



# ICON NEWSLETTER

Commission Internationale d'Optique

International Commission for Optics

January 2004

## ICO Galileo Galilei Award 2003 goes to Prof. Cid B. de Araujo

The ICO Galileo Galilei Award contributes to one of the essential missions of the International Commission for Optics as it is the recognition of 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.

This year the Committee of the ICO Galileo Galilei Award proposed to the consideration of the ICO Bureau the nomination of Prof. Cid B. de Araujo, from the University of Pernambuco (UFPE), Brazil, for the 2003 award. The nomination was approved unanimously at the last ICO Bureau meeting held in Joensuu (Finland), June 28-29, 2003, at the occasion of the ICO Topical meeting on "Polarization optics". The Committee and the Bureau have considered the outstanding contributions of Prof. Cid B. de Araujo in non-linear optics and novel optical materials and for the promotion of optics and physics in Brazil. His professional activity has been done essentially in Recife under comparatively unfavorable circumstances. He founded the Physics Department of UFPE and he led his group to international recognition.

The Committee of the ICO Galileo Galilei Award consists of: Prof. Gert Von Bally (Chair), Prof. Anna Consortini, Dr. Henryk Kasprzak, Prof. Serguey Oudoulov and Prof. Maria Yzuel. In the forthcoming ICO Newsletter, April 2004, a more extended information on this awardees will be provided. Call for the 2004 award is now open. Nominations should be sent to the Chair of the Committee, at the following address: Laboratory of Biophysics, University of Münster, Robert-Koch Strasse, 45, D-48129 Münster, Germany, fax +49 51 8358336, e-mail: bally@uni-muenster.de. Deadline: 15 April 2004.

## ICO Prize 2003 goes to Benjamin J. Eggleton

ICO established in 1982 the ICO Prize, to be given annually 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 proposal of the ICO Prize Committee for this year has been delivered to Dr. Benjamin J. Eggleton from the University of Sidney, Australia. This proposal was unanimously approved by the ICO Bureau held in Joensuu (Finland) last June. The award citation reads: "The ICO Prize for the year 2003 is given to Dr. Benjamin J. Eggleton in recognition of the high level of research areas of non-linear

optics, photonic bandgap structures, optical fiber gratings, air-silica microstructures fibers, tunable optical fiber devices, microfluidics, dispersion compensation techniques, Raman amplification and optical recognition. These achievements were done as a researcher younger than 40 years old". In the forthcoming ICO Newsletter, April 2004, a more extended information on this awardee will be published.

The ICO Prize Committee, chaired by Prof. Asher Friesem and comprising Profs. Henri H. Arsenault, Guofan Jin, Giancarlo Righini, Bahaa E. A. Saleh and Andrew M. Weiner is now seeking nominations for the 2004 Prize. Nominators are asked to follow the instructions given at the ICO web site. Nominations should be sent by April 15, 2004 to Prof. A. Friesem, Chair of the Committee, Department of Physics of Complex Systems, the Weizmann Institute of Sciences, P.O. Box 26, Rehovot 7610, Israel, fax +972 89344109, e-mail: friesem@wicc.weizmann.ac.il,

## An ICO Topical Meeting on Polarization Optics held in Polijärvi, Finland in conjunction with ICO Bureau Annual Meeting

The ICO Topical Meeting on Polarization Optics was organized in Polvijärvi, Finland, June 30 – July 3, 2003. It was preceded by the ICO Bureau meeting in Joensuu, Finland.



A view of the lakes at the Huhmari recreational area in Polijärvi (Finland) where the ICO Topical meeting "Polarization Optics" took place, 30 June-3 July 2003

The conference and holiday center "Huhmari", which was the venue of the conference, is located some 30 km from Joensuu in eastern Finland. The program committee was chaired jointly by Asher A. Friesem (Israel) and Jari Turunen (Finland), while Timo Jääskeläinen (Finland) acted as the

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chairman of the local organizing committee. The practical arrangements were the responsibility of the Department of Physics of the University of Joensuu. The conference was endorsed by European Optical Society (EOS), Finnish Optical Society (FOS), Optical Society of America (OSA), International Union of Pure and Applied Physics (IUPAP), and the International Society for Optical Engineering (SPIE).



ICO Bureau members at the gate of the center in Joensuu (Finland) were the annual ICO Bureau meeting took place, 28-29 June 2003. From left to right: R. Dändliker, H. Arsenault, G. Sincerbox, A. Friberg, A. H. Guenther, N. Gaggioli, A. M. Weiner, M. L. Calvo, G. Jin, A. Wagué, T. Tshudi, M. Kujawinska, Y. Petroff, G. Von Bally, A. Friesem, I. Yamaguchi, J. Cao (one of the ICO-20 organizers)

The conference and the associated Bureau meeting were sponsored financially by the following organizations and companies: International Commission for Optics, Academy of Finland, the Delegation of the Finnish Academies of Science and Letters, Finnish Optical Society, Nokia Research Center, Honeywell, Modiliss Ltd., the town of Joensuu, the county of Polvijärvi.

The conference attracted 116 participants (including 23 full-time students) and 19 accompanying persons from 26 countries: Australia (1), Canada (1), China (4), Cuba (1), Estonia (2), Finland (38), France (7), Germany (2), India (1), Ireland (1), Israel (4), Italy (3), Japan (7), Latvia (7), Lithuania (1), Mexico (1), Netherlands (4), New Zealand (1), Russia (4), Senegal (1), South Korea (1), Spain (9), Sweden (3), Switzerland (2), United Kingdom (3), USA (7).

The scientific program started with the Galileo Galilei Award Lecture by Rashid Ganeev. This was followed by the plenary talk of Emil Wolf on Young's classic interference experiment, all aspects of which remain yet to be explained. Altogether, 12 oral sessions were held in a single-session format, and they were divided into sessions focused on linear, nonlinear, and quantum polarization optics. The concept "polarization optics" was defined very broadly; in effect all contributions somehow related to the vectorial nature of light were welcome. One of the sessions was devoted to welcome the three Baltic states, Estonia, Latvia, and Lithuania, as new members of ICO. In this session a renowned member of the optics community of each Baltic country gave an extended talk. The total number of talks was approximately 50. In addition, the program contained a poster session, which also featured approximately 50 contributions.

The conference received considerable publicity in local media. The highlight of the press conference was the interview of Professors Emmet Leith and Adolf Lohmann, who told the media about the birth of holography and diffractive optics, respectively. Both large optical holograms fabricated in Joensuu by the company Holotek Oy and diffractive elements fabricated at the University of Joensuu and Nanocomp Ltd (Joensuu) were on display, and they received considerable interest among reporters.

Among the social programs a conference excursion was organized to the Koli Mountain, which is often referred to as the "national scenery" of Finland. After the excursion there was a special Midnight Session in which a representative from Nokia presented an informal talk on the secrets of the company's success story. This session was held outdoors, being accompanied by a grilled-sausage party, since there is no real night in Joensuu in mid-summer: the sun barely sets below the horizon for a short while. At the occasion of the conference dinner, an orchestra played traditional Finnish dancing music, including the Finnish version of tango. Immediately after the conference, on Friday, July 4, there was an opportunity to visit the Department of Physics of the University of Joensuu and to see, e.g. the lithographic facilities and the color research labs. After that several delegates witnesses a public PhD defense in the unique Finnish style, with the candidate, the opponent, and the custodian all wearing tailcoats.

In the beginning of the conference the weather looked a bit gloomy, but it soon turned out great, with sunny and warm weather that in fact lasted in Finland for the rest of July. Several delegates stayed in Finland for some time after the conference on vacation, and they probably did not curse the weather!

**Asher A. Friesem, Jari Turunen**, Conference co-chairs

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## Optics and Photonics in Technology Frontier 2004 meeting scheduled for July, Chiba, Japan



The ICO International Conference on Optics and Photonics in Technology Frontier, "ICO'04, Tokyo" will be held in Chiba, Japan from July 12-15, 2004. This meeting is organized co-located with InterOpto'04, 13-16 July 2004. The rapid progress being achieved in the field of optics and

photonics, especially in relation with the applications in information and communications technology and new applications in nano- and bio-technologies, is now a main feature coming to light in the technology frontier. The ICO Bureau has given the approval to host the next ICO topical meeting in 2004 in Japan. (ICO meetings have been held in Japan every ten years since 1964). ICO'04 will be held at the same site as InterOpto'04, that is the major industrial annual exhibition in optics and photonics organized by OITDA (Optoelectronic Industry and Technology Development Association) and will be co-supported by JOMA (Japan Optical Measuring Manufacturers Association) to provide an excellent opportunity for interaction between academia and industry. ICO'04 will be held with other two well known international conferences organized by the Optical Society of Japan (OSJ), ODF'04 (Optics-photonics design & fabrication) and ICOSN'04 (International Conference on Optical Engineering for Sensing and Nanotechnology).

ICO'04 will provide an international forum for exchanging leading-edge ideas and achievements through original paper presentations, and discussions of optics-photonics related scientific and industrial topics in the field of design, simulation, fabrication and testing for systems and components such as Information optics, Fiber communications, Bio-photonics, Storage, Measurement, Camera, Microscopy, Lithography, Printings, 3-dimensional displays and others.

The organizing committee of the meeting is chaired by Prof. Yoshiki Ichioka, from Nara National College of Technology with Vice-chair K. Yamamoto from Olympus.

The deadline for paper submission is January 31, 2004. Details for the submission and more information can be obtained at the web site of the meeting: <http://www.opticsdesign.gr.jp>

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## An ICO Traveling Lecturer Program 2003 Theme: Exploring Laser and Optics Applications in Engineering and Science Report

The main aim with this ICO Traveling Lecturer Program was to explore laser and optics application in engineering and science in India and to interact with the researchers through a series of lectures in various institutions: Instrument Design Development Centre (IDDC) Ambala, Central Scientific Instruments Organization (CSIO) Chandigarh, Instruments Research and Development Establishment (IRDE /DoD) Dehra Dun, IEEE-Delhi / OSA-local chapter: Indian Institute of Technology (IIT) Delhi, Center for Advanced Technology (CAT /DAE) Indore, Indian Institute of Science (IISc) Bangalore, Indira Gandhi Centre for Atomic Research (IGCAR /DAE) Kalpakkam, Indian Institute of Technology (IIT) Mumbai, Shriram Institute for Industrial Research (SRI) Delhi, National Physical Laboratory (NPL) Delhi.

The first five institutions located in the north and central part of India are directly involved in optics and laser research and development programs, whereas the others are involved indirectly as users for the R & D activities of their needs. Some institutions also develop laser and optics based educational kits for schools and colleges as well as impart optical-workshop training to the individuals. The lectures were held in the above mentioned institutions located at various places in the country. The lectures covered a wide spectrum of optics and laser applications in macro-, micro- and nanotechnology with the actual demonstrations of the samples. In total it attracted more than 200 participants. There has been much interest and enthusiasm among the audience for interdisciplinary research in the emerging areas. The lecturer is especially grateful for the support of the local organizers: Ms Keshni A. Arora,



Optical workshop trainee – polishing assistance

M. P. K. Goel, Dr. R. P. Bajpai, Mr. H. L. Bajaj, Dr. S. Mukopadhyaya, Prof. Kehar Singh, Dr. A. K. Nath, Prof. S. Mohan, Dr. Baldev Raj, Dr. V. S. Raghunathan, Prof. B. P. Kashyap, Dr. A. K. Gupta, Shri J. P. Kapur, Dr. R. K. Khandal and Dr. Vikram Kumar, who made this event a great success.

A related link with additional information can be found in: <http://www.ritsumeikai.ac.jp/eng/>

**Y. P. Kathuria**, Ritsumeikan University, Kusatsu, Japan

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## News on ICO Publications: J. of Optics A Special Issue

The Journal of Optics A: Pure and Applied Optics, edited by the Institute of Physics, will publish a special issue in connection with ICO for the Topical meeting on "Polarization Optics" held in Joensuu (Finland), last July. This special issue is scheduled for publication in February 2004. Topics covered in this special issue include all phenomena in linear, nonlinear and quantum optics, in which polarization of light has significance. The Guest Editors for this special issue are Jari Turunen, Joensuu University, Finland, Asher Friesem, Weizmann Institute, Israel and Ari Friberg, Royal Institute of Technology (KTH), Sweden. IOP web site: <http://www.iop.org/journals/jphysa>

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## Forthcoming events with ICO participation

Responsibility for the correctness of the information on this page rests with ICO, the International Commission for Optics; <http://www.ico-optics.org/>. President: Prof. René Dändliker, Institute of Microtechnology, University of Neuchâtel, CH-2000 Neuchâtel, Switzerland. Assoc. Secretary: Prof. Ari T. Friberg, Royal Institute of Technology, Optics, Electrum 229, SE-164 40 Kista, Sweden; [ari.friberg@imit.kth.se](mailto:ari.friberg@imit.kth.se)

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2-13 February 2004

**ICTP/ICO Winter College on Interferometry and Applications to Modern Physics**

Miramare - Trieste, Italy  
Prof. G. Denardo, ICTP, Strada Costiera 11, I-34014 Trieste, Italy  
fax. +39 040 2240 443, [denardo@ictp.trieste.it](mailto:denardo@ictp.trieste.it)  
<http://www.ictp.trieste.it/>

21-23 April 2004

**Optics in Computing 2004** (OIC 04)EOS Topical Meeting  
Engelberg, Switzerland

General Chair: Dr. Jürgen Jahns, FernUniversität Hagen, Optische Nachrichtentechnik, Universitätsstr.2/PRG, D-58084 Hagen, Germany,  
Fax: +49 2331 987352, [jahns@fernuni-hagen.de](mailto:jahns@fernuni-hagen.de)  
Co-Chair: Peter Seitz, CSEM, Centre Suisse d'Electronique et de Microtechnique S.A., Badenerstrasse 569, P.O. Box, CH-8048, Zurich, Phone: 41 1 497 1411, Fax: 41 1 497 1400  
<http://www.OiC2004.com>

12-15 July 2004

**ICO International Conference, Optics & Photonics in Technology Frontier**

("ICO'04 Tokyo", co-located with ODF'04 and ICOSN'04, held together with InterOpto'04)  
Makuhari Messe, Chiba, Japan  
Dr. Kimio Tatsuno, Hitachi Ltd., CRL, 1-280 Higashi-koigakubo, Kokubunji, Tokyo, Japan.  
Fax. +81 423 27 7673, [tatsuno@crl.hitachi.co.jp](mailto:tatsuno@crl.hitachi.co.jp)  
<http://www.opticsdesign.gr.jp/>

26-30 September 2004

**Optics, Life and Heritage**

Havana City, Cuba  
(Satellite meeting to V Riao / VIII Optilas)  
Dr. Angel G. Augier, Inst. Nuclear Sciences and Tech., Dept. of General, Physics and Math., CP 10 400, La Habana, Cuba, fax. +537 202 1518, [augier@fctn.isctn.edu.cu](mailto:augier@fctn.isctn.edu.cu)

3-8 October 2004

**ICO Regional Mtg, 5th Ibero-American Meeting on Optics, and 8th Latin-American Meeting on Optics, Laser and Their Applications (V Riao / VIII Optilas)**

Porlamar, Margarita Island, Venezuela  
Prof. Aristides Marcano Olaizola  
Centro de Fisica, Instituto Venezolano de Investigaciones Cientificas, Caracas 1020 A, Apartado 21827, Venezuela  
fax. +58 212 504 1148, [marcano@pion.ivic.ve](mailto:marcano@pion.ivic.ve)  
<http://www.ivic.ve/Fisica/cuantica/riao>

18-21 October 2004

**Basic Problems in Optics (BPO'04)**

St. Petersburg, Russia  
Contact: Dr. Ekaterina Utanova, Technical Univ., 14 Sabliskaya str., St., Petersburg 197101, Russia  
fax. +7 812 232-1467, [conf\\_bpo@mail.ifmo.ru](mailto:conf_bpo@mail.ifmo.ru)  
<http://www.ifmo.ru/bpo2004/>

28 November – 1 December 2004

**OWLS VIII Biophotonics Down Under**  
Melbourne, Australia

Prof. Min Gu, Swinburne Univ. of Technology, Ctr for Micro-Photonics, PO Box 218, Hawthorn, Victoria 3122, Australia  
fax. +61 3 92145435, [mgu@swin.edu.au](mailto:mgu@swin.edu.au)  
<http://www.swin.edu.au/optics/cmp/owlsv/>

21-26 August 2005

**ICO-20, Triennial Congress of the International Commission for Optics**  
"Challenging Optics in Science and Technology"

Changchun, China  
Dr. Jianlin Cao, President  
Changchun Institute of Optics, Fine Mechanics and Physics, 140 Renmin Street, Chanchung 130022, P.R. China  
fax. +86 431 5682346, [caojl@ciomp.ac.cn](mailto:caojl@ciomp.ac.cn)  
<http://www.conference.ac.cn/ico20.html>