



Instituto Jorge Robledo

First announcement of the International Conference "Colombia in the International Year of Light" June 16 - 19, 2015 Bogota & Medellin, Colombia

Dear Colleagues,

We are proud to announce the International Conference "Colombia in the International Year of Light", which will take place June 16-19, 2015 in Bogota and Medellin, Colombia. Lectures and other activities will be held in conveniently located auditoriums, easy to reach from the corresponding airports. We will make our best effort to promote high quality presentations and discussions on the subjects proposed by the General Assembly of UN in its call for the IYL 2015:

The United Nations (UN) General Assembly 68th Session has today during its 71st Plenary Meeting proclaimed 2015 as the International Year of Light and Light-based Technologies (IYL 2015).

In proclaiming an International Year focusing on the topic of light science and its applications, the United Nations has recognized the importance of raising global awareness of how light-based technologies promote sustainable development and provide solutions to global challenges in energy, education, agriculture and health. Indeed, the resolution was

adopted as part of a more general Agenda item on Science and technology for development. This International Year will bring together many different stakeholders including UNESCO, scientific societies and unions, educational and research institutions, technology platforms, non-profit organizations and private sector partners to promote and celebrate the significance of light and its applications during 2015.

Light plays a vital role in our daily lives and is an imperative cross-cutting discipline of science in the 21st century. It has revolutionized medicine, opened up international communication via the Internet, and continues to be central to linking cultural, economic and political aspects of the global society. For centuries light has transcended all boundaries, including geographic, gender, age and culture, and is a tremendous subject to motivate education. It is critical that the brightest young minds continue to be attracted to optics and photonics in order to ensure the next generation of engineers and innovators in this field.

IYL 2015 will promote improved public and political understanding of the central role of light in the modern world while also celebrating a number of important significant anniversaries that take place in 2015-from the first studies of optics 1000 years ago during the Islamic Golden Age to discoveries in internet optical fiber technology in 1965. As the Chairman of the IYL 2015 Steering Committee John Dudley explains: "An International Year of Light is a tremendous opportunity to ensure that policymakers are made aware of the problem-solving potential of light technology. Photonics provides cost-effective solutions to challenges in so many different areas: energy, sustainable development, climate change, health, communications and agriculture. For example, innovative lighting solutions reduce energy consumption and environmental impact, while minimizing light pollution so that we can all appreciate the beauty of the Universe in a dark sky. IYL2015 is a unique opportunity to raise global awareness of advances in this field."

The IYL 2015 resolution was submitted to the United Nations Second Committee on 6th November 2013 by the nation of Mexico, with delegates from both Mexico and New Zealand speaking in support. As Ana María Cetto from the National Autonomous University of Mexico (UNAM) says: "Light matters to all of us. It is thanks to light that we know our place in the Universe, and that there is life on Earth. The IYL will create a forum for scientists, engineers, artists, poets and all others inspired by light to interact both with each other and with the public so as to learn more about the nature of light, its many applications, and its role in history and culture." The resolution was adopted with co-sponsorship from 35

countries: Argentina, Australia, Azerbaijan, Bosnia and Herzegovina, Chile, China, Colombia, Cuba, Dominican Republic, Ecuador, France, Ghana, Guinea, Haiti, Honduras, Israel, Italy, Japan, Mauritius, Mexico, Montenegro, Morocco, Nepal, New Zealand, Nicaragua, Palau, Republic of Korea, Russian Federation, Somalia, Spain, Sri Lanka, Tunisia, Turkey, Ukraine and United States of America. This impressive list of co-sponsors reflects the truly international and inclusive nature of the theme of an International Year of Light.

The IYL 2015 is endorsed by a number of international Scientific Unions and the International Council for Science (ICSU). The IYL 2015 will be administered by an International Steering Committee in collaboration with the UNESCO International Basic Sciences Programme and a Secretariat at The Abdus Salam International Centre for Theoretical Physics (ICTP) which is a UNESCO Category 1 Institute. The Founding Scientific Sponsors of IYL2015 are: the European Physical Society (EPS); SPIE, the international society for optics and photonics; The Optical Society (OSA); the IEEE Photonics Society (IPS); the American Physical Society (APS) and the lightsources.org international network. National and regional committees and contact points currently being established will ensure all nations of the world can participate. For more information, and to be placed on a mailing list for updates, please contact light@eps.org Downloads are available from www.eps.org/light2015.

Further Information. The International Year of Light 2015 (IYL 2015) partnership was formed in 2010 and consists of a wide range of stakeholders including learned societies, educational institutions, networks, technology platforms and other non-profit organizations. The partners include professionals and volunteers in areas ranging from technology and engineering to art and culture, and come from Africa, Europe, the Americas, Eurasia, Asia and Australasia. Young people are represented prominently through the many international student chapters of international learned societies. Support during the construction phase of the project came from many partners, including the African Physical Society, the Ghana Academy of Arts and Sciences, the International Commission for Optics, the International Union for Pure and Applied Physics, the Russian Academy of Sciences, the New Zealand Institute of Physics and the Royal Society of New Zealand, the National Autonomous University of Mexico, and many other groups and individuals. A number of preparatory actions are already planned during 2014, including coordinated outreach by the European Consortium for Outreach in Photonics via the GoPhoton! Project, and many other local, regional and international events to raise awareness and to plan exciting activities throughout 2015.

The major scientific anniversaries that will be celebrated during 2015 are: the works on optics by Ibn Al-Haytham in 1015; the notion of light as a wave proposed by Fresnel in 1815; the electromagnetic theory of light propagation proposed by Maxwell in 1865; Einstein's theory of the photoelectric effect in 1905 and of the embedding of light in cosmology through general relativity in 1915; the discovery of the cosmic microwave background by Penzias and Wilson, and Charles Kao's achievements concerning the transmission of light in fibers for optical communication, in 1965.

This call is the basis for the Conference we are announcing here. The International Advisory Committee is inviting speakers who are actively involved in the development of the disciplines mentioned in the UN call, with the aim of promoting a broad understanding of a set of important problems and their solutions. Conference themes include optical metrology and fundamental optics and quantum mechanics, frequency standards, quantum optics, quantum information, spectroscopic techniques, and some representative applications in medicine, biology and astrophysics.

List of confirmed speakers

Alain Aspect (Paris, UNESCO Bohr gold medal winner, 2013)
Suzanne Fery-Forgues (Toulouse)
Jean-Pierre Galaup (Paris)
Paulo Soares Guimarães (Minas Gerais)
Serge Haroche (Paris, Nobel Prize winner, 2012)
Alejandro Mira (Medellin)
John Henry Reina (Cali)
Ana María Rey (Boulder)
Boris Rodriguez (Medellin)
William Unruh (Vancouver)
David Wineland (Boulder, Nobel Prize winner, 2012)

Expected audience and academic level

Plenary talks are directed to students, professors and researchers in different fields related to the science and applications of light. Some talks open to the general public will be arranged, to be given using common language.

Registration

For online registration please check the IYL2015 Colombia conference registration web page.

We are keen to see students, members of research groups, and other interested persons at this conference. If you would like to participate, please fill out the registration form at <http://indico.cern.ch/e/iyl2015colombiaconf>.

Conference Fee

Attendance to the Conference is free of charge.

Important Dates

Start of pre-registration: February 15, 2015.

Pre-registration deadline: June 15, 2015.

Arrival in Bogotá: Monday June 15, 2015.

Departure from Bogotá: June 20, 2014.

Travel Information

Information on how to get to Bogota and Medellin can be found on the conference web page, <http://indico.cern.ch/e/iyl2015colombiaconf>

Conference accommodations

The participants will be accommodated in hotels of their choice. Local organizers will recommend hotels that offer discounts for participants in this event.

Conference Language

The conference language is English. Some talks open to general audiences will have ear translation.

Web page

<http://indico.cern.ch/e/iyl2015colombiaconf>

Local Contacts

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Local Organizing Committee

Colombian Academy of Exact, Physical and Natural Sciences (Academia Colombiana de Ciencias Exactas, Físicas y Naturales):

Dr. Enrique Forero, President of the Academy

Universidad de Los Andes, Bogotá: Dr. Silvia Restrepo, Dr. Alejandra Valencia, Dr. Yenny Hernández

Universidad Nacional de Colombia, Medellín: Dr. Román Castañeda.

Universidad de Antioquia, Medellín: Dr. Jorge Mahecha, Dr. Edgar Rueda.

Do not hesitate to contact the organizers at enrique.forero@accefyn.org.co

International Advisory Committee

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Sponsors:

Universidad Nacional de Colombia; Universidad de los Andes; Universidad de Antioquia; Universidad de Cartagena; Academia Colombiana de Ciencias Exactas, Físicas y Naturales; Ministerio de Educación Nacional; Embajada de la República de Francia; Ruta N; Parque Explora; Instituto Jorge Robledo.

Sincerely yours,

For the Organizing Committee,

Dr. Enrique Forero

President

Colombian Academy of Exact,

Physical and Natural Sciences

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