



# NEWSLETTER

COMMISSION INTERNATIONALE D'OPTIQUE • INTERNATIONAL COMMISSION FOR OPTICS

## A proud past and a challenging future

**This year's LFNM conference highlighted how physics and optics in Ukraine can benefit from international collaboration.**



Professor Mauro F Pereira of Sheffield Hallam University, UK, gives a lecture presentation at the 2006 LFNM conference in Ukraine.

The 8th International Conference on Laser and Fiber-Optical Networks Modelling (LFNM) was held at Kharkiv National University (KhNU) and Kharkov University of National Electronics (KhNURE), Ukraine, on 29 June – 1 July 2006. About 140 papers were presented at plenary sessions, and as invited papers, oral and poster communications. Professor Mauro Pereira gave an invited talk and a longer introductory lecture on advanced microscopic methods for designing new materials and structures for optical devices. He also visited teaching, research and industrial labs and had meetings with key scientists in Kharkov to discuss possible topics and mechanisms for future collaboration.

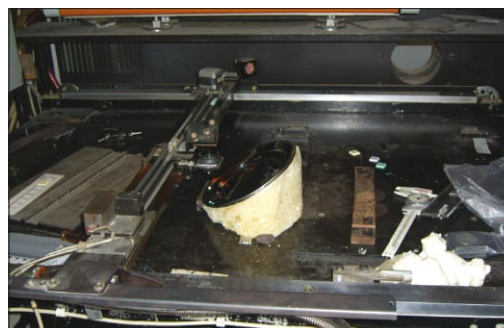
KhNURE is among the oldest and most widely recognized universities in Eastern Europe. Since its foundation in 1804 more than 100 000 students have graduated, and the university has hosted three Nobel Prize Laureates: L Landau, I Mechnikov and S Kuznets. It currently has around 12 000 students and employs 2000 lecturers, including 200 professors with habilitation (doctor degree) and more than 1000 professors with a PhD (candidate degree). However, the future of education and research in Ukraine is facing some uncertainty, since a typical professor's salary is only around \$200 a month and living costs in Ukraine keep rising.

KhNURE was set up in 1930, and regardless of the difficulties mentioned above it is fighting to maintain good educational standards. As the photographs here show, some of its laboratories are undertaking joint projects with industry, e.g. ceramic cylinder construction and digital patterns for printing (in co-operation with BASF), and commercial laser engraving with different types of materials. Of particular interest is the theoretical modelling being developed at the Photonics Laboratory. New concepts for optoelectronic materials are also being created in collaboration with the University of Guanajuato in Mexico, and the LEOS Student Chapter has developed an interesting interactive teaching software suite for basic photonics studies. The main difficulty for immediate progress at present is access to electronic journals.

In summary, there is potential for future contributions to optics in Kharkov. International collaboration and partnerships should



This instrument for measuring electrical field distribution in microwave waveguides was originally developed more than 70 years ago, but is still in good working condition in one of the teaching labs at KhNURE.



One of KhNURE's current joint projects with industry: laser digital pattern printing in co-operation with BASF.

be supported. For example, the ICO Travelling Lecture Program aims to help visiting scientists lecture in scientific and academic institutions outside their country of origin, and to enhance mutual international co-operation.

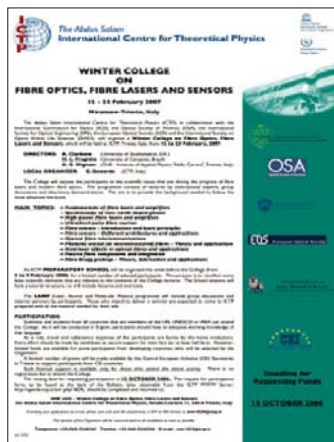
The Chair of the ICO Travelling Lecture Program is Professor Alexander A Sawchuk (USC, USA). Scientists or host groups interested in participating in this program should send a letter of application, by e-mail, to Prof. A Sawchuk at [ico-treasurer@sipi.usc.edu](mailto:ico-treasurer@sipi.usc.edu), with details of the proposed lecture program and the ICO support needed. Official letters of invitation from local institutions or research centres are also required, along with a tentative calendar of activities supported by the host institution.

Application forms can be downloaded from: [www.ico-optics.org/travlecture.html](http://www.ico-optics.org/travlecture.html).

**Mauro F Pereira**

# Winter College 2007 to focus on fibres

**The 2007 Winter College will be hosted by the ICTP in Trieste, Italy, in February.**



The ICTP announce details of the 2007 Winter College on Fibre Optics, Fibre Lasers and Sensors.

The Abdus Salam International Centre for Theoretical Physics (ICTP) has announced that the forthcoming Winter College on Fibre Optics, Fibre Lasers and Sensors will be held at the ICTP in Trieste, Italy, from 12 to 23 February 2007.

The Winter College is co-sponsored by ICO, EOS, OSA, OWLS and SPIE. The directors of this year's college will be: A Clarkson (University of Southampton, UK), H L Fragnito (University of Campinas, Brazil) and the local organizer G Denardo.

The college will expose participants to the scientific issues that are driving the progress of fibre lasers and modern fibre optics. The program will consist of lectures by international experts, group discussions and laboratory demonstrations. The aim is to provide the background needed to follow the most advanced literature on these subjects.

The main topics featured this year will be quite broad, and will focus on: fundamentals of fibre lasers and amplifiers; spectroscopy of rare-earth-doped glasses; high-power fibre

lasers and amplifiers; ultrashort pulse generated in fibre lasers; fibre sensors; optical fibre communications; photonics crystals; non-linear effects on optical fibres and applications; and fibre Bragg gratings.

The ICTP Preparatory School on Mathematics, which was initiated last year, will again run before the college (from 5 to 9 February 2007), with the aim of recollecting some of the basic scientific elements that are relevant to the contents of the college lectures. In addition, the LAMP (laser, atomic and molecular physics) programme will include group discussions and seminars for the participants.

Students and scientists from all countries that are members of the United Nations, UNESCO or IAEA are welcome to attend and encouraged to submit application forms. The closing date for requesting to participate is 15 October 2006.

For more information about the college and how to apply, read the full announcement at: [http://cadsagenda5.ictp.trieste.it/full\\_display.php?ida=a06183](http://cadsagenda5.ictp.trieste.it/full_display.php?ida=a06183).

# Successful ETOP series heads to Canada

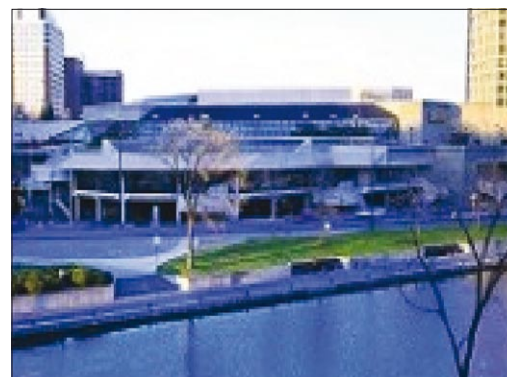
**ETOP 2007 will be hosted by the Ontario Photonics Education and Training Association on 4-6 June.**

The Ontario Photonics Education and Training Association (OPETA) has been announced as the host of the 2007 Education and Training in Optics and Photonics (ETOP) series of meetings. ETOP 2005, which was held in Marseille, France, was a big success (see *ICO Newsletter* January 2006), and the general principle is that ETOP is hosted in alternate continents each time, having been held in Tucson, Arizona, USA, in 2003. ETOP 2007 will be co-located with the Photonics North 2007 conference, and will be held at the Ottawa Convention Center in Ontario, Canada.

The ETOP 2007 chair will be Dr Marc Nantel. ETOP is co-sponsored by ICO, OSA and SPIE, and recently IEEE/LEOS has joined the ETOP Steering Committee for sponsorship, contributing to this unique joint venture.

The Ontario region in Canada benefits from some impressive technological activity. Giants like Nortel Networks and JDS Uniphase associate closely with a growing number of very active small- and medium-sized photonics companies. The area therefore has enormous potential in offering photonics training to young researchers and engineers who are interested in orienting their careers towards emerging photonics technologies.

ETOP is devoted to participants at the pre-college, technician, two-year, four-year and



The Ottawa Convention Centre in Ontario, Canada, where the ETOP 2007 meeting will be held on 4-6 June.

graduate-equivalent levels. Typical session topics include: training and laboratory materials for demonstrations; training and continuing education in industry; education in geometrical optics, quantum optics, technologies for integrated diffractive optics; software for teaching; computer-assisted learning; curriculum development, and laboratories for optics and photonics education.

The proceedings from the ETOP series are now available online, as a facility from the SPIE digital library, at: [www.spie.org/communityServices/StudentsAndEducators/etop/](http://www.spie.org/communityServices/StudentsAndEducators/etop/). For further information, please visit [www.etoponline.org](http://www.etoponline.org).

# Tunisia granted full ICO membership

The ICO annual bureau meeting was held in September in Russia.



Professor Zohra Ben Lakhdar, president of the Tunisian Optical Society and the Tunisian Territorial Committee.

On 2 to 3 September 2006 the International Commission for Optics (ICO) Bureau had its annual meeting, which was held in Saint Petersburg, Russia, to coincide with the ICO Topical Meeting on Optoinformatics/Information Photonics 2006.

During the meeting the ICO Bureau had the great pleasure of receiving Tunisia's application for full ICO membership. Tunisia has been an associate member since 2003, and the application was unanimously approved by the bureau.

The president of the Tunisian Optical Society and the Territorial Committee is Professor Zohra Ben Lakhdar. She is currently professor of physics at Tunis El Manar University in Tunisia and director of the Department of Physics Laboratory of Atomic-Molecular Spectroscopy and Applications. Professor Ben Lakhdar is a member of the Islamic Academy of Sciences, and has been an associate member of the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, Italy, since 2001. In 2005 she was honoured by being named a winner of the L'OREAL-UNESCO Award for Women In Science.

The board of the Tunisian Committee for Optics (TCO) consists of: Zohra Ben Lakhdar (president), Souad Lahmar (vice-president), Hassen Ghalila (secretary), and Zoubeida Dhaouadi (treasurer).

Among the TCO's forthcoming activities is participation in and support of the "International Ibn Al-Haythem Day", which is organized by the Youth Science Association of Tunisia, and will be held on 26 to 28 Decem-



Professor Ben Lakhdar with her collaborators at the Physics Laboratory of Atomic-Molecular Spectroscopy and Applications at the University of Tunisia.



Professor Ben Lakhdar with her undergraduate students.

ber 2006 in Tunisia. The event is supported by the Tunisian Optical Society, the University of Gabès and UNESCO.

## New member-at-large for ICO/US Advisory Committee

Arthur Guenther appointed to USAC/ICO National Advisory Committee for Optics.

Arthur H Guenther, research professor at the University of New Mexico, Center for High Technology Materials in the US has recently been appointed as a member-at-large of the US Advisory Committee for the International Commission for Optics (USAC/ICO), which represents the interests of the US optics community internationally.

The main purpose of USAC/ICO is to promote the advancement of optics and photonics in the United States and throughout the world, as well as to effect appropriate US participation in ICO through the national academies. USAC/ICO has been the official representation of the US as an ICO Territorial Committee since 1948.

Guenther is currently at the University of New Mexico after a career as chief scientist with the US Air Force, chief scientist for advanced defense technology at the Los Alamos National

Laboratory, and science advisor for laboratory development and manager of alliances with Sandia National Laboratories.

He has been involved in many outstanding projects, including helping to found an industry association in New Mexico, and promoting optics education programmes; he constructed a career ladder for optical technicians and theorists at West Mesa High School, Central New Mexico Community College and the University of New Mexico.

Guenther was ICO president between 1999 and 2002, and was their official representative to the Education and Training in Optics and Photonics (ETOP) Conference. He is still very active within ETOP and will participate in the next ETOP Conference, which will be held in June 2007 in Ottawa, Canada. Arthur previously chaired this biannual meeting in Singapore.

## Contacts

International Commission for Optics ([www.ico-optics.org](http://www.ico-optics.org)).

### Bureau members (2005–2008)

**President** A T Friberg  
**Past-president** R Dändliker  
**Treasurer** A Sawchuk  
**Secretary** M L Calvo,  
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E-mail: [mlcalvo@fis.ucm.es](mailto:mlcalvo@fis.ucm.es).  
**Associate secretary** G von Bally  
**Vice-presidents, elected**  
S N Bagayev, A M Guzmán,  
G F Jin, B Y Kim,  
M Kujawinska, H Lefèvre,  
J Love, I Yamaguchi  
**Vice-presidents, appointed**  
J Braat, M Gu, I C Khoo,  
G Sincerbox, P Stahl,  
A Wagué  
**Senior adviser (ad personam)**  
P Chavel  
**IUPAP Council representative**  
Y Petroff

## Forthcoming events with ICO participation

### 26–29 October 2006

#### 7th International Young Scientists Conference “Optics and High Technology Material Science SPO 2006”

Kiev, Ukraine. Contact: Dr Viktor O Lysiuk, [lysiuk@univ.kiev.ua](mailto:lysiuk@univ.kiev.ua)

### 13–17 November 2006

#### I Andinean and Caribbean Conference on Optics and its Applications

Santiago de Cali, Colombia. Contact: Prof. E Solarte, [esolarte@calima.univalle.edu.co](mailto:esolarte@calima.univalle.edu.co)

### 26–29 November 2006

#### 9th International Conference on Optics Within Life Sciences (OWLS 9)

Taipei, Taiwan. Contact: Prof. Arthur Chiou, [aechiou@ym.edu.tw](mailto:aechiou@ym.edu.tw)

### 3–10 December 2006

#### 8th LAM Workshop on Physics and Applications of Lasers

Addis Abeba, Etiopía. Contact: A Asfaw, [araya@phys.aau.edu.et](mailto:araya@phys.aau.edu.et)

### 6–8 December 2006

#### 5th International Conference on Optics-Photonics Design and Fabrications-ODF'06

Nara, Japan. Contact: Prof. Tsuyoshi Hayashi,

[hayashi@pac.ne.jp](mailto:hayashi@pac.ne.jp), [www.odf.jp/in.html](http://www.odf.jp/in.html)

### 12–16 December 2006

#### 8th International Conference on Optoelectronics, Fiber-optics and Photonics

Hyderabad, India. Contact: Prof. D N Rao, [dnrsp@uohyd.ernet.in](mailto:dnrsp@uohyd.ernet.in)

### 17–19 April 2007

#### International Workshop Technolaser 2007

Havana, Cuba. Contact: Dr J R Triana, [tecnolaser@ceaden.edu.cu](mailto:tecnolaser@ceaden.edu.cu), [www.ceaden.cu/tecnolaser/index.asp](http://www.ceaden.cu/tecnolaser/index.asp)

### 5–7 September 2007

#### International Conference on Optics and Laser Applications-ICOLA

Yogyakarta, Indonesia. Contact: Dr Sar Sardy, [sardy@eng.ui.ac.id](mailto:sardy@eng.ui.ac.id)

### 25–27 September 2007

#### ETOP 2007

Ottawa, Canada. Contact: Dr Marc Nantel, [marc.nantel@oce-ontario.org](mailto:marc.nantel@oce-ontario.org)

### 7–11 July 2008

#### 21st Congress of ICO

Darling Harbour, Sydney, Australia. Contact: Prof. John Love, [jd1124@rsphysse.anu.edu.au](mailto:jd1124@rsphysse.anu.edu.au)

**For further information about events with ICO participation that are coming up in 2006–2008, see the events page of the ICO website at [www.ico-optics.org/events.html](http://www.ico-optics.org/events.html).**

Responsibility for the accuracy of this information rests with ICO. President: Ari T Friberg, Royal Institute of Technology, Optics, Electrum 229, SE-164 40 Kista, Sweden; e-mail: [ari.friberg@imit.kth.se](mailto:ari.friberg@imit.kth.se). 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](mailto:lbiophys@uni-muenster.de).



**IOP**