

EOS NEWSLETTER

THE OFFICIAL PUBLICATION OF THE EUROPEAN OPTICAL SOCIETY

Progress update from the EOS president

Joseph Braat gives an update on the society's current activities and plans for the future.

Since my last contribution to the *EOS Newsletter* at the beginning of the year (OLE February 2005), a great deal of progress has been made in several of the following areas.

Membership

We are happy to welcome two new countries to the EOS, which have joined as full members (branches). The Laser Association of Russia and the Hungarian Optical Society joined at the EOS annual meeting in Munich in June.

Scientific meetings

This year, we will have organized three EOS topical meetings and sponsored a substantial number of other meetings, at which our members have been able to benefit from discounts and extra facilities. Of the three EOS meetings, two have already taken place: the Munich meeting on Industrial Imaging And Machine Vision (14–16 June) and the topical meeting on Advanced Optical Imaging Techniques, in London (29 June – 1 July). The third topical meeting is on Optical Microsystems and will be held on 15–18 September on the island of Capri, in Italy.

Annual meeting 2006

Next year, we intend to organize a large scientific event at the EOS annual meeting in Paris (17–20 October 2006). The meeting will be run in parallel with the OPTO 2005 exhibition – an annual event in France – and the plan is to have approximately six topical meetings, two of which will be joint meetings with the quantum electronics and optics division of the European Physical Society. At the moment, we are in the initial stages of deciding the subject matter and selecting the meeting chairs and members of the programme committees. We will keep you informed of progress via the EOS website.

Fully electronic EOS journal

At this year's annual meeting we announced some changes to our journal activities. Since 1991, EOS has been a privileged partner of Institute of Physics Publishing, a division of the Institute of Physics, UK. Together we have co-published two journals on optics: the *Journal of Optics A: Pure and Applied Optics* and the *Journal of Optics B: Quantum and Semiclassical Optics*.

However, the latter has recently merged with the *Journal of Physics B: Atomic, Molecular and Optical Physics*, which means that the EOS is left with only one affiliated optics journal. For this reason (and also as a new benefit to our members) the EOS Board has decided to launch a new fully electronic journal. The journal will be “owned” by the scientific community in the sense that there is no charge to access its contents. This is in line with the government policy of many countries.

The financial consequence of this principle of free access is that the journal's authors are requested to pay a publication charge. The EOS will try to keep this fee as low as possible and will

“Much progress has been made since the beginning of 2005.”

Joseph Braat

be offering a reasonable discount to its members.

At the moment, the business plan for the journal is being finalized and it is our intention to launch it in the autumn of this year. With the help of our scientifically active membership, it should not be a problem to create a high-standard journal. The editor of the journal will be Mario Bertolotti, from the University La Sapienza, Rome. Peter Török and his colleagues from Imperial College, London, will be responsible for the IT-oriented aspects of the new electronic journal.

Focus groups

Another important development within the EOS is the creation of focus groups. More details will follow in the next *EOS Newsletter*, but I can assure you that enthusiastic individuals in many fields are working to get them up and running, and to make them useful for the membership.

I wish you much success in your scientific work in optics and photonics, and hope that you will exploit the opportunities offered by the EOS. Please keep yourself informed about all ongoing EOS activities by consulting www.myeos.org.

OPERA project gets a website



Klaus Nowitzki describes some of the recent developments in the Europe-wide project aiming to boost research.



The OPERA 2015 project has bold plans for European research. A new website will be up and running shortly.

The OPERA 2015 project, supported by the 6th Framework Programme (FP6) of the European Union (EU), has been established to provide a platform to invigorate European research in optics and photonics. The idea is to develop and implement a joint strategy to shape the future of this vital industrial sector.

This objective is challenging and can only be achieved if sufficient involvement is guaranteed from all players in the optics and photonics field in Europe. Currently, the OPERA 2015 consortium consists of representatives from eight countries. However, to guarantee success in the long term, it is necessary to develop links with the broader photonics community.

An advisory board to the OPERA 2015 consortium is now being formed to help with this task. The board is expected to be operational in the autumn, and its main mission is to roadmap the evolution of photonics over the next decade.

The board members will be top executives (chief executive officers and chief technical officers) from industry, as well as high-ranking scientists from academia, government agencies and professional organizations within the optics and photonics fields. They will be elected by the partners of the OPERA 2015 consortium, who wish to balance the needs of industry and research.

Website to launch soon

A website for the OPERA 2015 project will be active shortly at www.opera2015.org. As well as providing information about the status of the

project, it will act as a portal for information about what's happening in photonics and optics research in Europe in general. Content will include details of national and FP6 projects, and links to useful reports, websites and events.

It is hoped that the website will provide a valuable forum for the exchange of information. OPERA 2015 welcomes any suggestions, links and inputs for publication on the website, so please send them your ideas. So, to keep up to date with the progress and activities related to photonics and optics in Europe, bookmark the website and check regularly for updates.

Work packages discussed in Paris

On 6 July, a meeting took place in Paris to discuss the work packages (WPs) in the OPERA 2015 project. The aim of the meeting was to determine specific tasks and co-ordinate the activities of the following WPs:

- WP2 research
- WP3 industry
- WP4 workshops

The objective is to compile an information base of European photonics research, with a special focus on industrial trends, products and market developments. The WP4 workshops will be the supporting elements for WP2 and WP3. An important part of the meeting was to discuss, in practical terms, how all the necessary information will be obtained from the different EU countries involved.

Photonics Prague a success

Photonics Prague 2005 was a hit, with artwork shown in support of World Year of Physics, and the ČSSF prize for young scientists.

On 8–11 June, the Czech Republic hosted Photonics Prague – the 5th International Conference on Photonics, Devices and Systems. This triennial event is organized by the Czech and Slovak Society for Photonics (ČSSF), an associate member of the EOS.

As with the previous four events, Pavel Tománek, from Brno University of Technology, acted as conference chairman and the meeting was a great success. This year, the International Programme Committee was composed of 16 members: three from the Czech Republic and 13 from 12 other countries around the world. In total, 112 people from 23 countries took part in the conference, with 61 oral contributions and 36 posters presented in 11 topic areas.

During the conference, the ČSSF prize for young scientists was awarded to two researchers who presented papers at the event:

- Tomáš Čížmár, from the Institute of Scientific Instruments, Brno, discussed a Czech-Scottish project entitled “Optical Conveyor Belts For Delivery Of Sub-Micron Objects”. His co-authors were Veneranda Garcéz-Chávez, Kishan Dholakia and Pavel Zemánek. The project demonstrated how the standing wave created from two counter-propagating non-diffracting (Bessel) beams can confine sub-micrometre-sized particles. The researchers also proved that changing the phase shift between these two beams can precisely deliver sub-micrometre objects in unison. In the experiment they succeeded in delivering polystyrene particles 410 nm in diameter over a distance of 300 μm.
- Boleslav Vraný, from the Academy of Sciences, Prague, presented a paper entitled “Optimization Of Reconstruction Algorithm For Cross-Phase Modulation Frequency-Resolve Optical Gating In A High Birefringence Microstructured Fiber”.



One of the paintings celebrating World Year of Physics.

His co-authors were Pavel Honzatko and Jiri Kanka of the Institute of Radio Engineering and Electronics at the Academy of Sciences.

Their paper described a frequency-resolved optical gating (FROG) measurement method using cross-phase modulation (XPM) in a microstructured optical fibre. This method makes it possible to measure low-energy short pulses that cannot be detected by XPM FROG in a conventional fibre.

Aside from the talks and prizes, the event's organizers also prepared a surprise for conference participants. As 2005 is being celebrated as “World Year of Physics”, a selection of Jitka Brůnová-Lachmann's exquisite paintings dedicated to this important event were exhibited.

Brůnová-Lachmann's paintings have a human dimension, while at the same time conveying mathematical relations and physical phenomena. She builds an interesting bridge between the physical world and art, and her work is inspiring for both.

Pavel Tománek is a professor of physics at Brno University of Technology in the Czech Republic. E-mail: tomanek@feec.vutbr.cz.

Highlights of Photonics Prague 2005 – conference lectures

Is Optical CDMA A Viable Technique For Broadband Networks?

Ivan Glesk, Varghese Baby, Camille S Brès, and Paul R Prucnal, of Slovakia and the US

Nanoscale Optical Spectroscopy And Detection

Lukas Novotny, Neil Anderson, Michael Beversluis and Achim Hartschuh, of the US

Raman-Spectroscopy For A Rapid Identification Of Single Micro-organisms

Jürgen Popp, Petra Rösch, Michaela Harz and Michael Schmitt, of Germany

Scanning Near-Field Optical Microscopy,

Spectroscopy And Nanolithography

Vladimir F Dryakhlushin of Russia

Erbium-Doped Silicon Multilayer Structures For LED And Laser Applications

Z F Krasilnik, B A Andreev, W Jantsch, D I Kryzhkov, V P Kuznetsov, H Przybylinska, Viacheslav B Shmagin, M V Stepikhova, N Q Vinh, and A N Yablonsky, of Russia, Germany and Poland

Er:YAG Laser Radiation Applications In Different Medical Branches

Helena Jelínková, Michal Němec, Petr Koranda, Mitsunobu Miyagi, Yi-Wei Shi and Yuji Matsuura, of the Czech Republic and Japan

Discrete Optical Solitons

Roberto Morandotti, H S Eisenberg, D Mandelik, Y Silberberg, D Modotto, M Sorel, C R Stanley and J S Aitchison, of Canada, the US, Israel and UK

Negative Refractive Optics

Werner Klaus, Yoshihisa Takayama and Makoto Fujino, of Japan

Calendar

DATE	EVENT	LOCATION
August 28 – September 2	SPIE International Congress on Optics and Optoelectronics	Warsaw, Poland
September 3–7	Diffraction Optics 2005	Warsaw, Poland
September 12–14	ICOLAD Second International Conference on Optical and Laser Diagnostics	London, UK
September 12–16	SPIE International Symposium on Optical Systems Design	Jena, Germany
September 12–17	CAOL 2005 Second International Conference on Advanced Optoelectronics and Lasers	Yalta, Ukraine
September 15–18	EOS Topical Meeting on Optical Microsystems	Capri (Naples), Italy
September 19–22	SPIE International Symposium on Remote Sensing	Bruges, Belgium
September 19–22	Eurodisplay	Edinburgh, UK

For more information on any of these events, please visit www.myeos.org.

Are you a member of EOS?

Look at the benefits

Individual members are eligible for:

- a regular EOS Newsletter e-mail
- reduced conference fees
- reduced prices for EOS journals
- free subscription to *Opto & Laser Europe*
- 20% discount on Institute of Physics Publishing books
- members living outside Germany are entitled to a 50% discount on subscription to the German-language journal *Photonik*, published by AT-Fachverlag

Additional benefits for corporate members:

- a company profile in the EOS directory
- a presence on the EOS website
- free advertisements for jobs in the EOS market
- reduced conference fees for all employees



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EOS Newsletter is produced for the European Optical Society by Institute of Physics Publishing Ltd

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EOS IOP

EOS 2005 membership fees

Individual members (who do not belong to a branch or affiliated society of the EOS):	€40
Students (who do not belong to a branch or affiliated society of the EOS):	€10
Corporate members (regardless of the number of employees of the company or members of the institute):	€200

Individual members of the branches Dga0 (Germany), SFO (France), SSOM (Switzerland), SOS (Sweden) and SIOF (Italy) are automatically full individual members of the EOS. Individual members of the affiliated societies Promoptica and CBO-BCO (Belgium), CSSF (Czech and Slovak Republic), DOPS (Denmark), FOS (Finland), the Optics Division of the Norwegian Physical Society (Norway), the Optics Division of the Polish Physical Society (Poland), ROS (Romania), SEDO (Spain), LAS (Russia) and the Optical Group of the IOP (UK) are automatically associate members of the EOS.

Membership information

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