

PREVIEW

Photonics West: First Time in San Francisco

23–28 January 2010, San Francisco, USA

This year's kick-off of the photonics trade fair season will be in San Francisco. The "Photonics West" will take place for the first time in the Moscone Center. About 18,000 attendees from all over the world are expected in the Bay Area. A synergy of technical sessions and exhibitions, as well as some special events to celebrate the 50th anniversary of the invention of the laser will be awaiting the visitors.

With over 1,100 exhibitors, the Photonics West exhibition (26–28 January) is one of the largest optics and photonics shows worldwide. The range of exhibits covers the whole bandwidth of light-driven technologies, from lasers and other light sources, laser accessories, laser systems, cameras and CCD components, fiber optic components, equipment, systems, optical components, to illumination engineering, optical detectors, high speed imaging and sensing, optical materials and substrates, as well as solar and alternative energy.

The technical program will feature more than 3,600 research papers, as well as 64 technical and professional development courses. In plenary and hot-topic sessions leading experts will present their latest research results.

With an expert panel, a "Cirque du LaSaire" reception, a display of 50 years of laser equipment, a multimedia tribute to laser legends and technology leaders, the LASE best student paper and multimedia contest, and other events, Photonics West 2010 will be celebrating the 50th anniversary of the invention of the laser.

Symposia Preview

The technical program of the Photonics West symposia 2010 features four renowned international symposia: BiOS 2010 – Biomedical Optics, LASE 2010 – Lasers and Applications in Science and Engineering, OPTO 2010 – Integrated Optoelectronic Devices, and MOEMS-MEMS 2010 – Micro- and Nanofabrication.

BiOS 2010

BiOS is the world's largest international biomedical optics and imaging conference. With 36 conferences and over 1,580 research papers, the event is a major impetus for launching new applications and technologies. The symposium includes a hot topics



SPIE
Photonics West

German Pavilion,
Convention Center,
at Photonics
West 2009.

(Courtesy of SPIE)

session with reports on breast cancer therapy, intravascular OCT, molecular imaging, spectroscopy, and microscopy.

Program tracks for 2010 are:

- Photonic Therapeutics and Diagnostics
- Clinical Technologies and Systems
- Tissue Optics, Laser-Tissue Interaction, and Tissue Engineering
- Biomedical Spectroscopy, Microscopy, and Imaging
- Nano/Biophotonics

The BiOS symposium is accompanied by the Biomedical Optics Exhibition (23–24 January 2010). The exhibition will feature 150 companies showcasing molecular imaging; therapeutic lasers; biomedical optics components, products, instrumentation, and applications; nano/biophotonics; biosensors; and spectroscopic/microscopic imaging.

LASE 2010

The 24 LASE conferences will address latest research on fiber, solid state, disc, and ultrafast lasers as well as semiconductor laser/LED. The plenary session will focus on ultrafast science and technology. Plenary speakers will be Paul B. Corkum (Univ. of Ottawa and Lab. for Attosecond Science, National Research Council Canada), Andreas Tünnermann (Fraunhofer IOF, Germany), and Holger Lubatschowski (Laser Zentrum Hannover e.V., Germany).

The 5 program tracks of LASE 2010 are:

- Laser Source Engineering
- Nonlinear Optics
- Semiconductor Lasers and LEDs
- Laser Micro-/Nanoengineering
- Laser Applications

MOEMS/MEMS 2010

The micro- and nanofabrication of MOEMS and MEMS is a growing industry. Micro- and nanofabricated electromechanical and optical components, created by batch processing, provide the missing links to the mass-produced miniaturized products and systems of the future. They are superior in cost, performance, and reliability. The MOEMS/MEMS 2010 will feature 8 conferences with over 225 research papers.

Main topics for 2010 are:

- Devices/Applications/Reliability
- Micro/Nanofabrication

OPTO 2010

The OPTO 2010 conferences offer the latest innovations and developments in integrated optoelectronic devices and semiconductor lasers. Visitors can explore the most up-to-date research in optoelectronic materials and devices, semiconductor lasers and LEDs for industrial applications.

33 conferences with over 1,235 research papers in 7 program tracks:

- Optoelectronic Materials and Devices
- Photonic Integration
- Nanotechnologies in Photonics
- Advanced Quantum and Optoelectronic Applications
- Semiconductor Lasers and LEDs
- Displays and Holography
- Optical Communications: Systems and Sub-systems

<http://spie.org/photonics-west.xml>



REVIEW

The 22nd Vision Sets Standards

3–5 November 2009, Stuttgart, Germany



The Vision-Award-Winner Jochem Herrmann, Chief Technology Officer, Adimec Holding B. V. Eindhoven/Netherlands(center); Thomas Walter, Director of the Industrial Solutions Division, Messe Stuttgart (left) and from Imaging and Machine Vision Editor in Chief Warren Clark. (Courtesy of Messe Stuttgart)

(fv) Not only in booming times, also in tough times the Vision trade fair strengthen its position as leading trade fair for machine vision. The Vision 2009 attracted around 5,900 visitors, i.e. only five percent fewer than in 2008. They came from more than 30 countries, primarily from Switzerland, Austria, the Netherlands, Spain, the USA, Italy, Belgium, the United Kingdom and France, but also from Korea, Taiwan, Israel, Saudi Arabia and Brazil. The visitors were predominantly interested in machine vision systems and components, but also in services and machine vision applications. There was a marked rise in the number of visitors who have a direct influence on investment and purchase decisions in their company. It rose from 76% in 2008 to 86% this year.

The Visitors came from a wide range of manufacturing industries, e.g. mechanical engineering, electrical engineering/electronics, precision mechanics and optics, medical technology, the automotive industry and its supplier industries. There was a pronounced increase in the proportion of visitors from the mechanical engineering industry from 18 to 25% and from medical technology from 6 to 14%. At present, there obviously appears to be growth in both industries and, thus, more interest in machine vision components and systems.

The accompanying programme of Vision 2009 was ranging from the Industrial Vision Days talk forum, the special show entitled "Application Park", the Vision Integration Area and the Beginners' Workshop of the Vision Academy through to the special shows entitled "Jugend forscht" (youth re-

search competition) and "International Machine Vision Standards".

This year the Vision Award was conferred to the consortium CoaXPress for its achievements in developing a new camera interface. Adimec received the award, worth 5,000 euros, representively for the whole consortium. CoaXpress developed "a link faster than Camera Link with reach as far as GigE, and carrying power too!", stated Don Braggins, spokesman of the Vision jury.

The proportion of visitors from abroad even increased from 28% in 2008 to 33% this year. "The further increase in the number of foreign visitors underlines the importance of Vision as the world's leading trade fair which, especially in times of economic uncertainty, provide important momentum for the industry. The exhibitors and represented German and foreign associations show in Stuttgart the direction which machine vision will take in future and present here the latest innovations and important advances in international standardisation questions", said Thomas Walter, Head of the Industrial Solutions Business Division of Messe Stuttgart. For a global standardization, leaders from the Automated Imaging Association (AIA), European Machine Vision Association (EMVA), and Japan Industrial Imaging Association (JIA) signed on the first day of the Vision an agreement to jointly develop and promote global machine vision standards.

The Vision 2010 will take place at the New Stuttgart Trade Fair Centre next door to Stuttgart Airport from 9 to 11 November 2010.

www.messe-stuttgart.de/VISION/



Packed halls, beaming faces and a terrific party. We would like to thank all the exhibitors and visitors of VISION 2009 for this successful event and look forward to doing it all again next year.

It's a VISION – it's a community.

VISION
2010

23rd International Trade Fair
for Machine Vision and
Identification Technologies

Messe Stuttgart
9 to 11 Nov. 2010

www.vision-messe.de

REVIEW

ICALEO – Accepting the Challenge

2–5 November 2009, Orlando, USA

(at) Held in the Hilton located in the Walt Disney World Resort, the 28th International Congress on Applications of Lasers and Electro-Optics once again brought together many of the best and brightest of laser and optics professionals and scientists to network and review the state-of-the-art in laser materials processing and predict where the future will lead. ICALEO 2009 brought 483 participants representing over 25 countries who filled the rooms for 233 presentations including scientific papers, short courses and panel discussions. Of course none of this would have taken place without our 68 vendors and sponsors lending their patronage and support.

The plenary session of the conference was fully devoted to photovoltaics and other

fields of green photonics. In the main conference, the Nanomanufacturing conference has been fully integrated aside with the established conferences on Laser material processing and Laser microprocessing. Within the Business Forum & Panel Discussion the green photonics issue was discussed even more deeply from the business perspective.

This year's Schawlow Award, named after 1981 Nobel Prize Laureate Arthur L. Schawlow and founding father of LIA, was bestowed upon Dr. Valentin P. Gapontsev, of IPG Photonics Corporation. At the ceremony, Gapontsev was recognized as "the father of the fiber-laser industry as it is known today, who has pioneered the field in five decades of academic work and as the founder and CEO of a global technology company that

continues to transform the laser industry." Dr. Gapontsev joins the world-renowned list of recipients including Arthur Schawlow, Arthur Guenther and Theodor Hänsch.

ICALEO was not just the pinnacle laser conference for 2009; it is also a looking glass to the future of laser manufacturing and processing. The attendees were treated to some of the best Orlando has to offer while pursuing their passion for lasers and optics. The papers presented and the insights, innovations and breakthroughs explored during the event show how the efficient and eco-friendly use of lasers is at the forefront of global technology.

<http://www.laserinstitute.org/news>

PREVIEW

Photonics21 Annual Meeting

14–15 January 2010, Brussels, Belgium

(cb) The 4th Annual Meeting of the platform Photonics21 will be held at the Radisson Blu Royal Hotel in Brussels, Belgium. Representing more than 1,400 members from industry, research and politics the Photonics21 Annual Meeting has become a major event to the European Photonics community. Its sessions start in the morning of January 15. All participants are invited to an evening reception on January 14 at the conference hotel.

Topics of this year's event are

- Presentation and handing over of the new edited Strategic Research Agenda to the representatives of the European Commission
- Discussing and developing of research strategies for Photonics Europe – the platform reviews 2009 activities and decides on action items for 2010
- International cooperation: special focus on the United States and photonics pro-

grammes on energy efficiency and sustainability

- Harmonization and coordination of member state funding activities in Photonics

The registration fee has been set at 130 Euro (incl. 21% VAT) covering entrance to all sessions, lunch, coffee breaks and evening reception.

www.photonics21.org

PREVIEW

Diffraction Optics

14–18 February 2010, Koli, Finland

(kmh) The EOS Topical Meeting on Diffraction Optics will be held on 14–18 February 2010. Organized by the European Optical Society, the scope of the meeting is to give the attendees a wide picture of the field, from fundamental modeling of light-matter interaction to design techniques and from fabrication techniques to novel applications. The conference will include focus sessions

on optics in displays, illumination, and vision as well as a seminar unified optical modeling with virtualab.

The fields covered will include topics such as: micro-optics in displays, optics of modern projectors, adaptive optics in vision, modeling of diffractive optics, fabrication and characterization, system integration, programmable DOEs, sub-wavelength

optics, photonic crystals, novel optical materials including metamaterials, shaping and homogenization of optical beams, measurement techniques, diffractive optics for life sciences and security applications.

<http://www.myeos.org/events/koli>