optique et de la photonique et de ses applications. Elle met l'accent sur l'unité du domaine interdisciplinaire de l'optique.

L'optique et la photonique sont définies comme les champs scientifiques et techniques qui recouvrent les phénomènes physiques et les technologies associés à l'émission, la transmission, la manipulation, la détection et l'utilisation de la lumière. Elles s'étendent des deux côtés de la partie visible du spectre électromagnétique dans la mesure où les mêmes concepts s'appliquent.

En particulier, la CIO promeut la coopération internationale et facilite l'échange rapide d'informations, en encourageant et en favorisant l'Organisation, sur une base internationale, de réunions scientifiques et d'écoles d'été. Elle met l'accent sur les actions d'éducation et de formation en optique et photonique au niveau international. Elle entreprend des actions spéciales pour le développement de l'optique et de la photonique dans les régions où un soutien particulier est nécessaire. Elle s'efforce d'améliorer la reconnaissance de l'optique et de la photonique en tant que domaines scientifiques ayant un impact significatif sur l'économie. Elle travaille également à la promotion d'accords internationaux sur la nomenclature, les unités, les symboles et les normes.

Article 2 Affiliation

La Commission Internationale d'Optique est membre à part entière de Catégorie 1 de l'International Science Council.

Article 3 Adhésion

La Commission compte trois catégories de membres.

3a) Les Comités territoriaux membres, qui représentent les communautés optiques identifiées dans un ensemble de zones géographiques qui ne se chevauchent pas. Un Comité territorial membre doit être listé sous un nom qui évite tout malentendu sur la zone représentée. Le mot "territoire" n'implique aucune position politique de la Commission, qui cherche à aider les scientifiques en optique partout dans le monde à coopérer au niveau international.

Each Territorial Committee should receive endorsement of the appropriate authority representing science in its territory, such as an Academy of Science.

3b) International Organization members. Such members are membership organizations active in the field of Optics on an international level.

3c) The Commission may also accept organizations active in optics as Associate Members. Associate Members pay no dues and have no voting privileges.

Application for all categories of membership shall be made to the Secretary of the Commission and submitted to the next General Meeting for approval. Applications in the Territorial Committee Member and Associate Member categories may be approved by the Bureau, subject to ratification at the next General Meeting of the Commission.

Article 4 Shares and votes

Each member of ICO has a specified number of shares, which determines its financial contribution as well as its number of votes at the General Meeting.

4a) The number of votes Nv1, which is also the maximum number of voting delegates of the Territorial Committee Member, is determined according to a scale, which presently reads as follows:

Category	number of shares	number of official delegates and votes
I	1	1
II	2 or 3	2
III	4 to 6	3
IV	7 to 9	4
V	10 to15	5
VI	> 15	6

Chaque comité territorial doit recevoir l'aval de l'autorité appropriée représentant la science sur son territoire, telle qu'une Académie des sciences.

3b) Les Organisations internationales membres. Ces membres sont des Organisations actives dans le domaine de l'optique au niveau international.

3c) La Commission peut également accepter des Organisations actives dans l'optique en tant que membres associés. Les membres associés ne paient pas de cotisation et n'ont pas le droit de vote.

Les demandes d'adhésion à toutes les catégories de membres sont adressées au Secrétaire de la Commission et soumises à l'approbation de la prochaine Assemblée générale. Les candidatures dans les catégories de Comité territorial et de membre associé peuvent être approuvées par le Bureau, sous réserve de ratification à la prochaine Assemblée générale de la Commission.

Article 4 Actions et votes

Chaque membre de la CIO dispose d'un nombre déterminé de parts, qui détermine sa contribution financière ainsi que son nombre de voix à l'assemblée générale.

4a) Le nombre de voix Nv1, qui est également le nombre maximum de délégués votants du membre du comité territorial, est déterminé selon un barème, qui se lit actuellement comme suit :

Catégorie	nombre de parts	nombre de délégués officiels et de votes
I	1	1
II	2 ou 3	2
III	4 à 6	3
IV	7 à 9	4
V	10 à15	5
VI	> 15	6

4b) The number of shares Ns2 of an International Organization Member is determined in agreement with ICO during the Membership admission procedure; it may be changed following the same procedures as for membership admission. The International Organization Members are represented by one voting representative carrying a number of votes Nv2 proportional to the number of shares Ns2 of the member determined in such a way that the total number of votes of all International Organization Members cannot exceed that of all Territorial Committee Members. The exact method for determining Nv2 is included in the Rules and Codes of Practice.

Article 5 The Bureau

- The Bureau of ICO consists of the following:
- The Executive Committee (Execom), consisting of the President, the immediate Past-President, the Secretary, the Associate Secretary and the Treasurer. All members of the Executive Committee, except for the Immediate Past-President, are elected by ICO at the General Meeting.
- The IUPAP representative appointed by the Executive Council of IUPAP under Article 7b of the statutes of the Union.
- The other Bureau members, who are traditionally known as Vice-Presidents. Eight Vice-Presidents (at least two of whom are from industry) are elected at the General Meeting by the Territorial Committee Members; in addition, also at the General Meeting, every International Organization Member appoints one Vice-President up to the limit of eight; if there are more than eight International Organization Members, eight Vice-Presidents are elected at the General Meeting by the International Organization Members.

The executive committee is responsible for the conduct of the Commission's business between General Meetings. The term of office of the Bureau is three years from October 1st in the year of the election. The President will be elected for a term of 3 years, normally after having served 3 years as a Bureau Member. In the event the President is unable to continue his/her duties for the elected term, the Past-President (or in case he/she is unable, the

4b) Le nombre de parts Ns2 d'une Organization internationale membre est déterminé en accord avec la CIO lors de la procédure d'admission des membres ; il peut être modifié selon les mêmes procédures que pour l'admission des membres. Les Organizations internationales membres sont représentés par un représentant votant disposant d'un nombre de voix Nv2 proportionnel au nombre d'actions Ns2 du membre déterminé de telle sorte que le nombre total de voix de toutes les Organizations internationales membres ne puisse dépasser celui de tous les Comités territoriaux. La méthode exacte pour déterminer Nv2 est incluse dans les Règles et Codes de pratique.

Article 5 Le Bureau

Le Bureau de la CIO se compose des éléments suivants :

- Le Comité exécutif (Execom), composé du président, du président sortant, du secrétaire, du secrétaire associé et du trésorier. Tous les membres du Comité exécutif, à l'exception du président sortant, sont élus par la CIO lors de l'Assemblée générale.
- Le représentant de IUPAP nommé par le Conseil exécutif de IUPAP en vertu de l'article 7b des statuts de l'Union.
- Les autres membres du Bureau, qui sont traditionnellement appelés Vice-Présidents. Huit Vice-Présidents (dont au moins deux industriels) sont élus lors de l'Assemblée Générale par les Membres du Comité Territorial; en outre, toujours lors de l'Assemblée Générale, chaque Organisation internationale membre nomme un Vice-Président dans la limite de huit ; s'il y a plus de huit Organizations internationales membres, huit vice-présidents sont élus lors de l'assemblée générale par les membres de l'Organization internationale.

Le Comité exécutif est chargé de conduire les affaires de la Commission entre les Congrès Généraux. La durée du mandat du Bureau est de trois ans à compter du 1er octobre de l'année de l'élection.

Le Président est élu pour un mandat de 3 ans, normalement après avoir servi 3 ans en tant que membre du Bureau. Si le Président n'est pas en mesure de poursuivre ses fonctions pendant la durée du mandat, le Président sortant (ou, en cas d'empêchement,

Secretary) will act as interim President, or, with the concurrence of the majority of the Bureau, will appoint one of the Bureau Members as interim President.

The Secretary, Associate Secretary and Treasurer will be elected for a term of three years and will be eligible for a second and usually final term of three more years. If either is unable to continue his/her duties for the elected term, the President will, with the concurrence of the majority of the Bureau, appoint a substitute from among the current Bureau Members.

Other Bureau Members will be elected for 3 years and will be eligible for not more than one further term of three years, except as described in the above two paragraphs.

The Bureau may fill vacancies occurring in its membership during the interval period between General Meetings, except for the position of Immediate Past President.

Article 6 Finance

The International Commission for Optics may possess funds of its own consisting of subscriptions from the Members and special donations or grants. Each member pays a number of shares. Dues are payable on the first day of each year. Certain specific projects may be financed independently of the general resources of the Commission. The unit subscription per share is decided by the General Meeting.

Article 7 Withdrawal & Resignation

A member whose subscription is more than six years in arrears is to be regarded as having withdrawn. Any Member which has resigned is liable for the unpaid subscriptions up to the end of the year of resignation. Any Member ceasing to belong to the Commission forfeits its rights to ICO assets.

Article 8 General Meeting

The ICO is governed by its General Meeting, which consists of the Bureau (non-voting) and the official delegates appointed by the Members.

The General Meeting of ICO is held every third year. The following business will be carried out at each of these General Meetings:

le Secrétaire) assure l'intérim ou, avec l'accord de la majorité du Bureau, désigne l'un des membres du Bureau comme Président par intérim

Le Secrétaire, le Secrétaire associé et le Trésorier sont élus pour un mandat de trois ans et sont éligibles pour un second et généralement dernier mandat de trois ans supplémentaires. Si l'un ou l'autre n'est pas en mesure de poursuivre ses fonctions pendant la durée du mandat, le Président, avec l'accord de la majorité du Bureau, nomme un remplaçant parmi les membres actuels du Bureau.

Les autres membres du Bureau sont élus pour trois ans et ne peuvent être réélus qu'une seule fois pour trois ans, sauf dans les cas décrits dans les deux paragraphes précédents.

Le Bureau peut pourvoir aux vacances survenant dans sa composition dans l'intervalle entre les assemblées générales, à l'exception du poste de président sortant.

Article 6 Finances

La Commission internationale d'optique peut disposer de fonds propres constitués par les cotisations des membres et par des dons ou subventions spéciales. Chaque membre paie un certain nombre de parts. Les cotisations sont payables le premier jour de chaque année. Certains projets spécifiques peuvent être financés indépendamment des ressources générales de la Commission. La souscription unitaire par part est décidée par l'Assemblée générale.

Article 7 Retrait et démission

Un membre dont la cotisation est en retard de plus de six ans doit être considéré comme s'étant retiré. Tout membre qui a démissionné est responsable des cotisations impayées jusqu'à la fin de l'année de sa démission. Tout Membre qui cesse de faire partie de la Commission perd ses droits sur les actifs de CIO.

Article 8 Assemblée générale

La CIO est dirigée par son Assemblée générale, qui se compose du Bureau (sans droit de vote) et des délégués officiels désignés par les Membres.

L'Assemblée générale de CIO se tient tous les trois ans. Les questions suivantes seront traitées lors de chacune de ces assemblées générales:

- a) election of the Bureau;
- b) examination of a Financial Statement presented by the Bureau;
- c) agreement on a provisional budget for future years;
- d) discussion of questions submitted by the ICO Members, or the Bureau.

Any Member, including Associate Members, as well as the ICO President can invite delegates at the General Meeting with no restriction of number. The number of voting delegates is restricted as per article 4.

The President may, with the approval of the Bureau, convene an Extraordinary General Meeting, and shall call such Meetings upon the request of one-third of all ICO Members.

The Draft Agenda for the General Meeting is circulated by the Secretary at least one month before the opening of the General Meeting. Subjects not on the Draft Agenda may be added at the Meeting with the consent of a single majority of the votes of Members represented at the Meeting.

A Member who is unable to send a delegate at a given General Meeting but wishes to vote on appropriate matters appearing on the Agenda may send its vote in writing to the President.

Alternately, it may give a proxy to another member of the same category. To be valid, votes made in writing and proxies must be received prior to the General Meeting.

Article 9 Other Meetings

The International Commission for Optics may sponsor or co-sponsor international conferences and give financial support (grants or guarantees), as a grant to organizing committees or as a travelling grant directly to participants.

Article 10 Relation with the International Union of Pure and Applied Physics (IUPAP)

The relationship with IUPAP is ruled by a specific Memorandum of Understanding signed by the two organizations.

Article 11 Duration of the Commission

The life of the International Commission for Optics is not limited. The dissolution of the Commission may be decided by a

- a) l'élection du Bureau ;
- b) l'examen d'un état financier présenté par le Bureau ;
- c) l'adoption du budget prévisionnel pour les années à venir ;
- d) discussion des questions soumises par les Membres de la CIO ou le Bureau.

Tout Membre, y compris les Membres associés, ainsi que le Président de CIO peuvent inviter des délégués à l'Assemblée générale sans restriction de nombre. Le nombre de délégués votants est limité conformément à l'article 4.

Le Président peut, avec l'approbation du Bureau, convoquer une Assemblée générale extraordinaire, et convoque de telles réunions à la demande d'un tiers de tous les Membres de CIO.

Le projet d'ordre du jour de l'Assemblée générale est diffusé par le secrétaire au moins un mois avant l'ouverture de l'assemblée. Des sujets ne figurant pas dans le projet d'ordre du jour peuvent être ajoutés lors de l'assemblée avec le consentement de la majorité simple des voix des membres représentés à l'assemblée.

Tout membre qui n'est pas en mesure d'assister à l'Assemblée générale mais qui souhaite voter sur un certain nombre de points figurant à l'ordre du jour peut envoyer un vote par écrit au Président. Il peut également, s'il le préfère, confier un pouvoir à un autre membre de la même catégorie. Pour être valables, ce vote ou ce pouvoir doivent être reçus avant le vote de l'Assemblée générale.

Article 9 Autres réunions

La Commission internationale d'optique peut parrainer ou coparrainer des conférences internationales et apporter un soutien financier (subventions ou garanties), sous forme de subventions aux comités d'Organisation ou de bourses de voyage allouées directement aux participants.

Article 10 Relations avec l'Union internationale de physique pure et appliquée (IUPAP)

La relation avec l'IUPAP est régie par un protocole d'accord spécifique signé par les deux Organizations.

Article 11 Durée de la Commission

La durée de la Commission Internationale d'Optique n'est pas limitée. La dissolution de la Commission peut être décidée à la

majority of two-thirds of the votes of the Members voting at a General Meeting. In this event, the assets of ICO will be allocated by the General Meeting to one or more not-profit organizations of closely similar purposes serving the optical sciences.

Article 12 Alterations to the Statutes

Alterations in the Statutes may be proposed by the Bureau of the Commission, or by one of the members. Such proposals must be received by the Secretary of the Commission at least three months before the date of the General Meeting.

Amendments or modifications may be adopted only at a General Meeting by a two-thirds majority of the Members taking part in the vote.

Article 13 Rules and Codes of Practice

Rules for the conduct of business determine procedures for dealing with matters not specifically laid down in these Statutes. They are meant to give guidance in general terms to the Bureau and to the Members in matters such as, for example, the provision of grants from the funds of the International Commission for Optics for Symposia and Schools.

The rules and codes of practice may not contravene the Statutes of the ICO. They are proposed by the Bureau. The adoption, modification, or abolition of any rule or code of practice shall require either a majority of two-thirds of the members voting at a General Meeting of the Commission, or alternatively a majority of two-thirds of the total number of votes of all Members in a postal vote on a proposal unanimously approved by the Bureau.

majorité des deux tiers des voix des membres votant lors d'une assemblée générale. Dans ce cas, les actifs de la CIO seront dévolues par l'Assemblée générale à une ou plusieurs Organisations à but non lucratif avec objectifs similaires servant les sciences optiques.

Article 12 Modifications des statuts

Les modifications des statuts peuvent être proposées par le Bureau de la Commission ou par l'un de ses membres. Ces propositions doivent être reçues par le Secrétaire de la Commission au moins trois mois avant la date de l'Assemblée générale.

Les amendements ou modifications ne peuvent être adoptés que lors d'une Assemblée générale, à la majorité des deux tiers des Membres prenant part au vote.

Article 13 Règlement intérieur

Un règlement intérieur détermine les procédures à suivre pour traiter les questions qui ne sont pas spécifiquement énoncées dans les présents Statuts. Il a pour but de donner des orientations générales au Bureau et aux Membres sur des questions telles que, par exemple, l'octroi de subventions provenant des fonds de la Commission Internationale d'Optique pour des colloques et les écoles thématiques.

Le règlement intérieure ne peut contredire les statuts de CIO. Il est proposé par le Bureau. L'adoption, la modification ou l'annulation de toute partie du règlement intérieur requiert soit une majorité des deux tiers des membres votant lors d'une réunion générale de la Commission, soit une majorité des deux tiers du nombre total des voix de tous les membres lors d'un vote par correspondance sur une proposition approuvée à l'unanimité par le Bureau.

Original statutes adopted at Delft, 1948. Amended at Cambridge - 1956, Santa Monica - 1972, Sapporo - 1984, Garmisch Partenkirchen - 1990, Taejon - 1996. New version adopted by ICO General Meeting, San Francisco, August 2, 1999. Approved by IUPAP, October 1999. The motivation was to obtain a good representation of the whole optical community within ICO through the addition of the new membership category "International Organization Member". The European Optical Society, the Institute of Electrical and Electronic Engineer's Laser and Electro-Optic Society, the Optical Society of America, and SPIE - the International Society for Optical Engineering were accepted for membership in the new category in 1999. Amended by the ICO-21 General Assembly, Sidney, Australia, July 2008. Article 1 amended at the ICO-23 General Meeting, Santiago de Compostela, August 2014. New version adopted by the ICO Bureau to apply for being category 1-full member of the International Science Council and approved at the ICO General Meeting celebrated in Dresden, September 7th, 2022.

Minutes of the second 2022 ICO Bureau meeting

**Tuesday 6th September 2022, 12:00-14:00h (CET).
Hörsaalzentrum TU Dresde, room 201, Dresden, Germany.**

Participants: J. Howell (Chair), H. Michinel (Secretary), A. Podoleanu, R. Ramponi, L. Sirko, G. von Bally, N. Westbrook, K. Minoshima, P. Ferraro, Y. Ismail, E. Rosas, K. Choquette, C. Londoño, G. Paulliat, J. Czarske (partially), A. Wagué (partially, online), J. Niemela (partially, online).

Apologies: Q. Gong, S. Otero, C. Cisneros, N. Kundikova.

1. Call to order, introduction

The meeting starts at 12:00 with a round of presentations proposed by the president who also thanks the bureau members for their attendance. The secretary explains that the agenda and documents for the meeting are available in a shared folder that it is accessible online. The link to the shared folder was sent two weeks in advance. He also says that some questions related to the General Assembly were discussed in a previous bureau online meeting that took place 23rd last August. The minutes of this previous meeting are also presented for approval.

2. Approval of the agenda and the minutes of the previous bureau

The agenda is presented with the request of J. Czarske to move the ICO-25 report to the beginning, because he has to attend many issues of the congress as general chair. The president explains that in connection with his report, he wants to start a discussion with the bureau members in connection with the ICO strategic plan. So, he proposes to interchange the presentations of the President's report and the ICO-25 report. Therefore, the following motion is moved and voted:

Motion 1: To interchange the President's report and the ICO-25 report presentations in the Agenda.

Moved by: J. Howell, seconded by E. Rosas, approved unanimously.

Once the agenda has been approved, the following motion is moved:

Motion 2: To approve the minutes of the previous ICO bureau celebrated online last 23rd August.

Moved by: R. Ramponi, seconded by E. Rosas, approved unanimously.

2. Report on the ICO-25

Prof. Jürgen Czarske says a few words about the status of the ICO-25 congress. He highlights among other facts the attendance of three Nobel Prize laureates and that a lot of female participants registered. He also says that the five continents are represented in the congress.

The Secretary asks him to present a written report that will be published in the next ICO newsletter next October. Prof. Czarske agrees and leaves the meeting temporarily to attend to other congress issues. The bureau members give him applause for his efforts with the organization of the congress.

3. Other issues to be proposed to the ICO General Assembly

a) IYSSBD MoU

The secretary explains that a MoU that was signed some months ago with IUPAP, after being authorized by the bureau, has to be presented to the ICO General Assembly (GA). The MoU sets the framework for cooperating in the International Year for Basic Science in Social Development (IYBSSD). It is recommended by assent to present the document to the ICO GA for approval.

4.b) ICO Mexican Territorial Committee

Prof. Eric Rosas says that changes in the Mexican legislation on corruption have affected NGOs and that the previous Academia Mexicana de Óptica (AMO) did not adapt to this new situation. Therefore, AMO cannot operate as an association in Mexico. He says that he has been appointed as ICO Delegate by “Comité Territorial de Óptica de México de la ICO”, which is the current representative of Mexico in RIAO (Iberoamerican Optics Network).

The Secretary of the ICO says that he has received a letter from the Mexican Academy of Sciences endorsing a organization called “Comité Territorial de Óptica de México de la ICO”, where doctors Jorge Enrique Mejía Sánchez and J. Oracio Cuauhtémoc Barbosa García, currently serve as President and Vice President, respectively. This is the necessary condition, according to article 3.b) of the ICO statutes for creating a territorial committee. The secretary also says that he has received an email signed by Prof. Eduardo Tepichín in the name of AMO claiming the representation of the Mexican territory. Prof. Tepichín was invited to attend the ICO GA to present his case, but he declined to attend. He was also urged to present a support letter from the Mexican Academy of Sciences, but no such letter has been received. The secretary asks prof. Rosas to leave the session for some minutes, so the bureau members may speak freely on this issue.

Prof. L. Sirko asks if Mexico is up to date on the ICO payments and who is paying currently the fees. The secretary says that, according to the ICO treasurer, payments have been made by Prof. E. Rosas. P. Ferraro says that according to article 3.4 of the ICO statutes, it seems quite obvious that the Mexican Academy of Sciences endorses “Comité Territorial de Óptica de México de la ICO”. The following motion is moved:

Motion 3: To propose the ICO General Assembly to accept “Comité Territorial de Óptica de México de la ICO” as the Mexican ICO territorial committee.

Moved by R. Ramponi, seconded by G. von Bally, approved unanimously.

Prof. E. Rosas is invited to come back and he is informed on the decision and the result of the vote.

4.c) Date of the next ICO General Assembly

The secretary reports that the day before a meeting took place between the ICO execom and G. Paulliat, N. Westbrook and A. Wagué (ICO Bureau VPs) and A. Levenson (president of the French society). In this meeting, A. Levenson explained that for the French society it will not be possible to help in organizing ICO-26 if it is celebrated in August. He proposes to move it to October. It is pointed that if moved to October, it must be during the first week, as the current bureau term expires 30th September. It is finally agreed that ICO-26 is finally moved to this week and that the ICO General Assembly will be celebrated 1st and 3rd October 2024 in Dakar (Senegal) during the ICO-26 congress. The following motion is moved:

Motion 4: To propose the ICO General Assembly to celebrate its 26th edition 1st and 3rd October 2024 in Dakar (Senegal).

Moved by G. Paulliat, seconded by N. Westbrook, approved unanimously.

4. Reports of the ICO Committees

The secretary summarizes the reports of the ICO awards and the chairs read the results and the citations. The following motions are moved:

Motion 5: To award the ICO Prize 2022 to Francisco Rodriguez-Fortuno from King's College London, UK, as the winner of the ICO Prize 2022, "for his seminal contributions to the spin-orbit interaction optics that largely expand our capacities to manipulate light-matter interaction at the nanoscale".

Moved by L. Sirko, seconded by K. Minoshima, approved unanimously.

Motion 6: To award the IUPAP Young Scientist Prize in Optics 2022 to Prof. Chao Zuo from the department of Electronic and Optical Engineering, Nanjing University of Science and Technology (China) "for his work on the Development of Novel Computational Optical Imaging and Measurement Technologies".

Moved by G. Paulliat, seconded by R. Ramponi, approved unanimously.

Motion 7: To award the 2022 Galileo Galilei Medal Award to Prof. Chittur Subramanian Narayanamurthy, senior professor at the Department of Physics, Indian Institute of Space Science and Technology, Valiamala, Trivandrum, "for his outstanding contribution to speckle interferometry, optical metrology, optical testing, digital holography and adaptive optics, achieved under comparatively difficult circumstances"

Moved by Y. Ismail, seconded by J. Howell, approved unanimously.

No reports from the International travelling lecture program or the Education committee have been received as no activity took place. Prof. E. Rosas briefly

comments the activities carried out in the Committee for Regional Development in Optics, which is in the online folder. With respect to the Ad-hoc Committee for International Affairs, its chairman G. von Bally, asks that the word “ad-hoc” does not make sense any more as the committee has worked for more than six years. The following motion is moved:

Motion 8: To remove the word “ad-hoc” from the name of the “ad-hoc Committee for International Affairs”

Moved by von Bally, seconded by E. Rosas, approved unanimously.

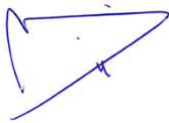
5. President's Report

After five minutes break, John Howell says that now that ICO has become a Category 1 full member of the ISC, the main goal of the current ICO Strategic Plan 2017-2023 has been achieved. Therefore, a new strategic plan must be started. The secretary says that, according to the ICO rules and codes, the strategic plan committee is chaired by the ICO President.

A presentation with online polls is presented by the president, with questions regarding the scope that the new “category one – full ISC member” may have. After a brief discussion it is agreed that the ICO may act as a hub for resources to promote optics and photonics in developing countries, especially in Africa, as the ICO26 will take place in Senegal. An online connection with prof. Malik Maaza takes place and he motivates the bureau members to persist in the previous goal. It is agreed by assent to have a similar discussion in the General Assembly.

As there is no more time available, it is agreed that points 7) and 8) of the agenda will be postponed for the next online meeting that will be celebrated during the ICTP winter college in optics.

No other issue were raised and the meeting adjourned 14:00h CET



Humberto Michinel, ICO Secretary General

Minutes Approved in the ICO Bureau meeting celebrated November 2th, 2023.

Minutes of the first 2023 ICO Bureau meeting

Thursday 2nd November 2023, 16:00-17:20h (CET).

Online meeting using “google meet”.

Participants: J. Howell (Chair), H. Michinel (Secretary), Q. Gong, R. Ramponi, L. Sirko, G. von Bally, N. Westbrook, K. Minoshima, P. Ferraro, Y Ismail, E. Rosas, K. Choquette, , G. Paulliat, J. Czarske, J. Niemela, N. Kundikova.

Apologies: A. Podoleanu, S. Otero, C. Londoño, C. Cisneros, A. Wagué.

1. Call to order, introduction

The meeting starts at 16:00. The secretary explains that the agenda and documents for the meeting are available in a shared folder that it is accessible online. The link to the shared folder was sent one week in advance. He also says that this meeting is the first part of the in-person gathering that will take place in South Africa the 8th of November.

2. Approval of the agenda and the minutes of the previous bureau

The agenda is presented and the following motion is moved and voted:

Motion 1: To approve the agenda of the meeting.

Moved by: G. Paulliat, seconded by K. Choquette, approved unanimously.

Once the agenda has been approved, the following motion is moved:

Motion 2: To approve the minutes of the previous ICO bureau celebrated during the last ICO Congress in Dresden on Tuesday 6th September 2022.

Moved by: K. Choquette, seconded by R. Ramponi, approved unanimously.

3. President's Report

Prof. John Howell comments that in the last General Assembly we discussed how we would move forward as new member of the International Science Council. With the understanding that ICO is limited in both manpower and money, the ICO looked for ways to be a benefit both to our member territories and its societies.

He reports many conversations (Optica, IEEE, African Science Advisory Committee, discussions with African Academy of Science, African teaching, collaborative African efforts, collaborative grants, mentoring programs etc., Education Committee) and much feedback (from societies and territories) from individuals who have worked in Africa. Some potential challenges: border controls, logistics, import regulations, internal strife, infrastructure (e.g., electrical, wifi), traditional interests, government support for basic science.

From the discussions with African Scientists, some capacity Building opportunities are:

1. Second-life project: reuse of unused scientific equipment from developing countries.
2. Active learning.
3. Computer software and information technology know how.
4. Collaboration and mentoring. Linking scholars and students inside and outside Africa.

It was discussed forming a committee to be a resource hub that could provide interested researchers a set of links to opportunities that existed within the many territories and societies within the ICO. However, upon more extensive conversations and discussions with possible committee chairs, it was concluded that it probably would not be successful. The long-term maintenance, redundancy of material and the potential lack of use were deciding factors.

He says that it was also discussed the possibility of expanding our outreach program especially within Africa. Yaseera Ismail was invited to be the ICO Education Committee chair. She formed a committee of scientists and engineers within Africa and abroad. After some discussions, it was determined that a phased approach would be best. The first phase would be an outreach program promoting optics to young researchers. If successful, this would then be expanded to other groups around Africa.

If the second phase was successful, it would expanded to incorporate other elements needs like computing and even scientific competitions between groups. The first phase was successful. Professor Rabia Sa'id of Bayero University in Nigeria assembled a group of 8 scientists and engineers, learned the elements of the Optics Suitcase from Optica and went to institutions within Nigeria to do hands-on experimentation in much the same way as Professor Imrana Zahid has done in Pakistan. The presentations were met with great enthusiasm and a hunger to learn more. We believe these outreach activities have a potential for a very positive and important impact on science and technology within developing countries.

He pointed that Yaseera Ismail has organized a wonderful meeting in South Africa to bring together scientists, engineers and students from within Africa and abroad to discuss science, learn about state-of-the-art research and most importantly establish connections between scientists. He hopes this is an opportunity to learn from each other, build relationships and develop collaborations among scientists.

He also commented on a project about developing a low-cost hyperspectral camera that can be used for many purposes in developing countries, for instance in combination with drones. H. Michinel pointed that he is interested on any application relating optical instruments and drones, due to his current position as Director of an Aerospace Engineering School.

4. Secretariat Report

The secretary, Humberto Michinel presents the report of the activities of the secretariat since the last ICO bureau meeting. It includes day-to-day activities like keeping the contact with the committees or updating the ICO website and databases, coordinating the ICO awards and publishing the ICO newsletter. Other action taken by the associate secretary (A. Podoleanu) is the management of the applications for ICO support. The following were processed:

Support for organising conferences, requested by and granted to:

1. Narine Gevorgyan, A.I. Alikhanyan National Science Laboratory (YerPhI) 0036 Yerevan, Armenia, \$1000 ICO co-sponsorship of the conference Optics and its applications, 11-15 Jan 2022. From the ICO grant, 5 participants from developing countries (3 of them from Ukraine + 2 from Iran) received support. The proceedings of the 9th Optics symposium, Springer Proceedings book (<https://link.springer.com/book/9783031112867>) contains a paper by a group of Ukrainian students, having an acknowledgement to the ICO support.
2. EOSAM, Elina Koistinen, EOS Executive Director, European Optical Society, Länsikatu 15, FI-80110 Joensuu, Finland, for the EOS annual meeting, EOSAM, held 12-16 September 2022 in Porto, Portugal. Euro 1000. Use of funding was postponed for the next conference in 2024.
3. Dr. Ernesto Montero Zeledón, Comité Organizador Local, Escuela de Física, Instituto Tecnológico de Costa Rica, ICO co-sponsorship of the conference RIAO OPTILAS 2023 meeting held from March 27 to 31, 2023 in San José, Costa Rica, \$1500. Funds transfer is pending completion of administrative formalities.
4. Prof: Oleg V. Angelsky, Chernivtsi National University, ICO co-sponsorship of the Correlation Optics Conference, 18-21 Sept. 2023, \$2000.

Support for acting as a cooperating society, requested by and granted to:

1. Mr. Tsuyoshi Hayashi, requested that ICO acts as a cooperating society to the 13th International Conference on Optics-Photonics Design and Fabrication, "ODF'22", Sapporo, held on August 3rd-5th, 2022 in Japan.

Requests not finalized for non compliance

1. Dr. Milica Sekulić, Laboratory for Radiation Chemistry and Physics, Vinca Institute of Nuclear Sciences, University of Belgrade, P.O. Box 522, 11001 Belgrade, Serbia, Serbian Conference on the Materials Application and Technology, scheduled for 20-21th October 2022. Aspect too narrow, support declined. However, the ICO agreed to endorse their congress, meaning that they could use the ICO logo in their website. On the other hand, we have detected that Serbian is not an ICO territory and suggested them to consider joining the ICO, but they did not respond or applied.
2. Prof. John de Mello, Director of Nanoscience, Norwegian University of Science and Technology (NTNU), "Discussions on Nano and Mesoscopic Optics,"

DINAMO 2023, didn't respond to request to obtain ICO Territory approval.

3. International Conference on Quantum Photonics, scheduled to be held in Jinhua, Zhejiang, China in 24-26 November 2023, did not respond to request to obtain ICO Territory approval.

Under consideration, ongoing

Support for acting as a cooperating society (co-sponsoring)

1. Mr. Tsuyoshi Hayashi, as secretary of the conference, 14th International Conference on Optics-Photonics Design and Fabrication, "ODF'24, Tucson", to be held on July 10-12, 2024 in Tucson, Arizona, U.S.A.

2. Marta S. Ferreira, Nanophotonics & Optoelectronics Group, i3N & Physics, Department, University of Aveiro, Portugal, The International Conference on Applications of Optics and Photonics (AOP), AOP2024, 2024 July 16-19, <https://aop2024.org/>.

Finally, the ICO Secretary comments that he has represented the ICO at several international meetings like RIAO in Costa Rica last March, the ISC mid-term meeting in Paris last May or delivering the ICO award to Bo-Zhen during the last EOSAM in Dijon, September 2023.

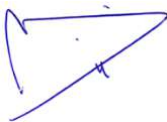
5. Treasurer's Report

Joe Niemela, the ICO Treasurer, presented his report that is added as an annex to these minutes. He explains that the financial situation of the ICO is good and that some administration issues have been solved with the help of Pierre Chavel, who is in charge of managing the French bank account. It is under study the possibility of having a US official address. Some possibilities are the NSF or other international societies like Optica, IEEE or SPIE. No concerns were shown by the bureau members.

2. Revision of the documents for the next in-person meeting in South Africa

The ICO Secretary reports that all the documents from the committees that will be presented in the meeting to be celebrated in South Africa on 8th November have been received.

No other issue were raised and the meeting adjourned 17:20h CET




Humberto Michinel, ICO Secretary General

Minutes Approved in the ICO Bureau meeting celebrated November 8th, 2023.

APPENDIX: 2022 Treasurer's Report

As of September 30, 2023 our total reserves are approximately **\$226,768.11** using a conversion rate (*XE/October 25, 2023*) of 1 EUR = 1.06 USD. This amount is held in US dollars (**\$184,874.77**) at the Bank of America and in Euros (**39,522.02 €**) in the Caisse D'Epargne bank in France.

The most recent full annual report (Calendar Year 2022) is included below. Our cash balance on December 31, 2022 was **\$200,500.70**, using a conversion rate (*XE/ December 31, 2022*) of 1 EUR = 1.07 USD for funds held in our French bank account.

The primary source of income that the ICO receives is derived from membership dues contributed by the Territorial Committees (TCs). The money that the ICO expends is used mostly to support conferences, ICO prizes, and traveling lecture awards and social media for the UNESCO International Day of Light, through a partnership with ICTP. The number of shares for any territory varies from 1 to 27 units, and the amount per share has remained fixed at \$235 USD.

Currently, the ICO has been undergoing an updating exercise that impacts our financial operations. The first phase of that process was to update the incorporation of our headquarters in France, a reasonably involved process requiring that we work with the French authorities, updating not only our address but also the composition of the Bureau. This could not have been done without having our representative in France, Pierre Chavel.

This allowed us to then seek the registration of ICO in the NATO database, under its official name "COMMISSION INTERNATIONAL D'OPTIQUE," which was successfully completed in September. The next phase, which is currently under review by US authorities, is the registration of the COMMISSION INTERNATIONAL D'OPTIQUE in the System Award Management (SAM) registry of the US Government. Importantly, this will allow us to access US federal funds. Our Point of Contact (POC) is the ICO Secretary, as recommended by the US National Academies given that we have no actual "employees" as is normally requested. The review takes some time, but we expect that it will finish soon.

The final phase will be to incorporate ICO in the US as a US-based branch of the French Association so that we are up-to-date there as well and avoid having two seemingly independent associations. The target is December 2023. We should have a physical address in the United States that is not a post-office box, and this is presently a challenge and something that the Bureau should consider.

Finally, the detailed record of financial input and expenditures for the most recent complete calendar year (2022) are included below.

Fiscal Year 2022**Covering the period January 1, 2022 to December 31, 2022**

ACCOUNTS:

Bank of America (BoA): Checking [USA]

Caisse D'Epargne (CdE): Checking and Savings [FRANCE]

CURRENT TOTAL COMBINED ASSETS, December 31 2022:

\$174,584.39 (BoA) + Euro (6,685.30 *checking* + 17,535.55 *savings*) (CdE)
= \$200,500.70

CONVERSION (XE/ December 31,2022): 1 EUR = 1.07 USD

BANK OF AMERICA Checking Account SummaryStarting balance (January 1, 2022): **\$167,088.72**Balance as of 31 July 2022: **\$174,584.39**

CAISSE D'EPARGNE BANK (CdE) Summary

Starting balances (January 1, 2022)

Checking: € 21,569.30

Savings: € 32,180.57

Total: € 53,749.87

Balance as of 31 December 2022:

Checking: € 6,685.30

Savings: € 17,535.55

Total: € 24,220.85

Expense Summary (*not including* incidental banking fees, etc):

• <i>ICO Prize (for 2016)</i>	<i>\$3,000 USD</i>
• <i>2023 ICTP Winter College</i>	<i>\$6,000 USD</i>
• <i>Correlation Optics 2021 (Ukraine, 2nd payment)</i>	<i>€ 918</i>
• <i>ISC Dues</i>	<i>€ 530</i>
• <i>ICO Secretariat</i>	<i>€ 17,900</i>
• <i>AOP Portugal (minus dues)</i>	<i>€ 1,392</i>
• <i>UNESCO Day of Light</i>	<i>€ 20,000</i>
• <i>2021 ICO-ICTP award</i>	<i>€ 930</i>
• <i>EOSAM 2022</i>	<i>€ 1000</i>
• <i>IYBSSD (IUPAP)</i>	<i>€ 2,500</i>
• <i>GG Award (for 2017)</i>	<i>€ 989</i>

Total Expenses (excluding incidental banking fees): ***\$ 58,390.13***

(1 EUR = 1.07 USD)

DETAILED CREDIT AND DEBIT HISTORY

BANK OF AMERICA (USA)

Beginning balance = \$167,088.7

January 2022

- no activity

Ending balance: \$167,088.72

February 2022

- no activity

Ending balance: \$167,088.72

March 2022

Debits:

- service fees \$5

Credits:

- SPIE \$1,175

Ending balance: \$168,258.72

April 2022

Debits:

- Service fees \$25

Credits:

- Optical Society of Korea \$940

- Colombia \$235

- Optica \$1,175

- Chin. Opt. S. \$2,585

- India \$940

Ending balance: \$174,108.72

May 2022

- no activity

Ending balance: \$174,108.72

<u>CAISSE D'EPARGNE (FRANCE)</u>	
June 2022	Beginning balance: €21,569.30
Debits:	January 2022
• none	Debits:
Credits:	• Service fees (General): €35
• royalties SPIE: \$165.67	• Secretariat: €850
Ending balance: \$174,269.39	• Correlation Optics 2021 €918
July 2022	Credits:
• no activity	• none
Ending balance: \$174,269.39	Ending Balance: €19,766.30
August 2022	February 2022
• no activity	Debits:
Ending balance: \$174,269.39	• Service fees: €12
September 2022	• Secretariat: €850
• no activity	• ISC dues €530
Ending balance: \$174,269.39	Credits:
October 2022	• none
Debits:	Ending balance: €18,374.30
• service fees \$10.00	March 2022
Credits:	Debits:
• US \$ 5,875.00	• Service fees: €12
• Japan	Credits:
Ending balance:	• Czech: €428
\$183,659.39 \$ 3,525.00	Ending balance: €18,790.30
November 2022	April 2022
Debits:	Debits:
• service fees \$ 75.00	• Service fees: €12
• A. Alu (ICO Prize)\$3,000	• Secretariat: €1,700
• ICTP Winter C. \$ 6,000	Credits:
Credits:	• Spain €1,283
• none	• Sweden €1,710
Ending balance: \$174,548.39	• Latvia €214
December 2022	• New Zealand € 641
• no activity	• UK €2,565
Ending balance: \$174,548.39	Ending balance: €23,491.30

May 2022	September 2022
Debits:	Debits:
• Service fees: €12	• fees €12
• AOP – Port €1,392	• IYBSSD €2,500
• IDL €8,000	• G. G. Award (2017) €989
Credits:	Credits:
• France: €3,207	• Savings €15,000
• Italy €2,565	Ending balance: €20,788.90
• EOS €214	October 2022
Ending balance: €20,073.30	Debits:
June 2022	• fees EURO 12
Debits:	• Paym. 1 UVigo: €5,000
• IDL €7,000	• Paym. 2 Uvigo: €6,000
• IDL €5,000	• Paym. 3 Uvigo: €4,350
• fees €58	Credits:
• D. Hayrapetyan (2021 ICTP prize) €930	• none
• IUPAP IYBSSD €2,500 (cancelled by bank)	Ending balance: €5,426.90
• EOSAM 2022 €1,000	November 2022
Credits:	Debits:
• OWLS €214	• fees €12.60
Ending balance: €3,799.30	Credits:
July 2022	• none
Debits:	Ending balance: €5,414.30
• fees €54	December 2022
Credits:	Debits:
• IUPAP (Returned payment less fees) €2,469.32	• fees €12.00
Ending balance: €6,241.62	Credits:
August 2022	• Switzerland €1,283.00
Debits:	Ending balance: €6,685.30
• fees €21.72	<u>SAVINGS ACCOUNT (CdE)</u>
Credits:	Beginning balance €32,180.57
• Germany €3.070	Transfer (09/2022): €15,000
Ending balance: €9,289.90	Interest Due €354.98
	Ending balance: €17,535.55

Minutes of the second 2023 ICO Bureau meeting

Tuesday 7th November 2023, 15:00-18:20h (SAST).

Ingwenyama Conference and Sport Resort, White River, South Africa.

Participants: J. Howell (Chair), H. Michinel (Secretary), Q. Gong, R. Ramponi, N. Westbrook, K. Minoshima, C. Londoño, A. Wagué, Y Ismail.

Apologies: A. Podoleanu, S. Otero, L. Sirko, G. von Bally, C. Cisneros, P. Ferraro, E. Rosas, K. Choquette, G. Paulliat, J. Czarske, J. Niemela, N. Kundikova.

1. Call to order, introduction

The meeting starts at 15:00h SAT. For organizational reasons of the congress the meeting was moved from Wednesday 8th to Tuesday 7th. All the attendants registered in the congress OPA2023 that hosts the ICO Bureau meeting were informed in advance about the date change.

The ICO President, John Howell, welcomes the attendants and congratulates Yaseera Ismail for the great job in organizing the congress that hosts the ICO bureau meeting. The secretary explains that the agenda and documents for the meeting are available in a shared folder that it is accessible online. The link to the shared folder was sent some days in advance. He also says that this meeting has been followed by a videoconference on 2nd November 2023, where all the documents were reviewed.

2. Approval of the agenda and the minutes of the previous bureau

The agenda is presented and the following motion is moved and voted:

Motion 1: To approve the agenda of the meeting.

Moved by: J. Howell, seconded by R. Ramponi, approved unanimously.

Once the agenda has been approved, the following motion is moved:

Motion 2: To approve the minutes of the previous ICO bureau celebrated online on 2nd November 2023.

Moved by: C. Londoño, seconded by Q. Gong, approved unanimously.

3. Reports from the ICO Committees

The documents corresponding to the reports of the ICO committees were reviewed in a previous online bureau meeting celebrated past 2nd November. No issues were found.

3.1. Report of the Committee for Regional Development in Optics

The report has been sent by ICO VP Eric Rosas, who chairs the committee. In his absence it is presented by the ICO Secretary General. Several activities are reported, with special emphasis in the Latin America region, such as the participation in the last RIAO congress in Costa Rica and the organization of several local meetings, such the invitation of the Nobel Laurate Donna Strickland to Mexico and the LASER initiative (Lasers for the Americas in Science and Engineering), which involves open high-intensity lasers to Latin American in a three years pilot project (USD 100 k per year) and grants for colloquia and school programs. It is also reported the participation in the ICUIL conference in Mexico on high-intense lasers.

3.2 Report of the Education Committee

This report is presented by ICO VP Yaseera Ismail, who chairs the committee. It is reported that, through the education committee, Rabia Said, from Nigeria, was provided 5 Optica Suitcases. She successfully implemented a pilot program at Excel College Kano. She intends to expand this program to numerous schools in her region.

The committee has also organized the Optics and Photonics in Africa Conference from 5-10 November at the Ingwenyama Conference and Sports Resort, White River, South Africa, which will be reported below. It is remarkable that USD 39 000 in sponsorship were raised to support student attendance and researchers from the African Continent. There are plans to further expand the activities to online workshops and lectures that can reach researchers across the African Continent.

John Howell congratulates Yaseera for the success of the conference and he says that there is a lot of things that can be done from the educational point of view. He is now promoting a Raspberry Pi-based project to develop low-cost hyperspectral cameras that can be very useful in developing countries. He asks about the potential role of the African Laser Center (ALC) in the promotion of education in optics at the doctoral level.

Ahmadou Wagué says that there are some bureaucratic problems with the enrolment of students in the ALC and the corresponding funding. He says that it would be great if the structure of the student chapters in Africa can be somehow permanent. A debate starts about the role of student chapters. Roberta Ramponi says that the students are not permanent and the chapters operate under the supervision of a faculty member. C. Londoño says that the student chapter model combines the flexibility of a continuous flux of students and the permanent affiliation of the faculty member.

A. Wagué says that in Africa the students run the chapters without any supervision, due to the lack of time of faculty members. J. Howell remarks that it is always necessary the supervision of a permanent faculty member. Q. Gong comments that student chapter are mostly for undergraduate students and that doctoral students are more related with research than with education and suggests that the ICO can organize student chapter similar to that of OPTICA or SPIE.

J. Howell says that a possible model could be that the ALC host students from different parts of Africa and that grants from international organizations can be found for those students. A. Wagué comments that he participated in the foundation of the ALC in South Africa and that other African governments were invited to participate, but finally only South Africa is giving funding. C. Londoño says that SPIE has a five-year program of activities and that it can be seconded by other organizations.

J. Howell replies that for the ICO a three-year horizon would work much better. H. Michinel comments that the ICO has an strategic plan committee that is chaired by the ICO president and that this committee is the ideal framework for this kind of activities. A. Wagué insists that the ALC has some conflicts with other universities and R. Ramponi says that a possible model that could work is that of the fab labs running at the ICTP in Trieste.

N. Westbrook comments that the French Optical Society (SFO) is committed with the Science Without Borders initiative, so people from developing countries can use some resources in optics and photonics by getting cheap equipment. She says that this is a French initiative and she does not know any other at the European level. A. Wagué says that the LAM network has coordinated some actions like an optical tweezer for detecting malaria in Senegal.

H. Michinel comments that in a previous ICO Newsletter, it has been reported a low-cost optical system for detecting tuberculosis and that the ICO could act as a hub for this type of cheap technologies that can be used in developing countries. A. Wagué comments that the first director of the ALC could be contacted.

To close the debate, J. Howell says that he has gathered a lot of information during his presidency and that he will prepare a document with his vision of how the ICO can contribute to education worldwide from a research-based perspective. He will share the document with the bureau members

3.3. Report of the ICO Award Committee

The document was sent by ICO VP Leszek Sirko, who chairs the committee. In his absence, the report is presented by the ICO Secretary. The discussions in the committee yielded the following final candidates:

Carlos Hernández-García	(4.54/5.0)
Aleksandr (Alex) Krasnok	(4.52/5.0)
Mengjie Yu	(4.44/5.0)

Therefore, the ICO Committee recommends Carlos Hernández-García an Associate Professor at Applied Physics Dept., University of Salamanca (USAL), Spain, as the winner of the ICO Prize 2023 due to his seminal contributions in the theory and modelling of laser-driven high harmonic generation and understanding how to manipulate their waveforms to impart orbital and spin photon angular momentum.

The following motion is moved and voted:

Motion 3: To award Carlos Hernández-García from University of Salamanca, Spain, the ICO Prize 2023 “for his seminal contributions in the theory and modeling of laser-driven high harmonic generation and understanding how to manipulate their waveforms to impart orbital and spin photon angular momentum.”

Moved by: Ahmadou Wagué, seconded by C. Londoño, approved unanimously.

3.4. Report of the ICO Galileo Galilei Medal Award Committee

The report was sent by ICO VP Nataliya Kundikova, who chairs the committee. In her absence, it is read by the ICO Secretary. It is reported that, after the discussions in the committee, the following candidates were proposed as finalists with the respective order:

- | | |
|-------------------------------|------------|
| 1. Dr. Rahman Chowdhury Mahdy | 4.1 points |
| 2. Prof. Victor Reshetnyak | 3.9 points |
| 3. Dr. Igor A. Sokolov | 3.5 points |
| 4. Prof. Saifollah Rasouli | 3.4 points |
| 5. Prof. Zhipei Sun | 2.8 points |

The Committee decided to propose to the ICO Bureau Dr. Rahman Chowdhury Mahdy, Associate Professor, ECE Dept. and Dept. of Math and Physics, North South University, Bashundhara, Dhaka-1229, Bangladesh as the recipient for the ICO Galileo Galilei Medal for 2023 for "his outstanding contributions in the areas of optical (main) and quantum mechanical manipulation achieved under comparatively difficult circumstances". The following motion is moved and voted:

Motion 4: To award Dr. Rahman Chowdhury Mahdy, from North South University, Bashundhara, Dhaka-1229, Bangladesh the ICO Galileo Galilei Medal 2023 “for his outstanding contributions in the areas of optical (main) and quantum mechanical manipulation achieved under comparatively difficult circumstances”

Moved by: John Howell, seconded by R. Ramponi, approved unanimously.

3.5. Report of the ICO-IUPAP Young Research Scientist in Optics Award Report

The report was sent by ICO VP Gilles Paulliat, who chairs the committee. In his absence, it is read by the ICO Secretary. It is reported that in 2023, 11 nominations were examined and there were a totally unbalanced gender distribution: 10 men, 1 woman. The committee proposes Carlos A. Ríos Ocampo from the University of Maryland, USA "For pioneering the integration of phase change materials with photonic integrated circuits for a wide range of applications".

The following motion is moved and voted:

Motion 5: To give the ICO-IUPAP Young Scientist in Optics Award to Carlos A. Ríos Ocampo from the University of Maryland, USA "For pioneering the integration of phase change materials with photonic integrated circuits for a wide range of applications".

Moved by: Q. Gong, seconded by R. Ramponi, approved unanimously.

3.6. Report of the ICO-ICTP Gallieno Denardo Award

The ICO VP Nathalie Westbrook, who chairs the committee, says that they received 3 nominations by the deadline of dec 1st 2022, two men and one woman. The candidates came from Armenia, Pakistan and India (more details in the table below). There were 4 candidates still eligible from last year, although their applications were not updated. We compared them to the new candidates but it did not change our decision for the one we ranked 1st.

The Committee picks the 2023 ICO/ICTP Gallieno Denardo Award to Dr Muhammad Qasim Mehmood from ITU Lahore in Pakistan “for his remarkable contribution to the field of nanophotonics, in particular plasmonics and metamaterials, and for supervising and inspiring many young researchers in Pakistan.”

Dr Qasim Mehmood was invited to receive his award and give a lecture at the ICTP Winter School that took place in Trieste on Feb 14th, 2023. The 2021 laureate, Dr David Hayrapetyan from Russian Armenian University, also came to this school, as the two previous editions had been cancelled due to COVID. The 2022 laureate, Dr V.R. Supradeepa from IIS Bangalore could not get a visa to come to the school, but he received his award from Joe Niemela on Jan 29th, 2023 at Photonics West in San Francisco.

3.7. Report of the Ad-Hoc Committee for International Affairs

The report was sent by ICO VP Gert von Bally, who chairs the committee. In his absence, it is presented by the ICO Secretary. The Committee evaluates the possibility for an emergency information line and network of (permanent or at least longer lasting) specific contact points for information exchange among besides ICO International Society Members actually also ICO Territorial Committees and beyond e.g. UNESCO organizations like ICTP, Trieste, Italy. In addition, the Committee established close contacts to corresponding ISC committees.

Since the Committee received advices and proposals from the Deputy Director of the German Commission for UNESCO, experienced in such matters, actually the Committee is establishing contacts to the organizations proposed by the German Representative of UNESCO. Actual focus of activities of most of them includes social support of Ukrainian scientists. The ICO Committee on International Affairs was asked to look into the problem of a new name of Taiwan as ICO Member Territory, which is opposed by the Chinese ICO Territorial Committee. The ICO Committee decided to contact the ISC for advice and coordination in the

actually aggravating conflict with China. Although the constitution of the ISC opens many possibilities, according to the ICO Statutes and Rules, a solution may be possible in the actual form. The political impact has to be considered carefully.

In view of the actual situation in Ukraine – but not restricted to that – the ICO Committee in coordination with the ISC develops further the idea to establish a website – ICO Help Website - where colleagues in need or just interested can find links to helping and supporting activities and programs. It would also make sense to check if such activities can be coordinated and integrated in a wider frame of ISC after ICO became full ISC member.

The ICO Committee on International Affairs closely follows and investigates further the development in Ukraine and the condemnation of the Russian invasion especially by ISC and the ICO International Society Members. The ICO Committee via representatives of the Ukrainian Academy of Sciences gave advices to the organizer of an online optical conference in Ukraine. In addition, the Committee is in contact with the ISC concerning the Israel-Gaza-Hamas conflict and its influence on scientists and scientific cooperation. In this respect, J. Howell proposes a statement about this conflict to be placed on the ICO website. After a short debate, the following motion is moved and voted:

Motion 6: To remove the current text on the Ukrainian conflict that appears on the ICO website and to put this new one:

“**Hamas-Israel Conflict: A Plea for Compassion and Peace**

The world has looked on with sadness, disbelief and shock at the great human tragedy that has unfolded in Israel and Gaza. Thousands of innocent civilians both within Israel and Gaza, many of them children, have been killed and tens of thousands have been injured. We call on both parties to respect the dignity of human life, the basic human rights of all individuals and replace conflict with compassion.”

Moved by: J. Howel, seconded by A. wagué, approved unanimously.

3.8 International Travelling Lecture Committee Report

The report was sent by ICO Treasurer, Joseph Niemela, who chairs the committee. In his absence, it is presented by the ICO Secretary. In 2023, Imrana Ashraf Zahid was awarded a Traveling Lectureship to present a lecture on outreach activities for girls and young women scholars in Pakistan in the 2023 ICTP Winter College on Optics: “Terahertz Optics and Photonics” <https://indico.ictp.it/event/10058> and to act as a tutor for young students still working on their degrees to help with basic optics concepts covered in the lectures that they may have not fully understood, including providing tutorials after hours as needed or requested. The award covered her travel expenses from Pakistan while ICTP provided local accommodation and meals. Her lecture was very well-received and opened up discussion on outreach with UNESCO headquarters staff also in presence.

4. Report on the OPA2023 Congress

The conference hosting this ICO Bureau meeting is celebrated from 5-10 November at the Ingwenyama Conference and Sports Resort, White River, South

Africa, and has been attended by international and national researchers. There were 45 postgraduate students and early career professionals attending the conference, 12 plenary talks and 23 invited talks.

There were a total of 66 talks and 42 poster presentations at the conference. 39 000 USD were raised in sponsorship through Optica, SPIE, Chinese Optical Society, African Laser Centre and the National Institute of Theoretical and Computational Sciences. This sponsorship is to support student attendance and researchers from the African Continent. Since the aim is to encourage networking and ensure students are aware of the opportunities available through the scientific societies, a student engagement panel session at the conference has been organized to expose students to opportunities and encourage them to join chapters of scientific societies.

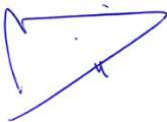
5. Report on the ICO-26 Congress Status

A. Wagué says that a committee was created and the met in a monthly basis. The members of the committee are: Ahmadou Wagué, Kedro Diamondé, Paul Buah Bassua, Gilles Paulliat, Ariel Levenson, Pierre Chavel and Nathalie Westbrook. Unfortunately, due to the political tensions in Senegal the committee does not meet since last June. He says that a provisional website ico26.org is running and that Alain Aspect and Donna Strickland have accepted to participate in the congress. The King Fahd Palace Hotel in Dakar has been contacted to be the venue. An estimated cost of 15.000€ is given for renting the rooms for the conference. A. Wagué expresses his concerns about the funding that can be obtained from the Senegal authorities, due to the uncertain political situation.

R. Ramponi says that the most important question is safety. A. Wagué says that no important safety issues are expected, but K. Minoshima indicates that on the website of the Japanese Ministry of Foreign Affairs there is a warning for certain zones in Senegal. H. Michinel and J. Howell say that the Spanish government and the US government qualifies in their official website Dakar as a low-risk zone. H. Michinel says that it is urgent to have a website with the main information about the congress: venue, fees, etc. so the potential attendants can book a slot in their calendars. This must be done before Christmas, otherwise it will be not possible to have the congress in Dakar and a decision must be made by the General Assembly with an electronic vote on this issue. A. Wagué says that the first week of December a website will be operative and the first call for papers will be ready.

6. Any Other Business

No other issues were raised and the meeting adjourned 18:20h SAST



Humberto Michinel, ICO Secretary General

Minutes to be approved in the ICO Bureau meeting of October 21st, 2024.

FINANCES

ICO Treasurer's report (2022-2024)



The ICO Budget was automatically extended for 2022 due to covid pandemics, as approved by the extraordinary General Assembly celebrated online on September 13th 2021. The primary source of income that the ICO receives is derived from membership dues contributed by the Territorial Committees (TCs). The money that the ICO expends is used mostly to support conferences, ICO prizes, and travelling lecture awards.

FISCAL YEAR 2022

Covering the period January 1, 2022 to December 31, 2022

ACCOUNTS:

Bank of America (BoA): Checking [USA]

Caisse D'Epargne (CdE): Checking and Savings [FRANCE]

FINAL TOTAL COMBINED ASSETS, December 31 2022:

$\$174,584.39(\text{BoA}) + \text{€}(6,685.30\text{checking} + 17,535.55\text{savings})(\text{CdE}) = \text{\$200,500.70}$

CONVERSION (XE/ December 31,2022): 1 EUR = 1.07 USD

BANK OF AMERICA Checking Account Summary

Starting balance (January 1, 2022): **\\$167,088.72**

Balance as of 31 July 2022: **\\$174,584.39**

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Starting balances (January 1, 2022)

Checking: € 21,569.30

Savings: € 32,180.57

Total: € **53,749.87**

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Checking: € 6,685.30

Savings: € 17,535.55

Total: € **24,220.85**

Expense Summary (*not including* incidental banking fees, etc):

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Total Expenses (excluding incidental banking fees): ***\$ 58,390.13***

(1 EUR = 1.07 USD)

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- Colombia \$235

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- Chin. Opt. S. \$2,585

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Ending balance: \$174,108.72

May 2022

- no activity

Ending balance: \$174,108.72

June 2022	CAISSE D'EPARGNE (FR.)
Debits:	Beginning balance: €21,569.30
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July 2022	• Correlation Optics 2021 €918
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December 2022	• Latvia €214
• no activity	• New Zealand € 641
Ending balance: \$174,548.39	• UK €2,565
	Ending balance: €23,491.30

May 2022	September 2022
Debits:	Debits:
• Service fees: €12	• fees €12
• AOP – Port €1,392	• IYBSSD €2,500
• IDL €8,000	• G. G. Award (2017) €989
Credits:	Credits:
• France: €3,207	• Savings €15,000
• Italy €2,565	Ending balance: €20,788.90
• EOS €214	October 2022
Ending balance: €20,073.30	Debits:
June 2022	• fees EURO 12
Debits:	• Paym. 1 UVigo: €5,000
• IDL €7,000	• Paym. 2 Uvigo: €6,000
• IDL €5,000	• Paym. 3 Uvigo: €4,350
• fees €58	Credits:
• D. Hayrapetyan (2021 ICTP prize) €930	• none
• IUPAP IYBSSD €2,500 (cancelled by bank)	Ending balance: €5,426.90
• EOSAM 2022 €1,000	November 2022
Credits:	Debits:
• OWLS €214	• fees €12.60
Ending balance: €3,799.30	Credits:
July 2022	• none
Debits:	Ending balance: €5,414.30
• fees €54	December 2022
Credits:	Debits:
• IUPAP (Returned payment less fees) €2,469.32	• fees €12.00
Ending balance: €6,241.62	Credits:
August 2022	• Switzerland €1,283.00
Debits:	Ending balance: €6,685.30
• fees €21.72	<u>SAVINGS ACCOUNT (CdE)</u>
Credits:	Beginning balance €32,180.57
• Germany €3.070	Transfer (09/2022): €15,000
Ending balance: €9,289.90	Interest Due €354.98
	Ending balance: €17,535.5

FISCAL YEAR 2023**Covering the period January 1, 2023 to December 31, 2023****ACCOUNTS:**

Bank of America (BoA): Checking [USA]

Caisse D'Epargne (CdE): Checking and Savings [FRANCE]

FINAL TOTAL COMBINED ASSETS, December 31 2023:

\$184,874.77 BoA+€(26,272.94 *checking*+18,047.00 *savings*)CdE =**\$232,031.19**

CONVERSION (XE/ March 03,2022): 1 EUR = 1.064 USD

BANK OF AMERICA Checking Account SummaryStarting balance (January 1, 2023): **\$174,584.39****CAISSE D'EPARGNE BANK (CdE) Summary**

Starting balances (January 1, 2022)

Checking: € 21,569.30

Savings: € 32,180.57

Total: € **53,749.87**

Balance as of 31 December 2022:

Checking: € 6,685.30

Savings: € 17,535.55

Total: € **24,220.85**Expense Summary (*not including* incidental banking fees, etc):

- *Correlation Optics 2023 (Ukraine)* €1,832
- *ISC Dues* €1,421
- *ICO Secretariat* €12,000
- *UNESCO Day of Light Secretariat (partnership with ICTP)* €18,000
- *Traveling Lecturer (Imrana Ashraf) `* € 930
- *ETOP (Creol)* € 2,294.31

Total Expenses (excluding incidental banking fees): **\$ 38,811.86**
(1 EUR = 1.064 USD)

2023 DETAILED CREDIT AND DEBIT HISTORY

BANK OF AMERICA. Checking

Beginning balance = \$174,584.39

January 2023

- no activity

Ending balance: \$174,584.39

February 2023

Debits:

- none

Credits:

- Australia \$1,410.00

Ending balance: **\$175,989.39**

March 2023

Debits:

- Service fees \$5

Credits:

- SPIE
\$1,175

Ending balance: **\$177,159.39**

April 2023

Debits:

- Service fees \$15

Credits:

- OPTICA
\$1,175
- India \$930
- Colombia \$235

Ending balance: **\$179,484.39**

May 2023

- no activity

Ending balance: **\$179,484.39**

NOTE: USA to combine 2023 dues with
2024 payment Mexico and RIAO
combined multi-year payments in 2024

June 2023

Debits:

- none

Credits:

- Korea \$940
- SPIE (royalties) \$150,38

Ending balance: **\$180,574.77**

July 2023

- no activity

Ending balance: **\$180,574.77**

August 2023

Debits:

- none

Credits:

- Wire Transfer errors \$70

Ending balance: **\$180,644.77**

September 2023

Debits:

- none

Credits:

- Russia \$4,230

Ending balance: **\$184,874.77**

October 2023

- no activity

Ending balance: **\$184,874.77**

November 2023

- no activity

Ending balance: **\$184,874.77**

December 2023

- no activity

Ending balance: **\$184,874.77**

Caisse d'Epargne. Checking

Beginning balance = €6,685.30

January 2023

Debits:

• Service Fees €12.50

Credits:

none

Ending balance: **\$6,672.80**

February 2023

Debits:

• Service Fees €12.50

Credits:

• ICTP for IDL2023 \$18,000

Ending balance: **\$24,660.30**

March 2023

Debits:

• Service Fees €12.50

• TLP (I. Ashraf) €12.50

• IDL Secretariat €4,500

Credits:

• UK €2.651

Ending balance: **\$21,868.80**

April 2023

Debits:

• Service Fees €37.50

Credits:

• Portugal \$940

• Czeck Rep. \$150,38

• Finland \$940

• Switzerland \$150,38

• France \$940

• Latvia \$150,38

• N Zealand \$940

• Sweden \$150,38

• Poland \$940

• SPIE (royalties) \$150,38

Ending balance: **\$31,854.52**

May 2023

Debits:

• Service Fees €12.50

• ICO Secretariat €6,000

• IDL Secretariat €4,500

Credits:

• EOS €221

• Tunisia €221

Ending balance: **\$21,784.02**

June 2023

Debits:

• Service Fees €12.50

• ISC Dues €1,421

Credits:

• none

Ending balance: **\$20,350.52**

July 2023

Debits:

• Service Fees €12.50

• Corr. Opt. Ukraine €1,832

Credits:

• Japan \$3,314

• SPIE (royalties) \$150,38

Ending balance: **\$21,820.02**

August 2023

Debits:

• Service Fees €12.50

Credits:

• none

Ending balance: **\$21,807.52**

September 2023

Debits:

• Service Fees €37.50

Credits:

• Pakistan \$216.45

Ending balance: **\$21,986.47**

October 2023	December 2023
Debits:	Debits:
• Service Fees €45.22	• Service Fees €45.22
• ETOP €2,294,31	Credits:
• ICO Secretariat €6,000	• Italy €2,651
• IDL Secretariat €9,000	• SPIE (royalties) \$150,38
Credits:	Ending balance: \$26,272.94
• ICTP IDL 2024 \$19,000	
Ending balance: \$23,646.94	SAVINGS ACCOUNT (CdE)
November 2023	Balance (01/01/23): \$17,535.55
Debits:	Interest (31/12/23): \$511.45
• Service Fees €12.50	Balance (31/12/23): \$18,047.00
Credits:	
• none	
Ending balance: \$23,634.44	

PROJECTED BUDGET 2025-2027 (inclusive)

Covering the period January 1, 2023 to December 31, 2023

Note: it is unclear with ICTP's current finances whether the Winter College will continue as before. This year it is halved in duration and half the normal contribution will be requested.

	Per year	3-year total
ICO Prize:	\$3000 (cash +travel)	\$9,000
Galileo Galilei Prize:	\$2000 (cash +travel)	\$6,000
ICO-ICTP Prize:	\$2000 (cash + travel)	\$6,000
IUPAP Optics Prize	\$1000	\$3,000
Winter College on Optics	-----	\$3,000 (1 time)
Traveling Lecturers (3 @ 1000):	\$3000	\$9,000
Other activities (5 @ \$1500):	\$7,500	\$22,500
Secretariat:	\$13,000	\$39,000
ISC dues:	\$1,421	\$4,263
CT Corp (or equivalent):	\$1,000	\$3,000
Compliance contract :	-----	\$15000 (1 time)
ICO-27 (one time):	-----	\$10,000 (1 time)
ETOP (One time):	-----	\$5,000 (1 time)
Totals:	\$33,921	\$134,763

COMMITTEE REPORTS AND AWARDS

ICO Nominating Committee for 2024 elections

Chairperson:

Prof. Roberta Ramponi

Members:

Prof. John Howell (USA)

Prof. Humberto Michinel (Spain)

Prof. Joseph Niemela (USA)

Prof. Adrian Podoleanu (UK)



The 26th General Meeting (GM) of the International Commission for Optics (ICO) will take place during the next World Congress of the ICO that will be celebrated from 21st to 25th October 2024, as already announced on the official website of the ICO (e-ico.org). During the GM, elections to the ICO Bureau positions will be done. According to the ICO rules and code, candidates for the Bureau may be nominated by the ICO Nominating Committee (NC) and/or by the Territorial Committees (TC). No other nomination may be received. Endorsement of all candidates by their respective TC is requested in all cases. In addition, TC may endorse candidates from any Territory. At the time of the General Meeting, the delegation of the TC to the General Assembly makes endorsements in its name. Endorsement means that the person is considered by the endorsing TC as a good person to stand for an ICO election and is to be understood as an intention, not an obligation, to support this candidate at the election, given the list of candidates at the time the endorsement is made. The NC establishes a first list of candidates that is sent to the TC along with the agenda of the General Meeting.

Nominations may be received until 24 hours before the election. After the closure of nominations, the NC establishes a final list of candidates. In addition, each candidate provides the NC with a short curriculum vitae and a statement on his/her policy if elected for distribution to the GM. Tradition holds that during the first session of the GM, the NC presents its report and indicates the current list of candidates for the ICO Bureau offices. Elections are held during the second session of the GM. The elections are conducted by the chairperson of the NC. Secret ballots is the rule. In the case of a tie for any vote, the elder candidate is declared elected. For any vote, if the number of candidates is equal to the number of seats, the NC Chairperson may decide that there is no vote and declare the candidate(s) elected. Concerning the Vice-Presidents, the rule is that eight of them represent the TC Members and are elected by them, while an additional number of Vice-Presidents are appointed by the International Organization Members.

ICO Committee for International Affairs

**Chairperson:**

Prof. Gert von Bally

Members:

Prof. Humberto Michinel (Spain)

Prof. Henryk Kasprzak (Poland)

Prof. Tomasz Szoplik (Poland)

Prof. Joseph Niemela

Due to the Corona pandemic and the resulting delay of the ICO 25 General Assembly this report covers a more extended time frame compared to the usual 3 years intervals by the representatives – Chair Gert von Bally, Germany, ICO EXECOM Humberto Michinel, Spain, ICTP Joe Niemela, Italy.

Proposed by the Bureau and agreed by the General Assembly the ICO Committee on International Affairs was established 2014 at the ICO-23 in Santiago de Compostela, Spain, as an ad hoc committee.

Based on actual cases the task of the Committee was defined as to analyze and prepare a procedure for the ICO whom to contact and how to act in order to give support to colleagues, who are personally endangered in their human rights in particular for professional or political reasons.

As a result of several discussions a procedure was evaluated for the ICO EXECOM, Bureau and Committee. Any hint to any contact point of ICO (Territorial Members, International Society Members, ICO Committee Members etc.) in such a case as described above shall initiate an immediate distribution of information to ICO EXECOM, Bureau and the ad hoc Committee. This includes contacting:

- ISC and IUPAP authorities;
- United Nations Human Rights Bodies

<http://www.ohchr.org/EN/HRBodies/Pages/HumanRightsBodies.aspx>
especially the “Special Rapporteur System”;

- appropriate NGOs and national Ministries of Foreign Affairs.

Based on the collected information the Committee prepares - if necessary in an ongoing process - proposals for further actions to the EXECOM and the Bureau.

By such a procedure ICO and the Committee were able to successfully contribute to the support actions of the global science community in helping endangered colleagues especially via the UN OHCHR Special Rapporteur system and received corresponding appreciation.

Emergency Network

In order to use the potential of the global activities, contacts and experience of ICO International Society Members and to act in a coordinated and structured manner, the Committee evaluates the possibility for an emergency information line and network of (permanent or at least longer lasting) specific contact points for information exchange among besides ICO International Society Members actually also ICO Territorial Committees and beyond - e.g. UNESCO organizations like ICTP, Trieste, Italy. These may have an appropriate contact environment, which could be included in this way.

Furthermore, the Committee received advices and proposals from the Deputy Director of the German Commission for UNESCO, experienced in such matters. Actually the committee is establishing contacts to the organizations proposed by the German Representative of UNESCO. Most of them are already involved in social support of Ukrainian scientists.

In order to check if such activities can be coordinated and integrated in a wider frame of ISC, the ICO Committee on International Affairs is in contact with the ISC Committee on Freedom and Responsibility in Science. After ICO became full ISC member such a cooperation is an additional contact bridge to ISC.

Since the Committee received advices and proposals from the Deputy Director of the German Commission for UNESCO, experienced in such matters, actually the Committee is establishing contacts to the organizations proposed by the German Representative of UNESCO. Actual focus of activities of most of them includes social support of Ukrainian scientists.

ICO Help Website

The ICO ad hoc Committee on International Affairs acted already successful in helping endangered colleagues via the UN OHCHR Special Rapporteur system. In view of the actual situation in Ukraine – but not restricted to that – the chair of the ICO Committee developed the idea to establish a website – ICO Help Website - where colleagues in need or just interested can find addresses and contacts for helping and supporting activities and programs .

As in the case of the ICO Emergency Network the ICO Committee on International Affairs evaluates - if supported by the corresponding ICO authorities - in a first step whether the ICO International Society Members may be asked for information on their corresponding activities and contacts. Next can be to ask the ICO Territorial Committees for their possible contributions to such an address list. In addition, organizations like the ICTP, Trieste, Italy may have an appropriate contact environment and could be included. It would also make sense to check if such activities can be coordinated and integrated in a wider frame of ISC. Since the ICO Committee on International Affairs is in contact with the ISC Committee on Freedom and Responsibility in Science in such matters another consideration is that after ICO became full ISC member such an ICO Help Website may be an additional contact bridge to ISC, especially in this early stage of the membership status.

Cooperation with ISC

ICO Emergency Network

Based on earlier request by and the published intentions and rules of the ISC Committee on Freedom and Responsibility in Science the ICO Committee informed the ISC on successful activities via the UN Rapporteur System and gave corresponding hints to follow this road.

Ukrainian – Russian Conflict and others

The ICO Committee on International Affairs closely follows and investigates further the development in Ukraine and the condemnation of the Russian invasion especially by ISC and the ICO International Society Members. The ICO Committee via representatives of the Ukrainian Academy of Sciences gave advices to the organizer of an online optical conference in Ukraine.

In addition, actually the Committee is in contact with the ISC concerning the Israel – Gaza-Hamas conflict and its influence on scientists and scientific cooperation.

Summarizing, by its activities the ICO Committee on International Affairs turned out to be an active bridge to the ISC, especially the ISC Committee on Freedom and Responsibility in Science.

All these successful activities resulted in a vote by the ICO General Assembly 2022 for a permanent ICO Committee status of the formerly ad hoc Committee on International Affairs.

Since the last ICO Bureau meeting took place jointly with the ICO Conference on Optics and Photonics November 7th, 2023 this report by the Committee representatives – Chair Gert von Bally, Germany (ICO Bureau); Humberto Michinel, Spain (ICO EXECOM); Joe Niemela, Italy (ICTP) - covers mainly the activities during the time interval since that date.

China –Taiwan name change dispute

The ICO Committee on International Affairs was asked to look into the problem of a new name of Taiwan as ICO Member Territory, which is opposed by the Chinese ICO Territorial Committee. The ICO Committee decided to contact the ISC for advice and coordination in the actually aggravating conflict with China. Although the constitution of the ISC opens different possibilities, according to the ICO Statutes and Rules a solution may be possible in the actual form. Here the political impact has to be considered carefully.

Summarizing, by its activities the ICO Committee on International Affairs turned out to be an active bridge to the ISC, especially the ISC Committee on Freedom and Responsibility in Science.

All these successful activities resulted in a vote by the ICO General Assembly 2022 for a permanent ICO Committee status of the formerly ad hoc Committee on International Affairs.

ICO Full Membership as an ISC Union

In order to become the status of an ISC Union it was necessary for the ICO to develop a new relation and a new Memorandum of Understanding (MoU) with IUPAP. Here the chair of the ICO Committee through his already existing contacts to the newly elected ISC General Secretary received information on MoU examples e.g. of the ISC Network of Geounions.

In a similar way the ICO Committee was able via its contacts to leading persons in the ISC administration like General Secretary and Operations Director to clarify and get a deeper insight into the conditions of ISC for new Union candidates. The result of these evaluations was the strict demand by ISC from the applicant to contribute to a wider range of socially and scientifically fields than “just” physics and optics. Here it turned out to be supportive that the ICO International Society Member cover a wide range of research fields such e.g. from biomedicine via art and humanities to life science and environmental protection.

These close contacts and detailed information lead to the possibility and acceptance of starting by a not yet finalized process of development of “under commissions” rather than an already strictly defined and established structure as usually demanded by ISC.

From the participation in several ISC meetings most important turned out to be that in the ISC Extraordinary Assembly 1.-5.February 2021 by the ICO President, ICO General Secretary and ICO Chair of the Committee International Affairs. There the development of the ISC structure came to a certain defined level by proposals, voting and demanding rules and codes.

These activities supported the ICO application to ISC with the positive result to be lifted from ISC Affiliated Member to the status of full member as ISC Union, the “gift for ICO in the 75th year since its foundation”.

All these successful activities resulted in voting by the ICO Bureau that the Chair of the ad hoc Committee on International Affairs became permanent advisor on these issues to the ICO EXECOM.

ICO Award Committee



Chairperson:

Prof. Leszek Sirko

Members:

Juergen Czarske (Germany)

Qihuang Gong (China)

Carmina Londono (USA)

Kaoru Minoshima (Japan)

Joseph Niemela (Italy)

Sara Otero (Spain)

Eric Rosas (Mexico)

Ahmadou Wague (Senegal)

Nathalie Westbrook (France)

ICO established in 1982 the ICO Prize, to be given each year to an individual who has made a noteworthy contribution to optics, published submitted for publication before the age of 40.

2022 AWARD

Nominee	Nominator	Supporters
Maria Chernysheva	Sergei K. Turitsyn	Jürgen Popp
* Yahia Hamdy Mohamed Elbashar	Self-nomination	Hussam H. Hassan, Mohamed Refaat, Sana Maize
Francisco Rodriguez-Fortuno	Alejandro Martínez	
Carlos Hernandez Garcia	Margaret Murnane	Andrius Baltuska, Inmaculada Pascual, Ignacio Moreno
* Patrice Genevet	Federico Capasso	Philippe Boucaud, Yuri Kivshar
<i>Michael Kues</i>	Roberto Morandotti	Zhigan Chen, Cheung Kong
* <i>Chao Yang Lu</i>	Qijin Chen	Marlan O. Scully, Gilles Brassard
* <i>Pasquale Memmolo</i>	Aydogan Ozcan	Bahram Javidi, Zeev Zalevsky
<i>Joseph Ivin Thomas</i>	Sisir Roy	

* *Not eligible because of age*

The ICO committee recommends Francisco Rodriguez-Fortuno for the ICO Award 2022 due to his seminal contributions to the spin-orbit interaction optics that largely expand our capacities to manipulate light-matter interaction at the nanoscale.

2023 AWARD

Nominee	Nominator	Supporters
Yiwen E	X.-C. Zhang	
Carlos Hernández-García	Margaret Murnane	Maciej Lewenstein, María S. Millán
Aleksandr (Alex) Krasnok	Andrea Alù	
Michael Kues	Self-nomination	Uwe Morgner
Muhammad Qasim Mehmood	Junsuk Rho	
Abdoulaye Ndao	Yanne K. Chembo	
Benedikt Schwarz	Erich Gornik	Gerald Bastard
Yijie Shen	Andrew Forbes	
Hossein Taheri	Krzysztof Sacha	

The ICO Committee recommends for the ICO Award 2023 Carlos Hernández-García, Associate Professor at Applied Physics Dept., University of Salamanca (USAL), Spain, due to his seminal contributions in the theory and modelling of laser-driven high harmonic generation and understanding how to manipulate their waveforms to impart orbital and spin photon angular momentum.

2024 AWARD

Will be announced during the ICO-26 Congress.

ICO-IUPAP Award



Chairperson:
Dr. Gilles Pauliat

Members:
Jürgen Czarske
Ursula Gibson
Sara Otero
Eric Rosas
Tsutomu Shimura
Mourad Zghal

This prize is awarded annually since 2008 by IUPAP through ICO to a scientist who has made noteworthy contributions to applied optics and photonics during a maximum of 8 years of research experience after having earned a PhD degree. Career interruptions will not be counted as time of research experience.

2022 Award

To attract applications for this prize, and with the help of Prof. Adrian Podoleanu, previous chair, we contacted the 2021 nominees who were still eligible for the prize. The call was also efficiently relied by several international and national optical learned societies. Thanks to them, we received in total 18 nominations.

The prize is awarded **to Prof. Chao Zuo** from the department of Electronic and Optical Engineering, Nanjing University of Science and Technology (NJUST) and group leader of the Smart Computational Imaging Laboratory at NJUST. He is awarded for his work on the Development of Novel Computational Optical Imaging and Measurement Technologies.

2023 Award

In 2023, 11 nominations were examined 3 nominations from 2022, 7 new or updated ones, with a totally unbalanced gender distribution: 10 men, 1 woman. The prize is awarded to **Carlos A. Ríos Ocampo**, Assistant Professor, Dept. of Materials Science & Engineering, and Institute of Research in Electronics and Applied Physics, University of Maryland, College Park USA, for pioneering the integration of phase change materials with photonic integrated circuits for a wide range of applications.

2024 Award

Will be announced during the ICO-26 Congress.

ICO Galileo Galilei Medal Award



Chairperson:

Prof. Natalya Kundikova

Members:

Prof. Anna Consortini (Italy)

Dr. Fernando Mendoza (Mexico)

Prof. Joseph Niemela (USA)

Prof. Maria J. Yzuel (Spain)

The ICO Galileo Galilei Medal contributes to one of the essential missions of the International Commission for Optics: to recognize the promotion of Optics under difficult circumstances. The award was established by the 1993 General Assembly of ICO and has been awarded annually since 1994.

2022 Award

Nominee	Nominator	Supporters
Saifollah Rasouli	Mohammad Taghi Tavassoly	
Chittur S. Narayanamurthy	Prof. Dr. Robert V. Parfeniev	Colin Sheppard, Mitsuo Takeda, W. Osten, Maria L. Calvo
Igor A. Sokolov	Alejandro Martínez	Kenneth T. V. Grattan, Marvin Klein
Dr. Sarun Sumriddetchkajorn	Nabeel A. Riza	Maria L. Calvo, Toyohiko Yatagai, Ken Y. Hsu

The Committee decided to propose to the ICO Bureau **Prof. Chittur Subramanian Narayanamurthy**, senior professor at the Department of Physics, Indian Institute of Space Science and Technology, Valiamala, Trivadrum, India as the recipient for the ICO Galileo Galilei Medal for 2022 for *"his outstanding*

contribution to speckle interferometry, optical metrology, optical testing, digital holography and adaptive optics, achieved under comparatively difficult circumstances"

2023 Award

Nominee	Nominator	Supporters
Dr. Rahman Chowdhury Mahdy	<i>Cheng-Wei Qiu</i>	
Prof. Zhipei Sun	Tawfique Hasan	
Victor Reshetnyak	Tigran Galstien	Tim Sluckin, Janusz Parka
Prof. Saifollah Rasouli	M. Tavassoly	
Prof. Igor Sokolov	Robert V. Parfeniev	Kenneth T. V. Grattan, Marvin Klein

The Committee decided to propose to the ICO Bureau **Dr. Rahman Chowdhury Mahdy**, Associate Professor, ECE Dept. and Dept. of Math and Physics, North South University, Bashundhara, Dhaka-1229, Bangladesh as the recipient for the ICO Galileo Galilei Medal for 2023 for "his outstanding contributions in the areas of optical (main) and quantum mechanical manipulation achieved under comparatively difficult circumstances".

2024 Award

Will be announced during the ICO-26 Congress.

ICO-ICTP Gallieno Denardo Award

**Chairperson:**

Prof. Nathalie Westbrook

Members:

Prof. John Howell (USA)

Prof. Humberto Michinel (Spain)

Prof. Joseph Niemela (USA)

Prof. Adrian Podoleanu (UK)

The ICO/ICTP Gallieno Denardo Award is a joint prize between ICO, the International Commission for Optics, and ICTP, The Abdus Salam International Centre for Theoretical Physics in Trieste. Since 2000, it is given to scientists less than 40 years old (on December 31st of the year for which the award is given) who are active in research in Optics and have contributed to the promotion of research activities in Optics in their own or another developing country.

The deadline for the applications to the 2022 Award, initially set on dec 1st 2021, was extended until jan 7th, 2022. Note that, due to the Covid pandemic, the ICTP winter School in Optics, where laureates traditionally are invited to receive their prize and give a lecture, had been cancelled in 2022.

Seven nominations fulfilling the age criteria were received in 2022, 4 men and 3 women candidates from India, Pakistan, Sri Lanka, Argentina and Romania. One additional candidate from Cameroon was not considered because of the age limit (born in Aug 1981). 3 candidates nominated in recent years (2018 and 2019) and still eligible in terms of age were also considered for the award: they were from Mexico, South Africa and Iran. (more details in the table below)

The Committee has decided to award the 2022 ICO/ICTP Gallieno Denardo Award to Dr VR SUPRADEEPA from IIS Bangalore, India:

“for his significant contributions to the field of high power fiber lasers and integrated nonlinear optics, including cascaded Raman fiber lasers, high power supercontinuum laser sources, and on-chip frequency combs. He has contributed to the promotion of research activities in Optics in India, through the supervision of many PhD students including women and members of unprivileged communities as well as outreach activities for undergraduate students.”

ICO Committee for Regional Development of Optics



Chairperson:

Dr. Eric Rosas

Members:

Dr. Carmiña Londoño (USA)

Prof. Kaoru Minoshima (Spain)

Prof. Rabia Sa'id (Nigeria)

Prof. Yaseera Ismail (South Africa)

Introduction

This committee is concerned with regional development in Optics. Developments in this area will only be supported by governments which understand the contribution that Optics can make to the wider community. Educational and industrial outreach from researchers and other specialists is therefore a crucial part of this effort.

LASER Initiative

One of the main initiatives in the period 2022-2014 has been called Lasers for the Americas in Science and Engineering Research (LASER). Its aim is:

- Open high-intensity lasers to Latin American
- Tree years pilot project (USD 100 k per year)
- Grants for FAST teams (2 months stays)
- Colloquia & Schools programs

In addition to the committee members, the actions were taken in cooperation with IUPAP C17 commission with Dr. Tsuneyuki Ozaki and Dr. Sekazi Mtingwa.



Group photo at the first Central America workshop in laser safety regulations

TAAS project

The other main project has been called TAAS (Training Activities for African Students), with the following actions:

- Second life for scientific instrumentation
- Raspberry Pi and Phyton tutorials
- Webinars and virtual schools
- Collaboration & mentoring

In addition to the committee members, the actions were taken in cooperation with the ICO President Prof. John C. Howell.

ALOP

Active Learning in Optics and Photonics has been developed in collaboration with the ICO Treasure, Prof. Joseph Niemela with the following aims:

- Review & update of current workshops
- Training workshops for Mexico, Central and South America

The committee has kept fruitful discussions with the Peruvian Optics Network, and the optics communities in Panama and Costa Rica, to boost their activity. An active participation was also taken in the celebration of the meeting of the Latin American Optics Network (LIAO) celebrated in Costa Rica in 2022.

The committee wants to than the ICO Bureau members for fruitful discussions and collaboration with the abovementioned initiatives.



ICO Education Committee



Chairperson:

Prof. Yaseera Ismail

Members:

Prof. John Howell

Prof. Rabia Said

Prof. Imrana Zahid

Prof. Malik Mazaa

Prof. Mourad Telmini

Prof. Kent Choquette

Prof. Nelufar Mohajeri

Prof. Joe Niemela

Prof. Ahmadou Wague

Prof. George Dwapanyin

The objectives of the ICO Education Committee

- Assist scientists in developing nations in awarding efforts for the promotion of science.
- Work collaboratively with the societies and members to achieve common goals.
- Educate and assist young researchers in building skills for solving local and global problems through optics and photonics.

These objectives are achieved through the following goals.

Goal 1: Reach out to optical societies to revitalize the student chapters in African countries.

We can host in-person and online sessions to host roadshows across the African Continent to encourage students to form chapters to benefit from the opportunities of international societies by exploiting the following platforms.

- Existing Optica Student Chapters: South Africa, Ghana, Tunisia, Morocco, Senegal (Inactive)
- Existing SPIE Student Chapters: South Africa, Cameroon, Egypt, Tunisia, Senegal (inactive)
- Existing IEEE Chapters: Tunisia
- ICTP: Associates on the African Continents (Centre in Rwanda)
- European Physical Society: Morocco
- UNESCO/UNISA Nanosciences

Chapters are the starting point for the pilot program. Furthermore, through the chapters, information can be disseminated, and outreach activities can be planned.

Milestones and Highlights

Through the education committee, Rabia Said, from Nigeria, was provided 5 Optica Suitcases. She successfully implemented a pilot program at Excel College Kano. She intends to expand this program to numerous schools in her region.



Goal 2: Regional meetings and conferences of chapters

We are hosting the Optics and Photonics in Africa Conference from 5-10 November at the Ingwenyama Conference and Sports Resort, White River, South Africa, which will be attended by international and national researchers. There are 45 postgraduate students and early career professionals attending the conference. There are 12 plenary talks and 23 invited talks. There will be a total of 66 talks and 42 poster presentations at the conference.

We raised USD 39 000 in sponsorship through Optica, SPIE, Chinese Optical Society, African Laser Centre and the National Institute of Theoretical and Computational Sciences. This sponsorship is to support student attendance and researchers from the African Continent. Since the aim is to encourage networking and ensure students are aware of the opportunities available through the scientific societies, we have a student engagement panel session at the conference to expose students to opportunities and encourage them to join chapters of scientific societies. We have plans to further expand our activities to online workshops and lectures that can reach researchers across the African Continent.



ICO International Travelling Lecture Program



Chairperson:

Dr. Joseph Niemela

Members:

Prof. John Howell (USA)

Prof. Humberto Michinel (Spain)

Prof. Roberta Ramponi (Italy)

Prof. Adrian Podoleanu (UK)

In 2023, Imrana Ashraf Zahid was awarded a Traveling Lectureship to present a lecture on outreach activities for girls and young women scholars in Pakistan in the 2023 ICTP Winter College on Optics: “Terahertz Optics and Photonics” <https://indico.ictp.it/event/10058> and to act as a tutor for young students still working on their degrees to help with basic optics concepts covered in the lectures that they may have not fully understood, including providing tutorials after hours as needed or requested.

The award covered her travel expenses from Pakistan while ICTP provided local accommodation and meals. Her lecture was very well-received and opened up discussion on outreach with UNESCO headquarters staff also in presence. Imrana’s outreach lecture was on Thursday, February 9, 2023.

In 2024, Prof. Muhammad Qasim Mehmood, Information Technology University in Lahore, Pakistan, traveled to Nairobi, Kenya to give multiple lectures and to help coordinate the laboratory sessions in the East African Summer School on Optics (<https://indico.ictp.it/event/10472>). Note that the financial contribution of \$1000 USD and accounting was covered by ICTP, through the UNESCO International Day of Light fund held there, which will be reimbursed to them directly. This was due to an inability to send funds to Pakistan from our bank in France at the time.



Prof. Imrana Ashraf giving her lecture at ICTP

PART II:

MEETINGS PROCEDURES

ICO CONGRESSES AND OTHER MAJOR ICO EVENTS

Topical Meetings, Regional Meetings, Schools

Information and Guidelines

Application deadlines are April 15 and October 15 of each year. The applications must be submitted to the ICO Associate Secretary by a deadline that is at least 12 months prior to the event and before the first announcement.

A - General conditions:

1. "Event" in this document refers to a scientific meeting, college, or school. As opposed to other events with ICO participation, ICO Congresses and other major ICO events are generated from the very beginning by ICO or in close relation with ICO. A companion document to this one gives the information and guidelines for ICO Co-sponsorship and Endorsement of Conferences and Schools, where ICO is not the primary organizer.
2. The following rules apply in all cases to ICO General Meetings and other major ICO events:
 - 1.the event should be international - typically, at least 30 % of the expected attendance and at least 50 % of the Program Committee should be from outside the host territory;
 - 2.the ICO Bureau should perceive clearly that the meeting will be of a good scientific quality and that the timing and venue are appropriate;
 - 3.the ICO Territorial Committee of the territory where the event is to be held should approve the project;
 - 4.in agreement with the organizers, the ICO Secretariat applies for the formal sponsorship of the ICO General, Regional, and Topical Meetings;
 - 5.the organizers should confirm compliance with the general principle of "free movement of scientists" as defined by the International Council for Science ([ISC](#)) in the booklet "Advice to Organizers of International Scientific Conferences". ICO is category 1 full member of the ISC and adheres to the declarations of the ISC. In essence, the host territory must guarantee that a *bona fide* scientist or engineer of any nationality or citizenship may attend. It is not sufficient to make such a guarantee only for persons from territories recognized by the host territory. Any failure to honour a guarantee is directly reported by ICO to the ISC.

Following a decision by the ICO execom, the organizers are requested to publish the following sentence in any circular, announcement, and in the Proceedings of the conference: "To secure ICO sponsorship, the organizers have provided assurance that (Conference name) will be conducted in accordance with principles stated in the ISC Document "[Universality of Science](#)" regarding the free circulation of scientists for international purposes. In particular, no bona fide scientist will be excluded from participation on the grounds of national origin, nationality, or political considerations unrelated to science." The following conditions apply:

1. the registration fees for meetings should follow [IUPAP's policy on conference fees](#). The ICO Bureau recommends to have substantially discounted fees for full- time students;
2. ICO should approve the composition of the Program Committee and be in a position to appoint part of it. The ICO Associate Secretary in charge of meetings should be ex officio a member of the Organizing Committee;
3. the ICO logo should be used in all public documents related to the meeting;
4. the event should be publicized in the ICO Newsletter. The texts are usually prepared in cooperation by the local Organizers and the ICO Secretary;
5. the announcements, calls for communications and registration forms should be distributed, among others, through the channel of the ICO Territorial Committees;
6. the organizers should accept to send free proceedings of the conference to countries where optics development requires special support; a list of addresses for this purpose selected by ICO will be provided by ICO.
7. ICO encourages meetings in all new areas of optics and meetings designed to fill specific needs, including regional development of optics. At the same time, ICO would like to avoid the unnecessary proliferation of conferences;
8. Industrial participation in the Program Committee and in the Organizing Committee is usually require
9. There may be ICO financial participation in ICO Events, in the form of a grant, a loan, or a participation in the risks. ICO participation is an ICO Bureau decision. There is usually no ICO financial participation in ICO Endorsed Events.

Notes:

1. Participation in the financial risks means an immediate loan that can be converted in part or in totality into a grant if the event runs a deficit. ICO accepts to take the first risk. In case of a surplus, however, ICO receives a share of the surplus (see ICO Green Book: Rules and Codes of Practice).
2. A typical amount of an ICO grant for a major ICO event is US\$ 1500-7000, and for an ICO Cosponsored event about US\$ 1000-3000. ICO grant are mostly awarded for the purpose of help support young scientists and scientists from low-income and lower-middle-income countries as defined by the most recent [list of the World Bank](#).

B - Special conditions for ICO Congresses

1. ICO Congresses are held every three years; they include the General Business Meeting as requested by the statutes and a Scientific Meeting that should cover most of optics.
2. For Congresses, calls for bids are issued by the ICO Associate Secretary with a deadline typically 4 years before the Meeting. The ICO Bureau in that year examines the bids and issues a proposition that is then submitted to the ICO Congress the following year. The ICO Congress makes the final decision. Advance notice is always appreciated. Bids should be sent to the ICO Associate Secretary in charge of meetings and schools.
3. The vast majority of the recent Congresses were held in the last days of August or early in September.
4. The budget should provide for some financial help for invited speakers, the usual minimum being free registration. Special support is requested for invited speakers from countries where the development of optics is comparatively difficult. In recent ICO Congresses, the number of invited speakers has ranged between 30 and 40. Recent winners of the ICO Prize, the IUPAP Young Scientist Prize in Optics and the Galileo Galilei Medal Award are usually invited speakers at the Immediate next ICO Congress.

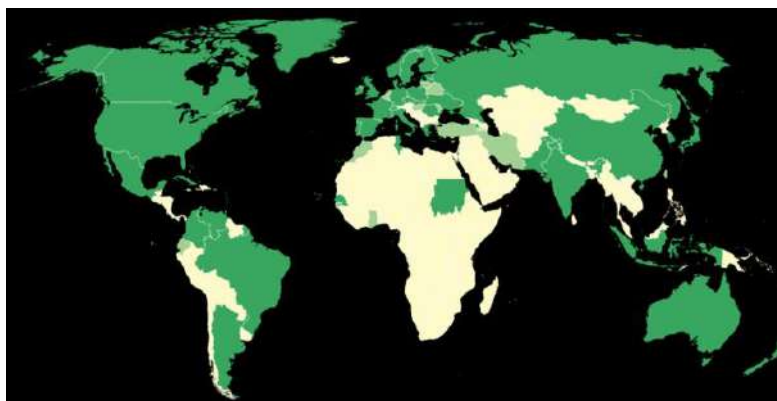
The 2024 Congress, ICO-26, will be held in Cape Town, South Africa, in October 2024. [ICO Congresses](#) were held in the following countries:

ICO-26, 2024, South Africa	ICO-12, 1981, Austria
ICO-25, 2022, Germany	ICO-11, 1978, Spain
ICO-24, 2017, Japan	ICO-10, 1975, Czechoslovakia
ICO-23, 2014, Spain	ICO-9, 1972, USA
ICO-22, 2011, Mexico	ICO-8, 1969, United Kingdom
ICO -21, 2008, Australia	ICO-7, 1966, France
ICO-20, 2005, China	ICO-6, 1962, F.R. Germany
ICO-19, 2002, Italy	ICO-5, 1959, Sweden
ICO-18, 1999, USA	ICO-4, 1956, USA
ICO-17, 1996, Korea	ICO-3, 1953, Spain
ICO-16, 1993, Hungary	ICO-2, 1950, United Kingdom
ICO-15, 1990, F.R. Germany	ICO-1, 1948, the Netherlands
ICO-14, 1987, Canada	(Preliminary meetings had been
ICO-13, 1984, Japan	held in Czechoslovakia and France

C - Other major ICO events:

ICO usually organizes Schools, Topical Meetings, and Regional Meetings between the Congresses with the following conditions:

1. ICO Meetings should correspond to a clear need in a given sub-field of optics or in a given geographical area.
2. It is possible to have more than one ICO major meeting in a given year or to have one in the same year as a Congress.
3. Bids for all major ICO events other than the ICO Congress that are to be held prior to December of a given calendar year should be sent to the ICO Secretariat by April of that year.
4. Opportunities to organize schools are welcome. ICO Schools should normally be specialized to some area of optics and should last between one and three weeks. Schools in geographical areas with special needs for the development of optics are particularly welcome.



ICO Territories in 2024.

ICO Co-sponsorship of Conferences and Schools

Information and Guidelines

Application deadlines are April 15 and October 15 of each year. The applications must be submitted to the ICO Associate Secretary by a deadline that is at least 12 months for Congresses and other major events and 6 months for cosponsored events prior to the event and before the first announcement:

Dr. Adrian Podoleanu
 School of Physics and Astronomy
 University of Kent, Ingram Building
 Canterbury, CT2 7NH, UK Phone: +44 (0)1227 823272
 e-mail: A.G.H.Podoleanu@kent.ac.uk
 More info: <http://www.e-ico.org/blog/contact/sponsorship/>

A - General conditions

1. ICO provides co-sponsorship to international conferences and schools - typically, those with at least 30 % of the attendees and at least 50 % of the Program Committee from outside the host territory. "Event" in the forthcoming refers to conference or school. A companion document to this one gives the information and guidelines for events directly generated by ICO or in particularly close cooperation with ICO (i.e., ICO Congresses, ICO Topical Meetings, ICO Regional Meetings, ICO Schools).
2. ICO participation implies in all cases that the ICO Bureau perceives that the meeting will be of a good scientific quality and that the timing and venue are appropriate; the ICO Territorial Committee of the territory where the event is to be held approves the project; the organizers should confirm compliance with the general principle of "free movement of scientists" as defined by the International Science Council (ISC) in the booklet "Advice to Organizers of International Scientific Conferences". The International Union of Pure and Applied Physics (IUPAP), in which ICO is Affiliated Commission 1, adheres to the declarations of ISC. In essence, the host territory must guarantee that a bona fide scientist or engineer of any nationality or citizenship may attend. It is not sufficient to make such a guarantee only for persons from territories recognized by the host territory. Any failure to honour a guarantee is reported by ICO to ISC through IUPAP.
3. ICO encourages meetings in all new areas of optics and meetings designed to fill specific needs, including regional development of optics. At the same time, ICO would like to avoid the unnecessary proliferation of conferences; section 6 of the Questionnaire should therefore be answered carefully, explaining why this particular conference should be held.

4. Industrial participation in the Program Committee and in the Organizing Committee is usually required.

B - Special conditions for ICO Cosponsored events

1. ICO Cosponsored conferences must follow IUPAP's policy on conference fees. For conferences held in 2024 the maximum registration fee is 750€. This includes abstracts, preprints and/or proceedings, but does not include meals and/or accommodation. If proceedings are not included, the fee shall be substantially lower. For ICO Endorsed events, exceptions to that rule may be made.
2. In ICO Cosponsored events, the ICO Associate Secretary (in charge of meetings) is ex officio a member of the Organizing Committee and should be kept regularly informed of the progress of the organization.
3. In ICO Cosponsored events, the ICO Bureau designates one member to represent it in the Program Committee.
4. For ICO Cosponsored events, the organizers are always welcome to use the channel of the ICO Territorial Committee mailing list to distribute information.
5. For ICO Cosponsored events, the organizers are requested to send free proceedings of the conference in email form to countries where optics development requires special support; a list of addresses appropriate for this purpose selected by ICO will be provided by ICO. The number of copies requested is of the order of 20.
6. All ICO Cosponsored events are listed in the section "Forthcoming events with ICO participation" on the ICO website and in the ICO Newsletter. In addition, organizers of ICO Cosponsored events are welcome to provide the ICO Secretariat with a 1000 to 2000 words article, if possible with an illustration, for further publicity in the ICO Newsletter. Since the responsibility for the publication rests on it, ICO has the liberty to slightly edit the text to adapt it to the general style and to the space available.
7. The use of the ICO logo in documents concerning ICO Cosponsored events is desired.
8. There may be ICO financial participation in ICO Cosponsored events in the form of a grant (for Congresses and other major events additionally in form of a loan, or a participation in the risks). ICO participation is an ICO Bureau decision.

Notes: participation in the financial risks means an immediate loan that can be converted in part or in totality into a grant if the event runs a deficit. ICO accepts to take the first risk. In case of a surplus, however, ICO receives a share of the surplus (for details, see ICO Green Book: Rules and Codes of Practice). A typical amount of an ICO grant for a major ICO event is US\$ 1500-7000, and for an ICO Cosponsored event about US\$ 1000-3000. In most of the recent cases, the ICO grant was specifically awarded for the purpose of helping identified registrants from less favoured countries.

Report of the Associate Secretary

Support for organising conferences, requested by and granted to:

1. Narine Gevorgyan, A.I. Alikhanyan National Science Laboratory (YerPhI) 0036 Yerevan, Armenia, \$1000 ICO co-sponsorship of the conference Optics and its applications, 11-15 Jan 2022. From the ICO grant, 5 participants from developing countries (3 of them from Ukraine + 2 from Iran) received support. The proceedings of the 9th Optics symposium, Springer Proceedings book (<https://link.springer.com/book/9783031112867>) contains a paper by a group of Ukrainian students, having an acknowledgement to the ICO support.
2. EOSAM, Elina Koistinen, EOS Executive Director, European Optical Society, Länsikatu 15, FI-80110 Joensuu, Finland, for the EOS annual meeting, EOSAM, held 12-16 September 2022 in Porto, Portugal. Euro 1000. Use of funding was postponed for the next conference in 2024.
3. Dr. Ernesto Montero Zeledón, Comité Organizador Local, Escuela de Física, Instituto Tecnológico de Costa Rica, ICO co-sponsorship of the conference RIAO OPTILAS 2023 meeting held from March 27 to 31, 2023 in San José, Costa Rica, \$1500. Funds transfer is pending completion of administrative formalities.
4. Prof: Oleg V. Angelsky, Chernivtsi National University, ICO co-sponsorship of the Correlation Optics Conference, 18-21 Sept. 2023, \$2000.

Support for acting as a cooperating society, requested by and granted to:

1. Mr. Tsuyoshi Hayashi, ODF22, 13th International Conference on Optics-Photonics Design and Fabrication, "ODF'22", Sapporo, held on August 3rd-5th, 2022 in Japan.
2. Mr. Tsuyoshi Hayashi, as secretary of the conference, 14th International Conference on Optics-Photonics Design and Fabrication, "ODF'24, Tucson", held on July 10-12, 2024 in Tucson, Arizona, U.S.A.
3. Marta S. Ferreira, Nanophotonics & Optoelectronics Group, i3N & Physics, Department, University of Aveiro, Portugal, The International Conference on Applications of Optics and Photonics (AOP), AOP2024, 2024 July 16-19, <https://aop2024.org/>.

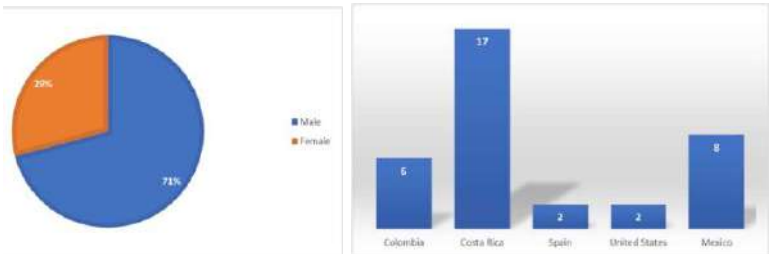
Prof Adrian Podoleanu
ICO Associate Secretary

Report on RIAO/OPTILAS 2023

The RIAO-OPTILAS Conference is an academic meeting organized by the Red Iberoamericana de Óptica (RIO) and aimed to gather the Iberian-American researchers and students working in the field of optics, photonics and their applications, so that they share the results of their projects and strengthen collaboration ties. RIO-OPTILAS is carried out every three years in a different Iberian-American country and since 1998 this flagship conference collocates the Iberian-American Optics Meeting (Formerly RIO) and the Latin-American Meeting on Optics, Lasers and Applications (OPTILAS).

The RIAO-OPTILAS 2023 was organized by RIO (the Red Iberoamericana de Óptica) in collaboration with the five public universities of Costa Rica: the Universidad de Costa Rica (UCR), the Universidad Nacional (UNA), the Instituto Tecnológico de Costa Rica (ITCR), the Universidad Estatal a Distancia (UNED) and the Universidad Técnica Nacional (UTN). The RIAO-OPTILAS 2023 was sponsored by RIO, ICO, EOS, Optica and SPIE, as well as by some Costa Rican institutions, like the Consejo Nacional de Rectores, a council conformed by the rectors of the five co-organizing universities, and the Promotora del Comercio Exterior de Costa Rica through its program “Esential Costa Rica”. RIO-OPTILAS 2023 was granted with the Declaration of Institutional Interest by UNED, ITRC and UNA.

The 120 participants came from 13 different countries: Argentina, Bolivia, Costa Rica, Colombia, Germany, Israel, Mexico, Peru, South Korea, Spain, Sweden, the United Kingdom and the United States of America. Regarding the gender of the participants, 71 % identified themselves as male compared to 29 % as women. All the 35 students who applied for support were granted a full scholarship, consisting on their registration fee waving and free accommodation for five nights.



Attendants gender distribution (left) and student's nationalities (right)

There were eight plenary talks and four more keynote presentations, all the 12 delivered by worldwide renowned scientists. As it has already become a tradition within the RIAO-OPTILAS Conference, this 2023 edition hosted the “Diversity, inclusion & equity” workshop sponsored by Optica and conducted by Optica member Dr. Angeles Camacho Rosales; as well as the “Women in optics and photonics” discussion panel sponsored by SPIE and enriched with the opinions of doctors Paola Vega, Myriam Tebaldi, Amalia Martínez and Karatina Svanberg.

It was the first time that the RIAO-OPTILAS Conference took place in Costa Rica and Central America. For the Costa Rican community, this represented an opportunity to organize this prestigious Iberian-American meeting, to learn about current research in the field of optics, photonics and lasers, to promote research in these topics among the students, and to provide a space for the exchange of information and establishing collaborations with students and researchers in the region and our country.

Therefore, for us in Costa Rica, it is highly recommended to continue supporting the RIAO scientific activities and other regional groups, with the aim of promoting vocations and conducting postgraduate studies, theoretical and applied research in these fields of science, engineering and industry.



Group photo of some attendants to RIAO-OPTILAS 2023 in Costa Rica

Dr. Ernesto Montero Zeledón
M. Sc. Miguel Ángel Rojas Quesada
Dr. Eric Rosas

Report on OPA 2023

The last ICO Bureau meeting has been celebrated during "Optics & Photonics Africa 2023" and has been an excellent opportunity for the planning of future events like the ICO 26th General Meeting scheduled to take place in October 2024. This event, organized under the auspices of the International Commission for Optics (ICO), has been held in South Africa, close to its emblematic Kruger National Park. It has been co-sponsored by various international societies and institutions: OPTICA, SPIE, RIAO, NITECHS, Kwazulu-Natal University LAM, OWLS, UNITWIN, UNISA, ALC, IFCAE and IUPAP.

The congress offered a diverse range of topics, ranging from Quantum Optics and plenary sessions were given by Andrew Forbes (Tailoring distortion-free light), Alexander Gaeta (Nonlinear Photonics for All), Michal Lipson (The Revolution of Silicon Photonics), Anna Chiara De Luca (Raman & SERS-based biosensors for biomedical applications), Carlos Hernández-García (Short Wavelength Structured Light for Attosecond Science), Kaoru Minoshima (Versatile control of optical waves with optical frequency combs enables broad applications), Malik Maaza (On the trapping of cold neutrons), Sonja Franke-Arnold (Polarization textures of light-Spin textures of atoms), Zouheir Sekkat (Smart Molecular Machines in Polymers) and Xu Liu (Multi beam parallel laser direct writing and 3D nano-fabrication).

Besides hosting the ICO Bureau meeting and the scientific topics covered the congress provided attendees with a unique opportunity to gather in many social activities and experience the natural wonders of South Africa.



Group photo of some attendants to OPA 2023 in White River (South Africa)

Report on EOSAM 2023

The meeting was held in the beautiful city of Dijon France, 11-15 September, at the congress centre. It was organized with the French Optical Society (SFO) that is one of the seventeen national optical societies (NOS) of the European Optical Society (EOS). Nine topical optical meetings, four focused sessions (on selected hot topics deemed to be of special interest to conference attendees), EU Project Sessions, Early Stage Researcher Sessions, and sessions on the industrial mastering of optical technologies and systems were scheduled in parallel in large rooms or the big auditorium to fit our over 500 attendees.

The exhibition and industrial program fostered relations between science and industry. EOSAM included a high-level program, with six exceptional plenary speakers and two plenary award speakers: Thomas Ebbesen, Ursula Keller, Fabio Sciarrino, Valentina Emiliani, Laura Na Liu, Jean-Pierre Wolf. The exhibition involved 20 companies, exhibiting from Tuesday to Thursday.



The ICO award 2021 was delivered at the meeting to Prof. Bo Zhen by the ICO Secretary (see photo on the left).

The EOS Prize was awarded to the best paper published in the Journal of the European Optical Society, JEOS-RP entitled “Optical diagnosis of gastric tissue biopsies with Mueller microscopy and statistical analysis”,

authored by Myeongseop Kim, Hee Ryung Lee, Razvigor Ossikovski, Aude Malfait-Jobart, Dominique Lamarque, and Tatiana Novikova. Francesco Baldini, Christophe Moser and Sébastien Tanzilli were upgraded to EOS Fellows.

An honorary member title was given to an exceptional service to the community to Hervé C. Lefèvre. Over 30% of the attendees were students. Master-level students were also given a chance to come and join the tutorials on Monday. Ten tutorial speakers took the stage before the official opening of the conference on Tuesday: Sébastien Bidault, Julien Charton, Sara Ducci, John M. Dudley, Oliver Fähnle, Philippe Grelu, Sandrine Lévêque-Fort, Rüdiger Paschotta, Roozbeh Shokri, Antoine Dubrouil. Around 90 posters were presented on Wednesday and Thursday, same posters kept on poster boards both days to allow sufficient time for discussions.

Report on AOP 2024

The 6th International Conference on Applications of Optics and Photonics took place from July 16th till 19th 2024 at the University of Aveiro, in Aveiro, Portugal. It was the 6th edition of previous successful meetings, which started upon the extraordinary success of the first International Conference on Applications in Optics and Photonics, AOP2011, organized by the Portuguese Society for Optics and Photonics, SPOF, at the University of Minho followed Aveiro Faro, Lisbon and Guimarães.

It has been the major optics conference in Portugal in 2024 and one of the most important at world level, aiming at discuss the recent progress and to establish a view on the future of all fields of optics and photonics. 174 participants from 31 countries presented 185 contributions in areas with enormous potential in optics and photonics ranging from archaeology to industry or from biomedicine to telecommunications amongst many other fields such as image digitalization and processing.

Two ICO Galileo Galilei Medal Awards were delivered by the ICO Secretary General at the conference: 2020 award to Prof. Jorge Ojeda-Castañeda "for his elegant insightful contributions in the development of phase-space analysis self-imaging and diffractionless beams, pioneering groundwork for computational imaging, for discovering class of functions providing extended depth-offield, and for designing nonconventional devices employing varifocal lenses under significantly unfavourable circumstances " and 2022 Medal to prof. Chittur S. Narayanamurty "for outstanding contribution to speckle interferometry, optical metrology, optical testing, digital holography and adaptive optics, achieved under comparatively difficult circumstances".



Group photo of some attendants to AOP 2024 in Aveiro (Portugal)

PART III:

THE ORGANIZATION OF THE ICO



ICO STATUTES

Article 1 Objective

The objective of the International Commission for Optics (ICO) is to contribute, on an international basis, to the progress of the science of optics and photonics and their applications. It emphasizes the unity of the cross disciplinary field of optics.

Optics and photonics are defined as the fields of science and engineering encompassing the physical phenomena and technologies associated with the generation, transmission, manipulation, detection, and utilization of light. It extends on both sides of the visible part of the electromagnetic spectrum as far as the same concepts apply.

In particular, the ICO promotes international cooperation and facilitates the rapid exchange of information, by encouraging and furthering the organization, on an international basis, of scientific meetings and summer schools. It emphasizes actions for the education and training in optics and photonics internationally. It undertakes special actions for the development of optics and photonics in regions where particular support is needed. It strives to improve the recognition of optics and photonics as fields of science with a significant impact on economy. It works also for the promotion of international agreements on nomenclature, units, symbols and standards.

Article 2 Affiliation

The International Commission for Optics is a Category 1 full member of the International Science Council.

Article 3 Membership

The Commission has three categories of Members.

- 3a) Territorial Committee Members, that represent identified optics communities in a set of non-overlapping geographical areas. A Territorial Committee Member should be listed under a name that avoids any misunderstanding about the area represented. The word "territory" does not imply any political position on the part of the Commission, which seeks to assist scientists in optics everywhere in the world to cooperate on an international level. Each Territorial

Committee should receive endorsement of the appropriate authority representing science in its territory, such as an Academy of Science.

- 3b) International Organization members. Such members are membership organizations active in the field of Optics on an international level.
- 3c) The Commission may also accept organizations active in optics as Associate Members. Associate Members pay no dues and have no voting privileges.

Application for all categories of membership shall be made to the Secretary of the Commission and submitted to the next General Meeting for approval. Applications in the Territorial Committee Member and Associate Member categories may be approved by the Bureau, subject to ratification at the next General Meeting of the Commission.

Article 4 Shares and votes

Each member of ICO has a specified number of shares, which determines its financial contribution as well as its number of votes at the General Meeting.

- 4a) The number of votes $Nv1$, which is also the maximum number of voting delegates of the Territorial Committee Member, is determined according to a scale, which presently reads as follows:

Category	number of shares	number of official delegates and votes
I	1	1
II	2 or 3	2
III	4 to 6	3
IV	7 to 9	4
V	10 to 15	5
VI	> 15	6

- 4b) The number of shares $Ns2$ of an International Organization Member is determined in agreement with ICO during the Membership admission procedure; it may be changed following the same procedures as for membership admission. The International Organization Members are represented by one voting representative carrying a number of votes $Nv2$ proportional to the number of shares $Ns2$ of the member determined in such a way that the total number of votes of all International Organization Members cannot exceed that of all Territorial Committee Members. The exact method for determining $Nv2$ is included in the Rules and Codes of Practice.

Article 5 The Bureau

- The Bureau of ICO consists of the following:

- The Executive Committee (Execom), consisting of the President, the immediate Past-President, the Secretary, the Associate Secretary and the Treasurer. All

members of the Executive Committee, except for the Immediate Past-President, are elected by ICO at the General Meeting.

- The IUPAP representative appointed by the Executive Council of IUPAP under Article 7b of the statutes of the Union.
- The other Bureau members, who are traditionally known as Vice-Presidents. Eight Vice-Presidents (at least two of whom are from industry) are elected at the General Meeting by the Territorial Committee Members; in addition, also at the General Meeting, every International Organization Member appoints one Vice-President up to the limit of eight; if there are more than eight International Organization Members, eight Vice-Presidents are elected at the General Meeting by the International Organization Members.

The executive committee is responsible for the conduct of the Commission's business between General Meetings. The term of office of the Bureau is three years from October 1st in the year of the election. The President will be elected for a term of 3 years, normally after having served 3 years as a Bureau Member. In the event the President is unable to continue his/her duties for the elected term, the Past-President (or in case he/she is unable, the Secretary) will act as interim President, or, with the concurrence of the majority of the Bureau, will appoint one of the Bureau Members as interim President.

The Secretary, Associate Secretary and Treasurer will be elected for a term of three years and will be eligible for a second and usually final term of three more years. If either is unable to continue his/her duties for the elected term, the President will, with the concurrence of the majority of the Bureau, appoint a substitute from among the current Bureau Members.

Other Bureau Members will be elected for 3 years and will be eligible for not more than one further term of three years, except as described in the above two paragraphs.

The Bureau may fill vacancies occurring in its membership during the interval period between General Meetings, except for the position of Immediate Past President.

Article 6 Finance

The International Commission for Optics may possess funds of its own consisting of subscriptions from the Members and special donations or grants. Each member pays a number of shares. Dues are payable on the first day of each year. Certain specific projects may be financed independently of the general resources of the Commission. The unit subscription per share is decided by the General Meeting.

Article 7 Withdrawal & Resignation

A member whose subscription is more than six years in arrears is to be regarded as having withdrawn. Any Member which has resigned is liable for the unpaid subscriptions up to the end of the year of resignation. Any Member ceasing to belong to the Commission forfeits its rights to ICO assets.

Article 8 General Meeting

The ICO is governed by its General Meeting, which consists of the Bureau (non-voting) and the official delegates appointed by the Members.

The General Meeting of ICO is held every third year. The following business will be carried out at each of these General Meetings:

- a) election of the Bureau;
- b) examination of a Financial Statement presented by the Bureau;
- c) agreement on a provisional budget for future years;
- d) discussion of questions submitted by the ICO Members, or the Bureau.

Any Member, including Associate Members, as well as the ICO President can invite delegates at the General Meeting with no restriction of number. The number of voting delegates is restricted as per article 4.

The President may, with the approval of the Bureau, convene an Extraordinary General Meeting, and shall call such Meetings upon the request of one-third of all ICO Members.

The Draft Agenda for the General Meeting is circulated by the Secretary at least one month before the opening of the General Meeting. Subjects not on the Draft Agenda may be added at the Meeting with the consent of a single majority of the votes of Members represented at the Meeting.

A Member who is unable to send a delegate at a given General Meeting but wishes to vote on appropriate matters appearing on the Agenda may send its vote in writing to the President. Alternately, it may give a proxy to another member of the same category. To be valid, votes made in writing and proxies must be received prior to the General Meeting.

Article 9 Other Meetings

The International Commission for Optics may sponsor or co-sponsor international conferences and give financial support (grants or guarantees), as a grant to organizing committees or as a travelling grant directly to participants.

Article 10 Relation with the International Union of Pure and Applied Physics (IUPAP)

The relationship with IUPAP is ruled by a specific Memorandum of Understanding signed by the two organizations.

Article 11 Duration of the Commission

The life of the International Commission for Optics is not limited. The dissolution of the Commission may be decided by a majority of two-thirds of the votes of the

Members voting at a General Meeting. In this event, the assets of ICO will be allocated by the General Meeting to one or more not-profit organizations of closely similar purposes serving the optical sciences.

Article 12 Alterations to the Statutes

Alterations in the Statutes may be proposed by the Bureau of the Commission, or by one of the members. Such proposals must be received by the Secretary of the Commission at least three months before the date of the General Meeting. Amendments or modifications may be adopted only at a General Meeting by a two-thirds majority of the Members taking part in the vote.

Article 13 Rules and Codes of Practice

Rules for the conduct of business determine procedures for dealing with matters not specifically laid down in these Statutes. They are meant to give guidance in general terms to the Bureau and to the Members in matters such as, for example, the provision of grants from the funds of the International Commission for Optics for Symposia and Schools.

The rules and codes of practice may not contravene the Statutes of the ICO. They are proposed by the Bureau. The adoption, modification, or abolition of any rule or code of practice shall require either a majority of two-thirds of the members voting at a General Meeting of the Commission, or alternatively a majority of two-thirds of the total number of votes of all Members in a postal vote on a proposal unanimously approved by the Bureau.

Original statutes adopted at Delft, 1948. Amended at Cambridge - 1956, Santa Monica - 1972, Sapporo - 1984, Garmisch Partenkirchen - 1990, Taejon- 1996. New version adopted by ICO General Meeting, San Francisco, August 2, 1999. Approved by IUPAP, October 1999. The motivation was to obtain a good representation of the whole optical community within ICO through the addition of the new membership category "International Organization Member". The European Optical Society, the Institute of Electrical and Electronic Engineer's Laser and Electro-Optic Society, the Optical Society of America, and SPIE - the International Society for Optical Engineering were accepted for membership in the new category in 1999. Amended by the ICO-21 General Assembly, Sidney, Australia, July 2008. Article 1 amended at the ICO-23 General Meeting, Santiago de Compostela, August 2014. New version adopted by the ICO Bureau to apply for being category 1-full member of the International Science Council and approved at the ICO General Meeting celebrated in Dresden, September 7th, 2022.

ICO RULES AND CODES OF PRACTICE

Adopted by the ICO-16 General Meeting, Budapest, August 1993.

Modified by the ICO-17 General Meeting, Tajeon, August 1996.

Modified by the ICO-18 General Meeting, San Francisco, August 1999.

Modified by the ICO-19 General Meeting, Florence, August 2002.

Modified by the ICO-20 General Meeting, Changchun, August 2005

Modified by the ICO-21 General Meeting, Sidney, July 2008

Modified by the ICO-22 General Meeting, Puebla, August 2011.

Modified by the ICO-24 General Meeting in Dresden, September 2022.

1. Free Circulation of Scientists

A member whose subscription is more than six years in arrears is to be regarded as having withdrawn. Any Member which has resigned is liable for the unpaid subscriptions up to the end of the year of resignation. Any Member ceasing to belong to the Commission forfeits its rights to ICO assets

2. Membership Application

This section complements article 3 of the statutes. The following are normally provided by a Territorial Committee applying for full membership:

- a) a statement from the president of the National Academy of Sciences or similar local scientific authority (Ministry, Council of Research,...); saying that the Territorial Committee is authorized by that body to represent optical scientists and engineers of that Territory within ICO;
- b) a letter of application signed by the chair person or representative of the applicant Territorial Committee, including a statement of adherence of the Territorial Committee to the ICO Statutes;
- c) a description of the organization of the Territorial Committee, including the number of members, their designation procedure, their term of office, and the procedures that are set up to ensure a good representation of the optics community within the territory.

The application of a Territory for Associate Membership in ICO shall be made to the Secretary. It may be considered and approved by the Bureau. At the next General Meeting, the decision shall be made either, subject to the desire of the applicant, to transform the associate membership into regular membership, or to extend the associate membership until the next General Meeting, or to terminate the associate membership.

In the case of a Territorial Committee applying for Associate Membership, items a) and b) always required. The following are normally provided by an International Organization Member applying for membership (whether as full member or as associate member, except for the number of shares, that applies only to full members):

- a) a letter of application signed by the President or its duly appointed representative, mentioning approval by the appropriate bodies in the Organization, expressing adherence to the ICO Statutes, and including a proposition for the number of shares;
- b) a description of the operation of the Organization, as provided for example by its bylaws, statutes, rules and codes of practice, and showing indication of its international character. This includes the requirement that at least 20% of the members are from outside the most represented country. The advice of the Territorial Committee (if any) in the most represented country will be considered.

Organization and duties of Territorial Committees

The Territorial Committees normally have members elected or designated by some agreed procedure, with a well-defined term of office; it is usually convenient for them to have a bureau or at least a chairperson; their organization secures in all cases :

- a fair representation of the optics community in the Territory;
- approval and support of the scientific authorities of the Territory (Ministry, Academy, council of Research,...).

The ICO Bureau may at any time request information from the Territorial Committees about their organization as described above. Territorial committees maintain mailing lists of at least an extensive representative subset of the optics community in the territory. They will include in the mailing list any bona fide scientist with an address in their Territory and requesting to be included. They distribute at no charge to ICO any document sent to them in an appropriate quantity either by the ICO bureau or on its behalf. This applies in particular to the ICO Newsletter and to the Meetings and Schools with ICO participation.

Number of votes of International Organization Members:

The number of votes N_{v2} of an International Organization Member is determined according to its number of shares N_{s2} according to the following formula, rounded to the nearest integer but with a minimum of 1:

$$N_{v2} = N_{s2} \frac{\sum N_{v1}}{\max(\sum N_{s1} ; \sum N_{s2})}$$

[Explanation note: e.g., assume the Territorial Committee members together have 200 shares and 100 votes. If the International Organization Members (IOMs) together have 100 shares, they will have 50 votes (apart from round off errors). If the IOM have 200 shares, they will have 100 votes. If the IOM have 250 shares, they will still have 100 votes and no more. In fact, this is unlikely to happen in the near future, but this rule has been established in response to the concern about the Territorial Committee Members being dominated by the International Organization Members and losing control of the ICO.]

3. General Meetings, votes and elections

This section complements articles 4 and 8 of the statutes that provide for a General Meeting of ICO every three years. ICO holds a Congress every three years. The ICO Congress consists of a business part, known as the ICO General Meeting, and an International Scientific Conference part.

Sessions

Tradition holds that General Meetings are held in two sessions with more than 24 hours between the end of the first session and the beginning of the second session.

Attendance in the General Meeting

During any session of the General Meeting, the Secretary circulates a list of attendance. Each attendant signs the attendance list, indicating:

- their capacity of ICO Bureau member, official delegate an ICO Territorial Committee, representative of an associate member, member of an ICO Committee, or observer (more than one category may apply);
- their country or ICO territory.

According to article 4 of the statutes, the number of official delegates of ICO Territorial Committees is equal to their respective numbers of votes. The number of official delegates may in no case exceed the number of votes, but if the actual number of official delegates at a General Meeting is smaller than the number of votes, the Territorial Committee still keeps the same number of votes.

Voting procedure

Except as indicated in articles 8 (agenda of the General Meeting), 11 (duration of the commission), 12 (alterations to statutes) and 13 (alterations of the Rules and Codes of Practice) of the statutes, decisions of the General Meeting, including elections, are by a majority of the votes of the members present and taking part.

Except for the ICO Bureau election, where secret ballot is the rule, the ICO President decides whether votes need to be made by secret ballot. A member having N votes is provided with N ballot forms; this applies to both the Territorial Committee members and the International Organization members. The member may decide to cast identical ballots or not.

Nomination procedure

Candidates for the ICO Bureau may be nominated by the ICO nominating Committee (see section 6 below) and/or by the Territorial Committees. No other nomination may be received. The Nominating Committee writes to the Territorial Committees at least one year before the election to request nominations for all positions in the ICO Bureau. Endorsement of all candidates by their respective Territorial Committees is requested in all cases. In addition, Territorial Committees may endorse candidates from any Territory. At the time of the General Meeting, the delegation of the Territorial Committee to the General Assembly makes endorsements in its name.

Endorsement means that the person is considered by the endorsing Territorial Committee as a good person to stand for an ICO election and is to be understood as an intention, not an obligation, to support this candidate at the election, given the list of candidates at the time the endorsement is made. The Nominating Committee establishes a first list of candidates that is sent to the territorial Committees along with the agenda of the General Meeting.

Nominations may be received until 24 hours before the election. After the closure of nominations, the Nominating Committee establishes a final list of candidates. In addition, each candidate provides the Nominating Committee with a short curriculum vitae and a statement on his/her policy if elected for distribution to the General Meeting. Except as provided in this and in the next subsection, there is no official campaign for the ICO Bureau.

Elections for the ICO Bureau

Bureau Elections are by secret ballot in all cases. Tradition holds that:

- during the first session of the General Meeting, the Nominating Committee presents its report and indicates the current list of candidates for the ICO Bureau offices;
- elections are held during the second session of the General Meeting;
- for the offices of President, Treasurer, Secretary and Associate Secretary, each candidate is given, immediately before the vote, a short prescribed time (typically between 5 and 10 minutes) to present himself and his/her policy to the General Meeting. If there is only one candidate, that procedure is optional.

The elections are conducted by the chairperson of the Nominating Committee. After each vote, the Nominating Committee counts the votes and during that time, the General Meeting may treat agenda items other than the elections. In the case of a tie for any vote, the elder candidate is declared elected. For any vote, if the number of candidates is equal to the number of seats, the Nominating Committee Chairperson may decide that there is no vote and declare the candidate(s) elected.

Concerning the Vice-Presidents, the idea is that eight Vice-Presidents represent the Territorial Committee Members and are elected only by the Territorial Committee Members, while a number of Vice-Presidents represent the International Organization Members and are elected only by the International Organization Members. Since it is not advisable to have too many members on the Bureau, the number of Vice-Presidents representing Territorial Committee Members has been set to eight, and the maximum number of Vice-Presidents representing International Organization Members has also been set to eight^[1].

^[1] *The whole point of having an International Organization Member category is to give them close contact with the ICO and therefore they are well represented in the Bureau. Nevertheless, their representation in the Bureau cannot exceed that of the Territorial Committee Members. Just like it is impossible for all Territorial Committee Members to have someone on the Bureau, it will also be impossible for all International Organization Members to have someone on the Bureau if their number exceeds eight. While this is a fair rule, it may generate difficulties and frustration if the number of International Organization Members happens to be just slightly larger than eight. If that happens, one option open to the ICO President will be to invite those International Organization Members that have no Vice-President to attend part or all of the Bureau meetings as observers.*

The votes are held in the following order:

1. Executive Committee (elected by all members):
 - one vote for the President;
 - one vote for the Treasurer;
 - one vote for the Secretary;
 - one vote for the Associate Secretary.
2. Vice-Presidents elected by Territorial Committee Members (only the Territorial Committee Members vote):
 - in a first vote, members vote on four (4) names; all candidates are eligible, whether they come from industry or not; if, among the first four (4) candidates ranked by number of votes, no one is from industry, the first three (3) are declared elected; if at least one is from industry, the first four (4) are declared elected;
 - if the first vote did not lead to the election of two (2) candidates from industry, a second vote is made, where only candidates from industry are eligible; as a result of this vote, the number of candidates from industry elected is brought to two (2); in that vote, members vote on one (1) or two (2) names, depending on how many candidates should be elected;
 - in a last vote, all candidates are eligible, whether they come from industry or not, and the total number of Vice-Presidents is brought to eight; in that vote, members vote on three (3) to four (4) names, depending on how many candidates should be elected.

In every vote, the ballots forms given to the voting members should indicate the number of seats to be assigned by this vote; nevertheless, ballots with a smaller number of votes are valid. On one given ballot form, no name should be written more than once and the ballot form must be explicit about that rule. If nevertheless one name is duplicated, it is counted only once. Ballots containing a number of different names larger than the number of seats to be assigned are not valid.

Tradition holds that for ICO elections, the detail of votes are not made public but are kept by the Nominating Committee Chairperson. Consequently, it is not sensible to repeat votes in order to reach an absolute majority and the applicable majority rule is always the relative majority, i.e. the candidates that have more votes are elected, whether they have reached the absolute majority or not.

3. Vice-Presidents representing International Organization Members (IOM):

For the Vice-Presidents appointed by the International Organization Members, prior to the General Meeting, every International Organization Member appoints one representative. If the representative is elected on the Executive Committee or as one of the eight elected Vice-Presidents, the International Organization

Member appoints another representative at its earliest convenience but no later than September 30th.

- If there are less than eight International Organization members, their representatives automatically become Vice-Presidents.
- If there are more than eight International Organization Members, unless a consensus agreement is found among the International Organization Members, the election of their eight Vice-Presidents takes place last and the candidates are automatically the appointed representatives of the International Organization Members.

The Nominating Committee contacts the International Organization Members at least six months before the GA to request the appointments.

4. Classification for the participation of ICO in Meetings and Schools

There are four categories for ICO participation in meetings and in summer (or fall, or winter, or spring) schools:

1. ICO General Meetings
2. Other major ICO events "; whenever appropriate, these events may receive the designation "ICO Special Meeting", "ICO Topical Meeting", "ICO School", "ICO Regional Meeting"
3. ICO Co-sponsored Meetings and Schools
4. ICO Endorsed Meetings and Schools.

The applicable rules are given in the table below with the following keys:

SR: strictly required. **UR:** usually required **NR:** not required. **PO:** possible. **NO:** usually not.

Any meeting with ICO participation, classified in category 2,3 or 4 may be given by the Bureau the name of ICO Satellite Meetings if it is scheduled to take place within 15 days of an ICO General Meeting or other major ICO event.

Note on registration fees:

As a rule, ICO adheres to the IUPAP upper limit on registration fees. Even though the participation of scientists from disadvantaged areas usually requires special measures independently of the cost of registration, high registration fees tends to limit participation, in particular from students and to be a form of discrimination between scientists.

Specifically, conferences submitted to ICO sponsorship must necessarily to follow the IUPAP limit in all cases. These are the General Meetings, Topical Meetings and other major ICO events — usually one per year. For the other events with ICO participation, registration fees higher than the limit can occasionally be accepted provided that an option exists for any scientist to request, at least six weeks in advance, application of the IUPAP limit and still be fully registered, perhaps except for some social events. That option must be known to registrants.

ICO CATEGORY	1-ICO General 2-Other major ICO events	3-ICO Cosponsored	4-ICO Endorsed
REQUIREMENTS			
a) ICSU rules on free movement of scientists	SR	SR	SR
b) good scientific quality as perceived by the ICO Bureau	SR	SR	SR
c) international character (typically > 30% participants and > 50% program Committee members from outside territory)	SR	SR	SR
d) industrial participation in Committees	UR	UR	UR
e) registration fee to follow IUPAP rules	SR	UR (see note)	UR (see note)
f) timeliness very clear, novelty	SR	UR	UR
g) participation in the ICO Proceedings Donation Programme	UR	UR	NR
h) approval by Territorial Committee (if there is one)	SR	SR	SR
ICO CATEGORY	1-ICO General 2-Other major ICO events	3-ICO Cosponsored	4-ICO Endorsed
ICO PARTICIPATION			
h) ICO Secretary or Associate Secretary in Organising Committee	SR	UR	NR
i) ICO designates one member of Programme Committee	SR	SR	UR
j) ICO associated from the beginning (usually at least 18 months in advance)	SR	SR	NR
k) use of ICO logo	SR	UR	PO
l) grant	PO	PO	NO
m) loan (reimbursable whether deficit or benefit)	PO	PO	NO
n) participation in budget, risk and benefits	PO	PO	NO
o) support for participation of scientists from regions of the world requiring special support	PO	PO	PO
p) announcements in Newsletter	SR	SR	PO
q) distribution of documents through ICO channels	SR	PO	NO

Table: Applicable rules for ICO participation in meetings and schools

Decision procedure:

The ICO Bureau approves all forms of ICO participation in international conferences, and authorizes the related grants:

- the meeting and school applications are processed twice annually, with the deadlines of applications on April 15 and October 15 of each year
- the applications must be received by ICO Secretariat by a deadline that is at least 12 months prior to the event and before the first announcement

- when the applications are received, the ICO President, Treasurer, and Secretary or Associate Secretary get in touch by some fast procedure and issue a memo including the background information relevant to the meeting. The memo may include a proposition concerning the category of ICO meeting applicable, the opportunity to grant the sponsorship requested, and the opportunity to grant financial support
- reply form is sent to the Bureau members; it includes the proposition
- in any event, if the approval by the relevant Territorial Committee is not clear from the application form, the Territorial Committee is contacted at the same time as the Bureau members, and it has a right of veto for 45 days after the letter has been sent; the default is that there is no veto
- no later than one month after application deadline, the decisions are made based on the replies obtained so far from the Bureau members. Only the votes received are counted, the votes not received are not considered as approvals of the proposition of the subcommittee.

Financial participation of ICO:

According to the table above, ICO may give a grant or a loan to meetings and schools of categories 1, 2 and 3. A special form of a grant, that can apply to all categories, is the financial support for the participation of scientists from regions of the world requiring special support. In that case, the amount is usually sent to the organizers with the instruction that they should spend it on financial support to identified scientists from such regions, inform the recipients of the support from ICO and send the list of recipients to ICO; whenever possible, the organizers should be requested to complement the ICO grant, for example by waiving the registration fees for the recipients.

Alternatively, ICO may also wish to take part where practicable in the risks or benefits of meetings and schools of categories 1, 2 and 3. That is possible, if the local law permits, in the following conditions:

- ICO accepts a financial responsibility up to an amount of X;
- the amount X is paid by ICO to the meeting organizers in the form of a treasury advance; it is made available to the organizers by the ICO Treasurer as soon as they request it;
- at the closing of the account and in no case later than one year after the meeting is finished,

if there is a deficit:

- if the deficit is smaller than X, ICO will cover it in its entirety, i.e. the organizers will only have to reimburse ICO the difference;
- if the deficit is larger than X, then ICO will cover it for an amount X, i.e. no money will be reimbursed to ICO;

if there is a surplus:

- if the surplus is smaller than $4X$, ICO will receive 25 % of the surplus, i.e. the organizers will reimburse ICO the amount X plus a quarter of the surplus;
- if the surplus is larger than $4X$, the organizers will reimburse ICO two times X .

Depending on circumstances, slight modifications to this scheme may be made by the Bureau. Any given Bureau may approve meeting support up to the triennial Meeting Support budget for the triennium of its term, augmented with any return from previously granted participation in risk. Loans are not counted and are limited only by the approval of the Treasurer based on the account balance. There is continuity in the ICO Bureau, therefore the Bureau may approve meetings to be held after the next Bureau elections.

5. Relations with IUPAP

The relation with the International Union of Pure and Applied Physics is ruled by a separate Memorandum of Understanding.

6. ICO Committees

In order to assist the General Meeting and the Bureau in their activities, ICO has established the following committees:

1. Nominating Committee, chaired by the ICO past-president.
2. Strategic Planning Committee, chaired by the ICO president.
3. Travelling Lecturer Committee, chaired by the ICO treasurer.
4. Committee for the Regional Development of Optics, chaired an ICO Vice-President.
5. Education Committee, chaired by an ICO Vice-President.
6. ICO Prize Committee, chaired by an ICO Vice-President.
7. ICO Galileo Galilei Award Committee, chaired by an ICO Vice-President.
8. ICO/ICTP Gallieno Denardo Award Committee, chaired by an ICO Vice-President.
9. IUPAP Young Scientist Prize in Optics Committee, chaired by an ICO Vice-President.
10. International Affairs Committee, chaired by chaired by an ICO Vice-President.

Duties of the committees:

- a) The specific purpose of each committee is indicated below. Committees report on their activity at each General Meeting and, as appropriate, at each meeting of the Bureau.
- b) The purpose of the Nominating Committee is to coordinate the elections of the Bureau.
- c) The purpose of the Strategic Planning Committee is to propose suitable new actions for ICO, with suitable attention for the inclusion of industrial optics in ICO's activities.
- d) The purpose of the Travelling Lecturer Programme Committee is indicated in section 7 below.
- e) The purpose of the Committee for the Regional Development of Optics is to find and implement actions whereby ICO can promote the transfer of optical knowledge and provide practical help to optical scientists and engineers in Developing Nations and in general, geographical areas where optics is not well developed.
- f) The purpose of the Education Committee is to promote education in Optics worldwide.
- g) The purpose of the ICO Prize Committee is indicated in section 9 below.
- h) The purpose of the ICO Galileo Galilei Award Committee is indicated in section 10 below.
- i) The purpose of the ICO/ICTP Gallieno Denardo Award Committee is indicated in section 11 below.
- j) The purpose of the IUPAP Young Scientist Prize in Optics Committee is indicated in section 12 below.
- k) The purpose of the International Affairs Committee, is to give advice to the ICO execom and ICO bureau in those international issues involving optics and photonics.
- l) The purpose of the Ad Hoc Committee for the Resources Hub, is to establish the ICO Resources Hub.

Membership of the Committees:

Each committee has a chairperson and members. The following rules apply:

- a) The chairperson of all ICO committees is always a member of the ICO Bureau.
- b) The ICO past-President is ex officio the chairperson of the Nominating Committee and the members are appointed by the chairperson.

- c) The ICO President is ex officio the chairperson of the Strategic Planning Committee and the members are appointed by the chairperson.
- d) The ICO Treasurer is ex officio the chairperson of the Travelling Lecturer Committee.
- e) Except for the cases of rules b) and c) above the members are proposed by the chairperson and appointed by the Bureau. To avoid delays in the operation of Committees, the appointment of members by the Bureau can be made by mail.

7. ICO Travelling Lecturer Programme

ICO established in 1988 a Travelling Lecturer Programme to promote lectures on modern aspects of optics in interested territories by scientists of international reputation with good lecturing skills. The program is aimed specially at developing nations, but is not necessarily restricted to them. As a rule, it is expected that the lecturer's local expenses will be met by the host institution and that ICO's contribution will be towards the travel costs. Scientists or host groups interested in participating in this program should write to the Treasurer of ICO with details of the proposed lecture program and ICO support requested.

Within the financial limits of the budget, an ICO Committee, with the ICO Treasurer as chairperson, decides for the ICO Travelling Lecturer grants. This Committee in principle does not meet, but works by mail and telecommunication facilities so as to secure the fastest response compatible with good operation.

8. ICO Prize

The ICO established in 1982 the ICO Prize, to be given each year to an individual who has made a noteworthy contribution to optics, published or submitted for publication before he or she has reached the age of 40. (Specifically, the Prize winner must not have reached the age of 40 before December 31 of the year for which the Prize is awarded). The character of the work of successive Prize recipients should preferably alternate between predominantly experimental or technological and predominantly theoretical. The "noteworthy" contribution in optics is measured chiefly by its impact (past or possibly future) on the field of optics generally, opening a new subfield or significantly expanding an established subfield in research or technology.

The ICO Prize involves:

- a citation,
- a cash award of an amount established in the triennial budget of the ICO and indicated every year in the call for nominations,
- travel support to attend said meeting to an amount to be determined by the Bureau,
- waiver of registration fees at said meeting,

- and the invitation to present an invited paper and receive the award at the next ICO Congress or another ICO meeting mutually agreed to by the Bureau and the award winner.

Every year, the ICO Prize Committee issues a call for nominations that is published in the ICO Newsletter, receives the nominations and selects the recipients for approval by the Bureau at its next meeting. The award needs not be made each year if the Prize Committee so chooses. The Prize is preferably given to an individual, but it can be shared by two persons. Eligibility for the Prize is not excluded by previous prizes awarded to the individual. The selected Prize winner is then announced in the ICO Newsletter and, if possible, in one or more optics journals. The prizes are presented at each ICO General Meeting.

9. ICO Galileo Galilei Medal Award

1. The Galileo Galilei medal of ICO is awarded for outstanding contributions to the field of optics which are achieved under comparatively unfavourable circumstances. The outstanding contributions in the field of optics should refer to:

- fundamental scientific questions or problems, or
- research or development of optical methods or devices, or
- scientific or technical leadership in the establishment of regional optical centres.

"Comparatively unfavourable circumstances" refers to difficult economic or social conditions or lack of access to scientific or technical facilities or sources of information.

2. The outstanding contributions must be documented, if applicable, by internationally acknowledged publications. Exceptionally, reports can be considered, provided that they are made available to the Award Committee.

3. The award is normally given to one person. Exceptionally, however, if a collective contribution is judged to be worthy of the award a team of several persons may be selected.

4. Every year, the ICO Galileo Galilei Award Committee issues a call for nominations that is published in the ICO Newsletter, receives the nominations and selects the winner for approval by the Bureau at its next meeting. The award need not be given every year if the Bureau so chooses.

5. The award consists of:

- a. the Galileo Galilei Medal offered by the Italian Society for Optics and Photonics,
- b. a cash award of an amount determined by the Bureau,

- c. assistance in travel as determined by the Bureau to present an invited paper and receive the award at the next ICO Congress or another ICO meeting mutually agreed to by the Bureau and the award winner,
- d. waiver of registration fees at said meeting,
- e. special attention and appropriate measures of ICO to support the future activities of the award winner.

10. ICO/ICTP Gallieno Denardo Award for Young Researchers from Developing Countries

(Approved by ICTP and ICO, Aug. 1999. New version approved Nov. 2007).

ICO, the International Commission for Optics, and ICTP, the Abdus Salam International Centre for Theoretical Physics, Trieste, have agreed to establish a joint prize, called the ICO/ICTP Award. It is reserved for young researchers from developing countries^[1], who conduct their research in a developing country. The award will be given to scientists less than 40 years old^[2] who are active in research in Optics and have contributed to the promotion of research activities in Optics in their own or another developing country. The award consists of the following:

1. The ICO gives a cash amount^[3] and a diploma.
2. The ICTP invites the winner to attend a three weeks College^[4] at Trieste at the next appropriate opportunity, and to give a seminar on his/her work when appropriate. ICTP will pay for travel and living expenses.

The award will be delivered to the winner at Trieste in the presence of representatives of ICO and ICTP. The award is given to one person every year. The winner is selected on the basis of nominations received by the Award Committee in response to a call published by both ICO and ICTP. The Award Committee consists of four members, of which two are appointed by ICO and two by ICTP for a period of three years. Among the four members, ICO appoints the Committee Chair.

The nominations must be documented by a complete curriculum vitae including a list of publications and selected reprints (no more than three) as well as a complete employment history and a description of the nominee's achievements for the promotion of research activity in developing countries. Since February 2008 the award has the new definitions as ICO/ICTP Gallieno Denardo Award honouring the memory of the late Prof. Gallieno Denardo.

^[1]Developing Countries are defined by the list of Developing Countries of the United Nations Organization

^[2]Specifically, the winner must not have reached the age of 40 on December 31st of the year for which the award is given.

^[3]For 2011-2017, the amount is US\$1000.

^[4]The ICTP in Trieste organises a Winter College on Optics, or Laser Physics, or Photonics, or Quantum Optics once a year, normally three weeks in February. The Winter Colleges are currently organised in cooperation with the ICO, OSA (Optical Society of America), SPIE and OWLS.

11. IUPAP Young Scientist Prize in Optics

The IUPAP Young Scientist Prize in Optics is an achievement prize established in 2009. It is an IUPAP prize administered by the ICO in a similar manner as the ICO's own prizes and awards. The IUPAP Young Scientist Prize in Optics will be awarded annually to a scientist who has made an outstanding contribution to the field of applied optics and photonics and who by the end of the year in which the prize is given has a maximum of eight years of research experience (excluding any career interruptions) after obtaining the doctoral degree.

The contribution, which is measured by its scientific impact, must be clearly documented. The IUPAP Prize is strictly an achievement award for an individual in early career. The Prize will be awarded at an ICO conference that is endorsed by the IUPAP. The IUPAP Prize involves:

- a) An IUPAP Young Scientist Medal, with the name and discipline (Optics) of the recipient engraved on the back. The medal is prepared by the IUPAP and its front side is the same for all Commissions and Affiliated Commissions.
- b) A certificate containing the citation (with a maximum of 100 words).
- c) A cash award determined by the IUPAP.

The recipient is expected to deliver an invited presentation at a major ICO conference and it is recommended that the registration fee for the awardee be waived. Additional travel support can be obtained from other sources but it cannot be used to increase the amount of the cash award.

For each triennial period the ICO appoints an IUPAP Prize Committee. Every year the ICO issues and distributes a call for nominations with a nomination deadline. The nominations are to be made in accordance with the general instructions as published on the ICO website. The Prize Committee evaluates the nominations and recommends a winner for the approval of the ICO Bureau. The Prize need not be given every year if the Prize Committee or the Bureau so decide.

Eligibility for the IUPAP Prize is not excluded by previous prizes that may have been awarded to the individual. Provided the time limitations are satisfied, unsuccessful nominations are considered for two subsequent years after the initial nomination, but the Nomination Committee may ask for updates of the nomination documents. After three years, a re-nomination can be made if the eight-year time limit is met. The nomination and selection procedure must overall be fair and open.

12. Fiscal sponsorship grant agreement between the OSA Foundation and the International Commission for Optics

[OSAF - ICO Fiscal Sponsorship Agreement, signed on November 15, 2010.](#)

Signatories:

Elizabeth Rogan, OSA Foundation Executive Director (15 Nov. 2010)

Maria L. Calvo, ICO President (11 Nov. 2010).

13. ICO Proceedings Donation Programme

Territorial Committees and scientists from countries that are preparing for ICO membership may request to receive copies of the Proceedings volumes issued on the occasion of meetings participating in the ICO Proceedings Donation Programme. At least all ICO General, Topical, Regional and Cosponsored Meetings participate in the Programme. These proceedings will be kept in a scientific library open to all researchers and engineers working in optics. The cost of printing and shipping will be borne by the organisers of the meetings. The ICO Secretariat will keep the mailing list and send the appropriate mailing labels in due time to the meeting organisers. In view of the expenses involved, there will be a limit of one address per ICO Member Territory and one address per country preparing for ICO membership. In addition, it is expected that Member Territories and countries where the access to scientific literature is relatively satisfactory will refrain from requesting to benefit from the Programme.

14. ICO Bureau Meetings

The ICO Bureau meets typically one time per year in the years without a General Meeting, and in addition once immediately before and once immediately after every General Meeting.

THE ICO TERRITORIAL COMMITTEES**ICO Membership List, October 1st, 2024****Argentina**

Units: 3, votes: 2, member since 1981

Asociación Física
ArgentinaDra. Myrian Tebaldi
myrianc@ciop.unlp.edu.ar**Armenia**

Units: 1, votes: 1, member since 2011

Nat. Academy of
Sciences of ArmeniaProf. Aram Papoyan
papoyan@ipr.sci.am**Australia**

Units: 6, votes: 3, member since 1959

The Australian
Optical SocietyProf. John Holdsworth
John.Holdsworth@newcastle.edu.au**Belgium**

Units: 4, votes: 3, member since 1948

Associate Member since 2013

Dr. Yvon Renotte
y.renotte@ulg.ac.be**Belorussia**

Units: 2, votes: 2, member since 1993

Associate member since 2013

Inst. of Physics of the NAS of Belarus

Prof. Andrey Goncharenko
ifanbel@ifanbel.bas-net.by**Brazil**

Units: 5, votes: 3, member since 1984

Canada

Units: 8, votes: 4, member since 1956

Tigran Galstian
galstian@phy.ulaval.ca**China**

Units: 11, votes: 5, member since 1987



Chinese Optical Society

Prof. Gong Qihuang
qhongong@pku.edu.cn**Colombia**

Units: 2, votes: 2, member since 1990

Sociedad Red Colombiana de Óptica

Prof. Edgar Rueda
edgar.rueda@udea.edu.co**Cuba**

Units: 1, votes: 1, member since 1993

Czech Republic

Units: 2, votes: 2, member since 1948

Dr. Miroslav Hrabovsky
hrabovsky@sloup.upol.cz**Denmark**

Units: 3, votes: 2, member since 1987

The Danish Optical Society

Dr. Anders Clausen
ancl@fotonik.dtu.dk**Ecuador**

Associate member since 2005

Ph. D. Dr. Nikolai Espinosa
ndespinosa@espe.edu.ec**Estonia**

Units: 1, votes: 1, member since 2002

Estonian Physical
SocietyProf Peeter Saari
psaari@fi.tartu.ee

Finland

Units: 4, votes: 3, member since 1978
Photonics Finland



Prof. Jyrki Saarinen
jyrki.saarinen@uef.fi

France

Units: 15, votes: 5, member since 1948



Société Française
d'Optique

Florence Haddouche
florence.haddouche@institutoptique.fr

Germany

Units: 15, votes: 5, member since 1953



DGAO

Ricarda Kafka
ricarda.kafka@dga0.de


Ghana / West Africa

Units: 1, votes: 1, member since 1993
Associate member since 2013
buahbass@hotmail.com
Prof. Ahmadou Wagué
wague@refer.sn
Prof. Kedro Sidiki Diomandé
cnra@aviso.ci or diomkap@yahoo.fr

Greece

Units: 3, votes: 2, member since 2005
Prof. Nikos Vainos
vainos@eie.gr

Hungary

Units: 3, votes: 2, member since 1963
Associate member since 2013
 OPAKFI: Sci. Soc. Optics,
Acoustics & Filmtech

Dr. Ákos Antal
akos1@mail.matav.hu

India

Units: 4, votes: 3, member since 1990



Optical Society of India

Prof. Lakshminara. N. Hazra
lakshminarayanahazra@gmail.com

Indonesia

Units: 1, votes: 1, member since 1987
The Indonesian Optical Society (InOS)



Himpunan Optika Indonesia
Indonesian Optical Society

Dr Husin Alatas
s.h.alatas@gmail.com

Ireland

Units: 3, votes: 2, member since 1984
Institute of Physics in Ireland
Karen Sheeran
Karen.Sheeran@iop.org

Islamic Republic of Iran

Units: 1, votes: 1, member since 1993
Associate member since 2013
Prof. M.T. Tavassoly
tavassoli@iasbs.ac.ir

Israel

Units: 4, votes: 3, member since 1972
Professor Abraham Katzir
katzir@post.tau.ac.il

Italy

Units: 12, votes: 5, member since 1948
Italian National Council for Research
Cecilia Lalle
cecilia.lalle@cnr.it

Japan

Units: 15, votes: 5, member since 1953

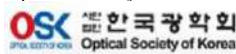


Science Council of Japan

Prof. Yasuhiko Arakawa
arakawa@iis.u-tokyo.ac.jp

Korea (Republic of)

Units: 4, votes: 3, member since 1975
Optical Society of Korea



Dr. Byoung Yoon Kim
osk@osk.or.kr

Latvia

Units: 1, votes: 1, member since 2002
 Prof. Janis Spigulis
 E-mail: janispi@latnet.lv

Lithuania

Unit: 1, votes: 1, member since 2003
 Associate member since 2013
 Prof. Juozas Vidmantis Vaitkus
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Mexico

Units: 3, votes: 2, member since 1972
 Dr. Anibal de la Piedad
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Moldova

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 Associate member since 2013
 Academy of Sciences of Moldova
 Prof. Elena Achimova
 elena.achimova@ifa.md

Morocco

Associate member since 2002
 Prof. Mustapha Haddad
 mhaddad22@yahoo.fr
 Prof. Mohammed Semaili
 medsemaili@hotmail.com

Netherlands

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 Associate member since 2013
 PhotonicsNL
 Dr. J. J. H. B. Schleipen
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New Zealand

Units: 3, votes: 2, member since 1974



Royal Society of
 New Zealand

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Frederique Vanholsbeeck
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 nz

Norway

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**Optical Engineering Society Taipei
 China (Taiwan Photonics Society)**

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 Associate member since 2013
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Poland

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 Polish Academy of Sciences
 Prof. Leszek Sirko
 sirko@ifpan.edu.pl

Portugal

Units: 2, votes: 2 member since 2011



SPOF

Soc. Portuguesa de Óptica e Fotónica
 Prof. Manuel Costa
 mfcosta@fisica.uminho.pt

Romania

Units: 1, votes: 1, member since 1993
 Prof. Nicolaie Pavel
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Russia

Units: 18, votes: 6, member since 1981
 Russian Academy of Sciences
 Prof. Natalya Istomina
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Singapore

Units: 3, votes: 2, member since 1984
 Optics and Photonics Society of
 Singapore



Optics and Photonics Society of Singapore
 新加坡光学与光子学学会

Dr. Qian Quemao
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Slovak Republic

Units: 2, votes: 2, member since 1948
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 SOCIEDAD ESPAÑOLA DE OPTICA

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Units: 6, votes: 3, member since 1948
 Swiss Society for Optics and
 Microscopy



Prof. Dr. Hans Peter Herzig
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Units: 1, votes: 1, member since 2006
 Prof. Souad Lahmar
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 Associate member since 2013
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Dr. Sara OTERO
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ICO COMMITTEES, 2017—2021

ICO Nominating Committee:

Chair: Prof. Yasuhiko Arakawa
(Japan, ICO Past President)

Members:

Prof. Maria Calvo (Spain) Prof. Seung-Han Park (Korea)

Prof. John Harvey (New Zealand)

ICO Strategic Planning Committee:

Chair: Prof. Roberta Ramponi (Italy,
ICO President)

Members:

Prof. Duncan T. Moore (USA)

Prof. Maria L. Calvo (Spain, not ICO
Bureau member)

Prof. Angela Guzmán (USA/Colombia)

Prof. James Harrington (USA)

Prof. Gert von Bally (Germany) Prof.
Pierre Chavel (France, not ICO Bureau
member)

ICO Committee for Regional Development:

Chair: Prof. John Harvey (New
Zealand)

Members:

Dr. Yanne K. Chembo (France, not
ICO Bureau member)

Prof. Joe Niemela (Italy)

Prof. Seung-Han Park (Korea) Prof.

Gert von Bally (Germany)

ICO Education Committee:

Chair: Prof. Qihuang Gong (China)

Members: (Inactive)

ICO Prize Committee:

Chair: Prof. Seung-Han Park (Korea)

Members:

Maria J. Yzuel (Spain, Former ICO
Vice President)

John Harvey (New Zealand)

Leszek Sirko (Poland)

Yasuhiko Arakawa (Japan)

Eric Rosas (Mexico)

Gert von Bally (Germany)

Joseph Niemela (USA)

Carmíña Londoño (USA)

Sara Otero (Spain)

IUPAP Young Scientist Prize in Optics Committee:

Chair: Prof. Dr. Adrian Podoleanu
(UK)

Members:

Jannick Rolland (USA)

Gabriel Popescu (Romania)

Mourad Zghal (Tunis)

ICO/ICTP Gallieno Denardo Award Committee:

Chair: Prof. Mourad Zghal (Tunisia)

Members:

Prof. Joseph Niemela (Italy, ICTP) Dr.

Mitcho Danailov (Italy, not ICO

Bureau member)

Prof. Anna Consortini (Italy, not ICO

Bureau member)

Prof. Ahmadou Wagué (Senegal)

ICO Galileo Galilei Medal Award Committee:

Chair: Prof. Natalya Kundikova
(Russia)

Members:

Prof. Anna Consortini (Italy, not ICO
Bureau member)

Prof. Nataliya Kundikova (Russia, not
ICO Bureau member, Past winner)

Prof. Fernando Mendoza (Mexico, not
ICO Bureau member)

Prof. Joseph Niemela (Italy)

ICO Traveling Lecturer Program Committee:

Chair: Prof. Joseph Niemela (USA,
ICO Treasurer)

Members:

Prof. Seung-Han Park (Korea)

Prof. Humberto Michinel

Prof. Gert von Bally

ICO ad-hoc Committee on

International Affairs:

Chair: Prof. Gert von Bally (Germany)

Members:

Prof. Henryk Kasprzak (Poland, not
ICO Bureau member)

Prof. Tomasz Szoplik (Poland, not ICO
Bureau member)

FORMER MEMBERS OF THE ICO BUREAU

1947-1950

T. Smith	Great Britain	President
A. Arnulf	France	Treasurer
P. Fleury	France	Secretary
J. Hrdlicka	Czechoslovakia	Vice-President
S. S. Ballard	U.S.A.	Vice-President
A. C. S. van Heel	The Netherlands	Vice-President

1950-1956

A. C. S. van Heel	The Netherlands	President
A. Arnulf	France	Treasurer
P. Fleury	France	Secretary
S. S. Ballard	U.S.A.	Vice-President
L. C. Martin	Great Britain	Vice-President
J. M. Otero	Spain	Vice President

1956-1959

S. S. Ballard	U.S.A.	President
W. D. Wright	Great Britain	Secretary-Treasurer
E. Ingelstam	Sweden	Vice-President
G. Hansen	Germany	Vice-President
A. Maréchal	France	Vice-President
G. Toraldo di Francia	Italy	Vice-President

1959-1962

E. Ingelstam	Sweden	President
W. D. Wright	Great Britain	Secretary-Treasurer
J. G. Baker	U.S.A.	Vice-President
A. Maréchal	France	Vice-President
P. Mollet	Belgium	Vice-President
G. Toraldo di Francia	Italy	Vice-President

1962-1965 (Posponed to 1966)

A. Maréchal	France	President
W. D. Wright	Great Britain	Secretary-Treasurer
G. Cario	Germany	Vice-President
W. L. Hyde	U.S.A.	Vice-President
H. Kubota	Japan	Vice-President
P. Mollet	Belgium	Vice-President

1966-1969

G. Toraldo di Francia

W. L. Hyde
L. E. Howlett
H. H. Hopkins
H. Kubota
T. Skalinski

Italy

USA
Canada
Great Britain
Japan
Poland

President

Secretary-Treasurer
Vice-President
Vice-President
Vice-President
Vice President

1969-1972

H. H. Hopkins

J.-Ch. Viénot
B. Havelka
R. M. Scott
K. Kinoshita
W. H. Steel

Great Britain

France
Czechoslovakia
U.S.A.
Japan
Australia

President

Secr. General & Treasurer
Vice-President
Vice-President
Vice-President
Vice-President

1972-1975

W. H. Steel

J.-Ch. Viénot
K. M. Baird
B. Billings
A. Fiorentini
B. Havelka
K. Kinoshita
H. Koehler

Australia

France
Canada
U.S.A.
Italy
Czechoslovakia
Japan
Germany

President

Secr. General & Treasurer
Vice President
Vice President
Vice President
Vice-President
Vice-President
Vice-President

1975-1978

K. M. Baird

W. H. Steel
J.-Ch. Viénot
F. D. Smith
B. Karczewski
A. W. Lohmann
L. Plaza
J. Tsujiuchi
W. T. Welford

Canada

Australia
France
U.S.A.
Poland
Germany
Spain
Japan
Great Britain

President

Past President
Secretary General
Vice Pres. & Treasurer
Vice President
Vice President
Vice President
Vice President
Vice President

1978-1981

A. W. Lohmann

K. M. Baird
H. J. Frankena
F. D. Smith
E. Marom
K. Schindl
T. Skalinski
J. Tsujiuchi
W. T. Welford

Federal Rep. Germany

Canada
The Netherlands
USA
Israel
Austria
Poland
Japan
Great Britain

President

Past-President
Secretary-General
Treasurer & Vice-Pres.
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President

1981-1984

J. Tsujiuchi	Japan	President
A. W. Lohmann	FRG	Past-President
H. J. Frankena	The Netherlands	Secretary-General
J. N. Howard	USA	Vice Pres. & Treasurer
F. T. Arecchi	Italy	Vice President
K. Biedermann	Sweden	Vice President
S. Lowenthal	France	Vice President
T. Skalinski	Poland	Vice President
P. Varga	Hungary	Vice President

1984-1987

S. Lowenthal	France	President
J. Tsujiuchi	Japan	Past-President
H. J. Frankena	The Netherlands	Secretary-General
J. N. Howard	USA	Treasurer
H. H. Arsenault	Canada	Vice-President
K. Biedermann	Sweden	Vice-President
E. Byckling	Finland	Vice-President
J. W. Goodman	USA	Vice-President
P. Hariharan	Australia	Vice-President
M. P. Petrov	USSR	Vice-President

1987-1990

J. W. Goodman	USA	President
S. Lowenthal	France	Past-President
J. C. Dainty	Great Britain	Secretary-General
P. Hariharan	Australia	Treasurer
H. H. Arsenault	Canada	Vice-President
M-W Chang	O.E. Soc. Taipei	Vice President
A. Consortini	Italy	Vice-President
F. Lanzl	FRG	Vice-President
D. Malacara	Mexico	Vice-President
J. Perina	Czechoslovakia	Vice-President

1990-1993

J. C. Dainty	Great Britain	President
J. W. Goodman	USA	Past-President
P. Chavel	France	Secretary-General
P. Hariharan	Australia	Treasurer
T. Asakura	Japan	Vice-President
A. Consortini	Italy	Vice-President
F. Lanzl	FRG	Vice-President
G. Lupkovics	Hungary	Vice-President
K. Rebane	former USSR	Vice-President
G. Sincerbox	USA	Vice-President
C.H.F. Velzel	The Netherlands	Vice-President
M.J. Yzuel	Spain	Vice-President

1993-1996

A. Consortini

J.C. Dainty
P. Chavel
R.R. Shannon
T. Asakura
K. Chalasinska-Macukov
S.S. Lee
F. Merkle
G.G. Mu
G. Sincerbox
C.H.F. Velzel
M.J. Yzuel

Italy

Great Britain
France
USA
Japan
Poland
Korea (Republic of)
FRG
Chinese Opt. Soc.
USA
The Netherlands
Spain

President

Past-President
Secretary-General
Treasurer
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President

1996-1999

T. Asakura

A. Consortini
P. Chavel
A.T. Friberg
R.R. Shannon
K. Chalasinska-Macukov
R. Dändikler
A.H. Guenther
M.C. Hutley
S.S. Lee
F. Merkle
G.G. Mu
J. Ojeda-Castañeda

Japan

Italy
France
Finland
U.S.A
Poland
Switzerland
U.S.A
U.K.
Korea (Republic of)
Germany
Chinese Opt. Soc.
Mexico

President

Past-President
Secretary-General
Associate Secretary
Treasurer
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President

1999-2002

A.H. Guenther

T. Asakura
P. Chavel
A.T. Friberg
G.T. Sincerbox
R. Dändikler
U. Kim
J. Ojeda-Castañeda
G. C. Righini
C. Sheppard
L.L. Wang
M.L. Calvo
A.A. Friesem
D.A.B. Miller
Y. Petroff
B.E.A. Saleh
T. Tschudi
H.H. Arsenaault

USA

Japan
France
Sweden
USA
Switzerland
Korea (Republic of)
México
Italy
Australia
Netherlands
Spain
Israel
USA
France
USA
Germany
Canada

President

Past-President
Secretary-General
Associate Secretary
Treasurer
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed

2002-2005**R. Dändliker**

A. H. Guenther
 M. L. Calvo
 A.T. Friberg
 G.T. Sincerbox
 H.H. Arsenault
 A. A. Friesem
 N. G. Gaggioli
 G. Jin
 B. Y. Kim
 M. Kujawinska
 G. C. Righini
 A. A. Sawchuk
 T. Tschudi
 G. von Bally
 A. Wagué
 L. Wang
 A. M. Weiner
 I. Yamaguchi
 P. Chavel
 Y. Petroff

Switzerland

USA
 Spain
 Sweden
 USA
 Canada
 Israel
 Argentina
 China
 Korea
 Poland
 Italy
 USA
 Germany
 Germany
 Senegal
 The Netherlands
 USA
 Japan
 France
 France

President

Past-President
 Secretary-General
 Associate Secretary
 Treasurer
 Vice-President appointed
 Vice-President
 Vice-President
 Vice-President
 Vice-President
 Vice-President
 Vice-President appointed
 Vice-President appointed
 Vice-President appointed
 Vice-President
 Vice-President appointed
 Vice-President
 Senior Adviser
 IUPAP Delegate

2005-2008**A. T. Friberg**

R. Dändliker
 M. L. Calvo
 G. von Bally
 A. A. Sawchuk
 A. N. Bagayev
 M. Gu
 J. Braat
 A. M. Guzmán
 G. Jin
 I.C. Khoo
 B. Y. Kim
 M. Kujawinska
 H. Lefevre
 J. Love
 G. Sincerbox
 H.P. Stahl
 A. Wagué
 I. Yamaguchi
 P. Chavel
 Y. Petroff

Finland

Switzerland
 Spain
 Germany
 USA
 Russia
 Australia
 The Netherlands
 Colombia & USA
 China
 USA
 Korea
 Poland
 France
 Australia
 USA
 USA
 Senegal
 Japan
 France
 France

President

Past-President
 Secretary General
 Associate Secretary
 Treasurer
 Vice-President
 Vice-President Appointed
 Vice-President Appointed
 Vice-President
 Vice-President
 Vice-President appointed
 Vice-President
 Vice-President
 Vice-President
 Vice-President
 Vice-President appointed
 Vice-President appointed
 Vice-President appointed
 Vice-President
 Senior Adviser
 IUPAP Delegate

2008-2011

M. L. Calvo

A. T. Friberg
A. M. Guzmán
G. von Bally
J. A. Harrington
Y. Arakawa
Z. B Lakhdar
Z. Bingkun
H. Lefèvre
F. Mendoza Santoyo
D. T. Moore
M. Oron
T. Szoplik
R. Ramponi
I. C. Khoo
D. T. Strickland
H. P. Stahl
M. Gu
A. Wagué
C. Cisneros

Spain

Finland
Colombia & USA
Germany
USA
Japan
Tunisia
China
France
Mexico
USA
Israel
Poland
Italy
USA
Canada
USA
Australia
Senegal
Mexico

President

Past-President
Secretary General
Associate Secretary
Treasurer
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
IUPAP Delegate

2011-2014

D. T. Moore

M. L. Calvo
A. M. Guzmán
G. von Bally
J. A. Harrington
Y. Arakawa
Z. B Lakhdar
Z. Bingkun
F. Höller
H. Michinel
M. Oron
R. Ramponi
T. Szoplik
A. Diaspro
Y. J. Ding
U. Gibson
H.P. Herzig
A. Wagué
M. J. Yzuel
C. Cisneros

USA

Spain
Colombia
Germany
USA
Japan
Tunisia
China
Germany
Spain
Israel
Italy
Poland
Italy
USA
Norway
Switzerland
Senegal
Spain
Mexico

President

Past-President
Secretary General
Associate Secretary
Treasurer
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
IUPAP Delegate

2014-2017**Y. Arakawa**

D. T. Moore
A. Guzmán
G. von Bally
J. Harrington
J. Harvey
F. Höller
H. Michinel
J. Niemela
R. Ramponi
S-H. Park
J. Zakrzewski
M. Zghal
K. Choquette
J. C. Howell
S. Morgan
E. Rosas
P. Urbach
M. Yzuel
C. Cisneros

Japan

USA
Colombia
Germany
USA
N. Zealand
Germany
Spain
USA
Italy
Korea
Poland
Tunis
USA
USA
UK
Mexico
Nederlands
Spain
Mexico

President

Past-President
Secretary General
Associate Secretary
Treasurer
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
IUPAP Delegate

2017-2021**R. Ramponi**

Y. Arakawa
H. Michinel
F. Höller
J. Niemela
Q. Gong
J. Harvey
N. Kundikova
S. Otero
S-H. Park
A. Podoleanu
L. Sirko
M. Zghal
K. Choquette
J. C. Howell
C. Londoño
G. Pauliat
E. Rosas
G. von Bally
Wagué
C. Cisneros

Italy

Japan
Spain
Germany
USA
China
N. Zealand
Russia
Spain
Korea
UK
Poland
Tunis
USA
USA
USA
France
Mexico
Germany
Senegal
Mexico

President

Past-President
Secretary General
Associate Secretary
Treasurer
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
Vice-President appointed
IUPAP Delegate

PART IV:

THE GENERAL MEETING

Minutes of the 25th ICO General Meeting

**Thursday 7th September, 2022 14:00h – 18:00h (CET).
Room 304 Hörsaalzentrum Technische Universität Dresden, Germany.**

The President of the Commission, Prof. John Howell, chaired the General Assembly. The following members of the Bureau were present:

ICO Bureau:

Past-President:	Roberta Ramponi (Italy*)
President:	John Howell (USA)
Secretary General:	Humberto Michinel (Spain*)
Treasurer:	Joseph Niemela (USA, online)
Assoc. Secretary:	Adrian Podoleanu (UK*)
Vice-Presidents, elected:	K. Minoshima (Japan*), N. Westbrook (France*), L. Sirko (Poland*), A. Podoleanu (UK*), J. Czarske (Germany*).
Vice-Presidents, appointed:	K. Choquette (IEEE, USA*), Y. Ismail (OPTICA), G. Paulliat (EOS, France*), E. Rosas (RIAO), G. Bally (OWLS, Germany), C. Londoño (SPIE)
<u>Apologies presented by:</u>	S. Otero, C. Cisneros, A. Wagué, Q. Gong, P. Ferraro

Asterisk (*) indicates bureau members attending also as delegates from their respective countries. In addition to the above names, delegates from the following ICO Territories were present (listed alphabetical order of territory):

Australia	D. Kane, A. White	Latvia	J. Spigulis
Colombia	E. Solarte	N. Zealand	F. van Holsbeeck, C. Simpson
Czech Rep.	M. Hrabovsky, P. Schovaneck	Spain	I. Pascual
Finland	A. Friberg	Rep. of Korea	S-H. Park
Germany	R. Kafka	Russia	N. Petrov
Italy	R. Pini	USA	K. Apter, L. Rogan, K. Rocheford, R. Graves

1. Welcome from the ICO President and approval of the agenda

The President welcomes the delegates and simultaneously the secretary prepares an online system for Prof. Dr. Malik Maaza from South-Africa, who has been invited to participate in the meeting. The agenda is presented with the request of J. Czarske to move the ICO-25 report to the beginning, because he has to attend many issues of the congress, as general chair. The president explains that in connection with his report, he wants to open a discussion with the delegates in connection with the ICO strategic plan. So, he proposes to interchange the presentations of the President's report and the ICO-25 report. The following motion is moved:

Motion 1: To interchange the President's report and the ICO-25 report presentations in the Agenda and to approve it.

Moved by: C. Simpson, seconded by A. White, approved unanimously.

2. Minutes of the ICO-24 General Assembly

The Secretary explains that the elections were celebrated last year online in August 2021 in an extraordinary General Assembly and that it is necessary to approve the minutes of that GA so the information on the new execom can be sent to the bank in order to be able to operate the ICO bank account sei@ico.org. He says that the minutes are available online in a "google drive" folder that was sent previously to all the delegates that registered. Prof. A. Friberg from Finland says that he did not receive the folder. The secretary asks other delegates and three more say that they did not receive the information. The secretary sends again the original email to those that request the information. After some time, the following motion is moved:

Motion 2: To approve the minutes of the ICO Extraordinary General Assembly, celebrated online in August 2021

Moved by: R. Ramponi, seconded by John Howell. Approved unanimously.

3. ICO-25 Report

Prof. Jürgen Czarske says a few words about the status of the ICO-25 congress. He highlights among other facts the attendance of three Nobel Prize laureates and that a lot of female participants registered. He also says that the five continents are represented in the congress.

The Secretary asks him to present a written report that will be published in the next ICO newsletter next October. Prof. Czarske agrees and leaves the meeting temporarily to attend to other congress issues. The delegates members give him applause for his efforts with the organization of the congress. Prof. Czarske leaves temporarily the session.

4. Secretariat report for 2017-2022

The Secretary thanks the ICO Associate Secretary for his work and presents briefly his report, saying that the full information is available online in the "Green Book" that the delegates can download from the ICO website since one year ago. Prof. A. Friberg asks if there is a printed version available. The secretary responds that he can download the current one. This "Green Book" is available in the following link: <https://www.e-ico.org/blog/publications/ico-triennial-report/>

5. Finances: Report of the treasurer and budget for 2022-2024

The Treasurer's Report is presented in an online presentation by the ICO Treasurer Prof. Joe Niemela from the ICTP at Trieste. He apologizes for not being able to attend the meeting and explains the budget for 2023 and 2024, as the budget for 2022 was an extension of 2021. Prof. A. Friberg asks how the budget was extended and the secretary explains that this was approved in the previous

extraordinary general assembly because of the pandemics and the postponement of ICO-25 for two years. Prof. A. Friberg asks if there are problems with countries not paying their fees. No serious issues are detected in the detailed Treasurer's report which contains all the accounting and is available in the online folder provided days ago to the delegates. The following motion is moved:

Motion 3: To approve the report of the treasurer and the budget of the ICO for 2023 and 2024.

Moved by: R. Ramponi. Seconded by A. Friberg. Unanimously approved.

6. Changes in the ICO Statutes and Rules and Codes of Practice after the ICO becoming "ISC Category 1 Full Member"

The Secretary explains that some changes in the ICO statutes and rules are necessary to adapt to the new ICO status in the International Science Council. Most of the changes are related with the ICO being no more an IUPAP affiliated commission and also to facilitate the daily operation of the organization. For an easier management of the bank account it is also necessary to modify article 5 stating that daily issues between general assemblies are carried out by the ICO execom. A comparative table with the changes is red is presented and discussed. The secretary says that all the changes have been previously supervised and authorized unanimously by the ICO execom and the ICO bureau.

Prof. A. Friberg asks when the decision on leaving IUPAP was adopted. Prof. R. Ramponi responds the this decision was voted in the previous GA. She explains that it was necessary to leave IUPAP to apply for being "category 1 full member" of the the ISC. Prof. A. Friberg asks about the ICO-IUPAP awards. The secretary explains that this award as well as the relationships with IUPAP are ruled by a Memorandum of Understanding between the two organizations. R. Pini says that it would be nice to share information on the awards among ICO and IUPAP, to avoid overlapping of awardees. R. Ramponi says that it is a huge success for the ICO the be on equal foot as other international organizations like IUPAP or IUPAQ. Finally, the following motion is moved:

Motion 4: To approve the new version of the ICO statutes and rules, that are attached as an appendix to this minutes.

Moved by K. Choquette, seconded by C. Londoño, approved unanimously.

7. Reports of the ICO Committees

The Secretary informs that the reports of the ICO committees have been received with the exception of the Education committee and the International Travelling Lecture Program, it is assumed that no activity has taken place in both committees. The secretary summarizes the reports of the ICO awards and announces to the assembly the 2022 winners:

The ICO Prize 2022 is awarded to Francisco Rodriguez-Fortuno from King's College London, UK, "for his seminal contributions to the spin-orbit interaction optics that largely expand our capacities to manipulate light-matter interaction at the nanoscale".

The IUPAP Young Scientist Prize in Optics 2022 is awarded to Prof. Chao Zuo from the department of Electronic and Optical Engineering, Nanjing University of Science and Technology (China) "for his work on the Development of Novel Computational Optical Imaging and Measurement Technologies".

The 2022 Galileo Galilei Medal Award is given to Prof. Chittur Subramanian Narayanamurthy, senior professor at the Department of Physics, Indian Institute of Space Science and Technology, Valiamala, Trivandrum, "for his outstanding contribution to speckle interferometry, optical metrology, optical testing, digital holography and adaptive optics, achieved under comparatively difficult circumstances".

The secretary says that the bureau recommends a 4-year deadline to receive all the ICO awards in person. The following motion is moved:

Motion 5: The ICO will not be responsible of delivering any trophy or money to the recipient of any ICO award after four years of its official notification.

Moved by C. Simpson, seconded by K. Choquette, approved unanimously.

L. Sirko comments that some excellent candidates for the ICO award were not eligible for being a few months older than the limit of 40 years. C. Simpson comments that circumstances like maternity must be taken into account. D. Kane says that it is a very complex problem to list all other potential circumstances that can be considered for extending the deadline over 40 years of age to receive the ICO award. Roberta Ramponi volunteers to join the group of chairs of the ICO awards to decide a possible text for including all the circumstances that can be considered for extending the limiting age beyond 40 years.

It is also briefly reviewed the activity of other committees and the president thanks all the chairs for their service. The secretary also informs that the bureau decided to rename the ad-Hoc committee for International Affairs, removed the word "ad-Hoc" from its title. This change in the name is approved by assent.

8. ICO Territories issues

Prof. Eric Rosas says that changes in the Mexican legislation on corruption have affected NGOs and that the previous Academia Mexicana de Optica (AMO) did not adapt to this new situation. Therefore, AMO cannot operate as an association in Mexico under current law. He says that he has been appointed as ICO Delegate by "Comité Territorial de Óptica de México de la ICO", which is the current representative of Mexico in RIAO (Iberoamerican Optics Network).

The Secretary of the ICO says that the ICO bureau has received a letter from the Mexican Academy of Sciences endorsing an organization called "Comité Territorial de Óptica de México de la ICO", where doctors Jorge Enrique Mejía Sánchez and J. Oracio Cuauhtémoc Barbosa García, currently serve as President and Vice President, respectively. This is the necessary condition, according to article 3.b) of the ICO statutes, for creating a territorial committee. The secretary also says that he has received an email signed by Prof. Eduardo Tepichín in the name of AMO claiming the representation of the Mexican territory. Prof. Tepichín was invited to attend the ICO GA to present his case, but he declined to attend. He was also urged to present a support letter from the Mexican Academy

of Sciences, but no such letter has been received. All the documents and emails related with the case are in the online folder that the delegates received days ago. P. Ferraro says that according to article 3.4 of the ICO statutes, it seems quite obvious that the Mexican Academy of Sciences endorses “Comité Territorial de Óptica de México de la ICO”. The following motion is moved:

Motion 6: To accept “Comité Territorial de Óptica de México de la ICO” as the Mexican ICO territorial committee.

Moved by A. White, seconded by R. Ramponi, approved unanimously.

9. MoU for the IYBSSD

The secretary explains that a MoU that was signed some months ago with IUPAP, after being authorized by the bureau, has to be presented to the ICO General Assembly (GA). The MoU sets the framework for cooperating in the International Year for Basic Science in Social Development (IYBSSD). It is moved the following motion:

Motion 7: To accept the MoU with IUPAP for the International Year for Basic Science in Social Development (IYBSSD), attached to this minutes as an appendix.

Moved by C. Simpson, seconded by A. White, approved unanimously.

10. Conferences with ICO participation

The Secretary informs that several conferences with ICO participation were celebrated since the last extraordinary assembly in 2021. \$1000 funding was given to Narine Gevorgyan and A.I. Alikhanyan from the National Science Laboratory in Yerevan, Armenia, to organize the Conference on Optics and its Applications, 11-15 Jan 2022. Elina Koistinen, EOS Executive Director, received 1.000€ for the EOS annual meeting, EOSAM, to be held 12-16 September 2022 in Porto, Portugal. Finally, Mr. Tsuyoshi Hayashi, requested that ICO acts as a cooperating society to the 13th International Conference on Optics-Photonics Design and Fabrication, "ODF'22", in Sapporo, Japan held on August 3rd-5th, 2022 in Japan. Detailed information is given in the ICO “Green Book” that is available online.

11. Date and place of the next ICO General Meeting(*)

The Secretary explains that after some meetings with the organizers, the ICO bureau recommends that the next ICO General Meeting will take place in Dakar (Senegal) 1st and 3rd October 2024. This means that the current bureau term must end after 30th September 2024. The following motions are moved:

Motion 8: To extend the term of the current ICO bureau one week, until 7th October 2024.

Moved by D. Kane, seconded by A. White, approved unanimously.

Motion 9: To celebrate the first and second session of the ICO General Assembly on 1st and 3rd October 2024, respectively.
 Moved by G. Pauliat, seconded by R. Ramponi, approved unanimously.

12. President's Report

After five minutes break, John Howell says that now that ICO has become a Category 1 full member of the ISC, the main goal of the current ICO Strategic Plan 2017-2023 has been achieved. Therefore, a new strategic plan must be started. The secretary says that, according to the ICO rules and codes, the strategic plan committee is chaired by the ICO President. The following plan is presented:

Strategic Goals

- Promotion of Optics and Photonics in Africa in view of the 2024 ICO26 General Assembly in Dakar, Senegal.
- Position ICO as a resource hub for developing countries.

Strengths of ICO

- Global brand with 54 territorial committees and 7 optical societies.
- Category 1 member of ISC.

Weaknesses of ICO

- Manpower: The ICO works simply on a voluntary basis and has no professional staff.
- Money: The ICO has a limited revenue stream from dues.

Operational Principles

- Assistance: we will assist scientists in developing nations in awarding efforts of the promotion of science and scientific policies.
- Collaboration: we will work collaboratively with the societies and members to achieve common goals.
- Education: we will educate and assist young researchers in building skills for solving local and global problems through optics and photonics.
- Observe, then Serve: we will first understand the needs and potential solutions before committing to a plan of action.

Vision

The vision of the ICO is two-fold. First, our efforts will be to make a meaningful impact in the lives of researchers working in optics and photonics in developing countries. That impact can include awarding efforts for devoted service, educating young scientists in optics and photonics, establishing scientific collaborations and/or assisting in policy decisions. Second, we will leverage the resources and collaborations within the ICO to promote solutions to local and global problems. In the short term, these efforts will focus on Africa in light of ICO 26 in Dakar, Senegal in 2024.

Action Plans**1. Resource Hub**

- Assign Resource Hub committee chair (October 2022).
- Form committee and delegate committee assignments (November 2022).
- Research resources within ISC, Optical Societies, and territories (March 2023).
- Disseminate and link information in website, newsletter and social media to territories and researchers in developing countries (Bureau Meeting 2023).

2. Education Committee

- Assign Education committee chair (October 2022).
- Form committee from VPs of international optical societies and African researchers (November 2022).
- Delegate assignments for gathering information about needs, interests and solutions from institutions, researchers, academies and policy makers within Africa (March 2023).
- Determine course of action (May 2023).
- Recruit 10 to 20 more African countries to join ICO (Bureau Meeting 2023 held in Africa).
- Implement course of action with measurable outcomes by general assembly (Bureau Meeting 2023 in Africa).
- Assess and report on findings in General Assembly 2024

13. Any Other Business

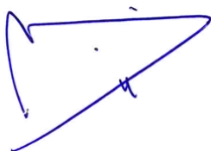
After introducing the strategic plan, a presentation with online polls is made by the president. In the presentation there are questions regarding the scope that the new “category one – full ISC member” may have.

F. van Holsbeeck says that it is important to look at what already exist. The president comments that the tutorials must be about optical systems and that the ICO will not supply the money for the activities. R. Kafka says that the activities must stick to optics and photonics.

An online connection with prof. Malik Maaza takes place and he motivates the assembly to persist in the previous goals of the plan. After a brief discussion it is agreed that the ICO may act as a hub for resources to promote optics and photonics in developing countries, especially in Africa, as the ICO26 will take place in Senegal. The following motion is moved:

Motion 10: To establish an “ad hoc resource hub committee” with the mission of setting up in one year an ICO resource hub: moved by Kent Choquette seconded by Carmaña Londoño, approved unanimously.

No other issue were raised and the meeting adjourned 18:10h CET



Prof. Humberto Michinel

ICO Secretary General

() The date and place of the next ICO General Meeting was changed in a further online urgent vote due to security problems in Dakar. It was finally approved to celebrate it in Cape Town, South Africa from 21st till 25th October 2024 and to extend the bureau term until 24th October 2024.*

This draft minutes must be approved by the 26th ICO General Assembly to be celebrated 22nd October 2024 in Cape Town, South Africa.

Report on the preparation of ICO-26

The 26th Congress of the International Commission for Optics taking place for the first time on the African Continent features keynote speeches by Nobel Laureates, Invited talks from leading researchers across the globe, panel discussions, and poster presentations, covering a wide range of topic.

Delegates are attending from six continents, 25 countries as well as representatives from all seven science societies. There are approximately 100 presentations at ICO26 in the form of Keynote Addresses, Plenary talks, Invited Talks, Contributed Talks and Poster presentations.



Keynote Speakers:

- Prof **Donna Strickland** (University of Waterloo, Canada - 2018 Nobel Laureate): “From Nonlinear Optics to High-Intensity Laser Physics”.
- Prof **Anne L’Huillier** (Lund University, Sweden, 2023 Nobel Laureate): “The Route to Attosecond Pulses.”



Prof Anne L'Huillier
Nobel Prize in Physics 2023



Prof Donna Strickland
Nobel Prize in Physics 2018

Plenary Speakers:

- Prof Juan Yin (University of Science and Technology of China, China) – Space-based Quantum Physics Experiments
- Prof Gerd Leuchs (OPTICA President, Max Planck Institute) - Field quantization from the viewpoint of classical optics
- Prof Carlos Hernández-García (University de Salamanca, Spain) - Structured attosecond pulses to probe ultrafast matter dynamics
- Prof Mikael Rechtsman (Penn State University, USA) - How to make photons feel magnetic fields, and implications thereof
- Prof Carlos Rios Ocampo (Maryland Energy Innovation Institute, USA) - Programmable photonics based on phase-change materials
- Prof Mahdy Rahman Chowdhury (North South University, Bangladesh) – Opticak and Quantum Manipulation from Microscopic to Large using Light and Matter Waves: Recent Observations of Counterintuitive Forces
- Prof Malik Maaza (University of South Africa, iThemba Labs, South Africa) – Photonics at the nano-scale: Multi-disciplinary & Frontiers science

Awards presented at ICO26

- ICO Award 2023 - Prof Carlos Hernández-García.
- ICO Award 2018 – Prof Mikael Rechtsman
- ICO- IUPAP Medal 2023 – Prof Carlos Rios Ocampo
- ICO Galileo Galilei Award Medal 2023 – Prof Mahdy Rahman Chowdhury
- ICO Galileo Galilei Award Medal 2018 – Prof Malik Maaza

Special sessions:

- **Authors Workshops hosted by Optica:** As a student delegate, you have a unique opportunity to enhance your skills and knowledge by participating in our exclusive Authors Workshops. This workshop is tailored specifically for emerging scholars like you, and they're designed to provide invaluable insights into the world of academic and professional writing.
- **Sustainable Development Goal Panel Discussion:** We are thrilled to announce one of the most impactful sessions on our agenda: the Sustainable Development Goal (SDG) Panel Discussion. This session is an exceptional opportunity to delve into the critical global challenges and innovative solutions related to the SDGs.
- **Roses in Science and Elite Panel:** This session will comprise of a panel discussion with elite researchers. It is a session to exchange ideas with peers in a more informal environment. It's a great way to network and discuss collaborative opportunities.

- **ICO HyperPi Session:** This session is set to be a highlight, showcasing an innovative hyperspectral camera, HyperActivePi, and an exciting project centered around the versatile Raspberry Pi platform. The first successful demonstration of the camera is the HyperActivePi by groups in Ecuador, the United States, and South Africa are working on developing their models as well as experiments that can utilize the HyperPi including post-harvest food monitoring, tissue discrimination, forest monitoring, and wheat stress. Join us at the session to hear more about this innovation initiative.

Gratitude to our sponsors and partners, and participants for their unwavering support and dedication towards making this conference a success.



