NEWSLETTER

COMMISSION INTERNATIONALE D'OPTIQUE ● INTERNATIONAL COMMISSION FOR OPTICS

ICO president takes up global challenge

Maria L Calvo aims to expand the ICO's international activities to promote optics and photonics research.

María L Calvo (ICO president for the term 2008–2011) is head of the Optics Department at Facultad de Ciencias Físicas, Universidad Complutense de Madrid, Spain.

Over the last few years we have seen the rapid evolution of new developments in science and watched them occur alongside massive changes in our global economy. It is undeniable that the global economy influences all aspects of our research activities. The elusive strong link between technology and the global economy determines the growth index in different regions all over the world. Economic indices highlight the emerging technological areas of influence as well as showing undesirable gaps that need to be filled.

These considerations are just a part of a general overview. The ICO is an international body, associate to the International Council of Science and to the International Union of Pure and Applied Physics. Today, international scientific bodies have a duty to enhance the presence of science in our society. As a result, the ICO seeks to reinforce activities in the areas of optics and photonics, in multiple and diversified issues inside academia, scientific institutions, industry and in general it means to address all activities involving the education and training of young researchers and colleagues around the world.

This task cannot be achieved soleyl by the action of members of our community involved in the ICO Bureau. The key is that all ICO territorial committees and bureau members be alive and dynamic, offering collaborative initiatives to the rest of our community. Indeed, at the last General Assembly held in Sydney, Australia, 9 July 2008, two new territorial committees were admitted: Tunisia and Sudan. Thus, the ICO is formed by a total of 49 territorial committees and two associate members, Ecuador and Morocco.

We shall meet challenges and difficulties in our search for efficient ways of working in a coordinated way. In my role I shall work closely with all territorial committees and bureau members. I hope to incude all those who in one way or another are also concerned about the expansion of optics and photonics in the world. The participation of international societies with appointed vice-presidents at the ICO Bureau is an important joint venture.

The ICO has a long-standing connection with the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste (Italy). The ICTP is an outstanding institution providing complete programmes in many areas of science for training students and researchers, with a particular emphasis on developing countries and with the support of the UN. This is a clear example of what the ICO understands by international cooperation, having in mind the enormous difficulties that many of our colleagues face in some regions of the world in developing their careers and achieving merited progress.

The area of optics and photonics is certainly a suitable one for designing international activities aimed at disseminating information on results and of emerging technologies, from which all societies and communities might benefit without restrictions. The activities in optics and photonics in industrialized countries are intense and have a high international profile. However, these activities are fractioned and not well known in certain regions of the world. We all then require dedicated support, in which the local academic and research institutions are also involved. Photonics is identified as a horizontal and key technology of the 21st century, while some new fields involving micro- and nanotechnologies are in their early infancy. I hope that we will see, in the not too distant future, a time in which new generations can improve their quality of life and bring their hopes into being.

I am at your service for this three-year term 1 October 2008 – 30 September 2011.

María L Calvo, ICO president

ICO Newsletter appoints editorial board

Three high-profile professors take up posts on *ICO Newsletter*'s editorial committee.

Professors Malgorzata Kujawinska, Ken Baldwin (above) and John Dudley.

As of 2009, the *ICO Newsletter* will have an editorial committee: Prof. Malgorzata Kujawinska from the Institute of Micromechanics and Photonics, Warsaw University of Technology (mkujawinska@smarttech.pl); Prof. Ken Baldwin from the Australian National University (kenneth.baldwin@anu.edu.au); and Prof. John Dudley from the Université de Franche-Comté, Besançon, France (john.dudley@univ-fcomte.fr).

Malgorzata Kujawinska is professor of applied optics and photonics at Warsaw University of Technology, head of the optical engineering division at the Institute of Micromechanics and Photonics, and is a recognized expert in full-field optical metrology and microsystems testing, image processing, and hybrid experimental-numerical methods in mechanics and material engineering, as well as multimedia technologies.

A fellow of the SPIE, Kujawinska was president of SPIE in 2004. She is the vice-president of the European Technology Platform Photonics 21, and a coordinator of the European Network of Excellence in Micro-Optics. In the past two years she was an elected vice-president of the ICO and chair of the ICO Education Committee.

Ken Baldwin is president of the Federation of Australian Scientific & Technological Societies and deputy director of the Centre of Excellence for Quantum-Atom Optics of the Australian Research Council, a centre that combines pre-eminent Australian theoretical and experimental research groups in quantum and atom optics. Baldwin chairs the Science Meets Parliament Committee, and the Policy Committee for the Federation of Australian Scientific and Technological Societies, an activity for which he has was awarded the 2004 Australian Government Eureka Prize for Promoting Understanding of Science. He has also been chair of the International Council of the Optical Society of America.

John Dudley is a professor at the University of Franche-Comté in Besançon, France, where he is team leader of the Optoelectronics and Photonics research group. He was nominated to the Institut Universitaire de France in 2005, and elected a fellow of the Optical Society of America and a senior member of the IEEE in 2007. He serves on a number of journal editorial boards and is currently the secretary of the Board of the Quantum Electronics and Optics Division of the European Physical Society and general chair of CLEO Europe-EQEC 2009.

Advances in Optics and Photonics goes online in January

***AOP* is a convenient single source for high-quality overviews of all aspects of optics and photonics.**

Prof. Bahaa Saleh of Boston University will be *AOP*'s first editor-in-chief.

The Optical Society of America (OSA) has recently announced its newest journal, *Advances in Optics and Photonics* (*AOP*), with the inaugural issue scheduled for publication in January. Designed to capture the most significant advances in optics and photonics, *AOP* will publish invited in-depth review articles, peer-reviewed tutorials with multimedia enhancements, and peer-reviewed letters to the editor with replies pertaining to published review articles or tutorials. The scope of the journal is broad, covering basic and applied topics in all areas of optics and photonics. *AOP* will be an online quarterly journal and all articles will have internal navigational links and external reference linking. Links to review articles published in special issues of other OSA journals will also be included, making *AOP* a convenient single source for high-quality overviews of all aspects of optics and photonics.

Prof. Bahaa Saleh will serve as *AOP*'s first editor-in-chief. Currently at Boston University, Saleh will become dean of the College of Optics and Photonics and director of CREOL at the University of Central Florida, beginning in January. Saleh is a veteran OSA editor, having served as editor of *JOSA A* and chair of the OSA board of editors. In 2000–2002, he served as vice-president of the ICO.

Members of *AOP*'s inaugural Editorial Advisory Board are: Govind Agrawal, Christopher Dainty, Erich Ippen, Daniel Malacara, Peter Milonni and Sune Svanberg. Also members of the board are OSA journal editors: Stephen Burns (*JOSA A*), Joseph Mait (*Applied Optics*), Martijn de Sterke (*Optics Express*), Henry van Driel (*JOSA B*) and Allan Willner (*Optics Letters*).

World renowned for their scientific achievements and stature in the optics and photonics community, board members will help Saleh formulate editorial strategy and identify new directions. OSA's network of distinguished topical editors and dedicated reviewers will be an invaluable asset for the new journal, and will enable *AOP* to stay ahead of the curve. OSA's high standards of production quality and reliability will be maintained by its outstanding staff.

Support for the new journal has been strong and many in the optics and photonics education community are excited about the idea of serious tutorials on current topics, or old concepts revisited from a current perspective. A number of reviews and tutorials written by prominent, respected authors at the forefront of their fields have been lined up for forthcoming issues.

OSA will provide free introductory access to the journal for a limited time following its launch. *AOP* tutorials will remain open access.

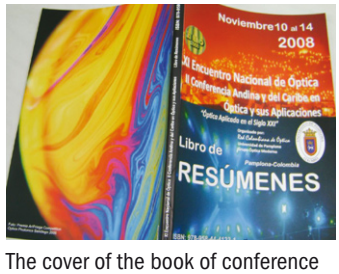
For more information on *AOP* or to suggest authors and topics for invited articles, please visit http://aop.osa.org.

AOP's editor-in-chief said: "With *AOP*, OSA will enter a new publishing domain, creating a journal that will comprehensively explore the most important topics in optics and photonics. As the world's most respected publisher of archival material in the field, OSA provides all of the advantages of professional society publishing by bringing together a network of subject-matter experts with a peer-review infrastructure to produce state-of-the-art reviews and tutorials of high-impact research areas and applications. I can unequivocally say that this journal will have a great impact on work being done in the field, and I am honoured to be its first editor."

Pamplona hosts ENO/CANCOA conference

The conference had a multidisciplinary character, with attendance from physicists, chemists, and engineers.

An exhibition of traditional dance formed part of the closing ceremony.



The cover of the book of conference abstracts. The image, "Soap bubble", appearing on the back cover of this book was courtesy of Santiago Betancur.

The Colombian Meeting on Optics (ENO) has evolved into a regional conference (CANCOA) that nurtures collaborations in optics and its applications among members of the Andean and Caribbean research community.

Conference participants line up for a photo call at ENO/CANCOA 2008.

The 11th Colombian Meeting on Optics, combined with the Second Andean and Caribbean Conference on Optics and Applications, was held on 10–14 November 2008 in the Colombian city of Pamplona under the banner "Applied optics in the XXI century." The conference was hosted by the University of Pamplona and chaired by Prof. Jorge Enrique Rueda.

Two days of the meeting were devoted to the Regional School on Optics in Nano and Biophotonics. The school is a successful new effort launched jointly by the Colombian Network on Optics and the Venezuelan Committee for Optics, with the aim of promoting a long-anticipated Latin American School on Optics.

The joint conference was attended by 88 students, 12 from Venezuela, with a total of 151 participants from 26 institutions of higher education in Colombia and Venezuela, and an additional six participants from outside the region. The organizers offered lodging and living expenses to 77 students and 21 invited speakers. Some 12% of the 188 scientific contributions were the result of research collaboration between Colombia and 11 different countries, and another 12% were contributed by Venezuelan researchers. The extended papers have been compiled on a CD.

The organizers of this conference developed a new electronic platform (http://enocancoa2008.unipamplona.edu.co) to support activities related to conference organization, such as electronic abstract and contributions submissions, reviewing, and mailing. They also developed novel software to synchronize simultaneous sessions.

The conference had a multidisciplinary character, with attendance from physicists, chemists, and engineers, and a wide spectrum of optics applications were discussed, ranging from optical properties of new materials to archeological analysis. Noteworthy was the participation of the many knowledgeable students, whose enthusiasm, self-confidence, and budding spirit of professionalism turned oral and poster sessions into memorable occasions for the senior researchers.

There are four OSA/SPIE student chapters in Colombia with memberships exceeding 80 students in different disciplines. These students held an assembly to discuss their own activities, including the creation of the first student chapter in Venezuela and of a regional network of student chapters in Latin America to promote student mobility and coordinate activities worldwide with the International OSA Network of Students, which will hold its 5th conference in Barcelona on 19–20 February.

The closing ceremony began with a forum on the impact of education research in optics in the Andean and Caribbean region. This was followed by a presentation by the university choral and dance group, and the students' award ceremony. The Colombian Network on Optics awarded prizes for the best oral and poster presentations by both graduate and undergraduate students, and the student chapter from the Universidad del Valle awarded two free student memberships of OSA.

The event was clearly the result of a successful joint effort of the Colombian and Venezuelan research communities in optics, with skillful organization by the Group of Modern Optics of the University of Pamplona under the outstanding direction of the conference chairman, Prof. Jorge Enrique Rueda. The strong support given to the conference by the University of Pamplona is greatly appreciated. The next Regional School on Optics will be held in Venezuela in 2009, and the next ENO/CANCOA meeting in Barranquilla, Colombia, in 2010.

TLP nurtures Pakistan–Morocco alliance

Developing nations benefit from the ICO's Travelling Lecturer Programme. Prof. Imrana Ashraf Zahid visits Marrakech.

Prof. Ashraf Zahid (left) conducts experiments with Prof. Berrada.

As part of the ICO's Travelling Lecturer Programme (TLP), Imrana Ashraf Zahid, a professor in the Department of Physics at Quaid-i-Azam University in Islamabad, Pakistan, was invited by Prof. Khalid Berrada of the Department of Physics, Cadi Ayyad University in Marrakech, Morocco, to give some lectures on quantum optics. The objective was to introduce young students at the university to this subject and to motivate the faculty to add the course to its curriculum. Prof. Ashraf Zahid's lectures provided a review of quantum mechanics, an introduction to the density matrix approach, and quantization and the states of the radiation field.

"I enjoyed giving the lectures and holding discussions with students," said Prof. Ashraf Zahid. "The discussions were conducted with the help of Prof. Berrada because, although teaching at Cadi Ayyad University is in French, for research the students need English. Interacting with students from another developing country gave me a feeling of achievement and happiness."

During her four-week stay, Prof. Ashraf Zahid was able to work with Prof. Berrada's SIAM team conducting experiments using ion beam sputtering on silicon and porous silicon. Together they completed work for two research papers in the field of nanomaterials. "I hope to keep this collaboration alive and to strengthen the [working relationship] between Pakistan and Morocco," said Prof. Ashraf Zahid.

Prof. Ashraf Zahid introduces quantum optics to students in Marrakech.

The visiting professor was also able to work with her host to finalize the programme for the African Preparatory School on Optics and Photonics, which is scheduled for November. The goal of these preparatory schools is to enhance the understanding of conceptual optics in Africa, Asia, and Latin America, and also to develop collaboration in scientific and educational research. The African Preparatory School on Optics and Photonics will be first of its kind, according to Prof. Ashraf Zahid, with follow-on schools on optics in Asia and Latin America.

Prof. Ashraf Zahid is particularly grateful for the support of her family, which enabled her to take part in the programme.

Contacts

International Commission for Optics (www.ico-optics.org).

Bureau members (2008–2011)

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C Cisneros

IOP

Forthcoming events with ICO participation

Below is a list of events with ICO participation that are coming up in 2009. For further information, see www.ico-optics.org/events.html.

2–13 February 2009
Winter College on Optics in Environmental Science
Miramare-Trieste, Italy
Contact: J Niemela, tel +39 040 2240 607, fax +39 040 224163, niemela@ictp.it, smr2018@ictp.it, www.ictp.trieste.it/pages/events/calendar.html

13–16 April 2009
VI. International Workshop Tecnolaser 2009 and II. Meeting Optics, Life & Heritage
La Habana, Cuba
Contact (Tecnolaser): Justo Ravelo Triana, tel +53 7 209 3920.
Contact (Optics, Life & Heritage): Prof. Angel Augier, Prof. German Muniz, tel +53 7 878 5018, augier@instec.cu, muniz@electrica.cujae.edu.cu, www.ceaden.cu/tecnolaser/index_ing.asp

27–29 May 2009
4th Asian and Pacific Rim Symposium of Biophotonics (APBP 2009)
Jeju Island, Korea
Contact: Donghyun Kim, tel +82 2 2123 2777, fax +82 2 313 2879, kimd@yonsei.ac.kr, www.apbp2009.org

11–14 June 2009
12th International Conference on Photorefractive Materials, Effects and Devices – Control of Light and Matter
Bad Honnef, Germany
Contact: Cornelia Denz, tel +49 251 83 33516, fax (+49) 251 83 39811, denz@uni-muenster.de, www.pr09.de

21–24 June 2009
Nanophotonics Down Under 2009: Devices and Applications
Melbourne, Australia
Contact: Min Gu, tel +61 3 921 48776, fax +61 3 92145435, mgu@swin.edu.au, www.smonp2009.com

Responsibility for the accuracy of this information rests with ICO. President: M L Calvo, Universidad Complutense de Madrid, Departamento de Óptica, Facultad de Ciencias Físicas, Ciudad Universitaria s/n, E 28040 Madrid, Spain; mlcalvo@fis.ucm.es. Associate secretary: Gert von Bally, Laboratory of Biophysics, Medical Centre, University of Münster, Robert-Koch-Str. 45, D-48129 Münster, Germany; e-mail: lbiophys@uni-muenster.de.