

Munich, June 7, 2017

## Press Release

### World of Photonics Congress 2017

## THE ENTIRE WORLD OF PHOTONICS IN A SINGLE EVENT

The [World of Photonics Congress](#) is among the world's top 3 photonics congresses and number 1 in Europe. It will take place from June 25 to 29, 2017 at the ICM – Internationales Congress Center München on the Messe München site concurrently with [LASER World of PHOTONICS](#), the world's leading trade fair, from 26 – 29 June 2017 in the directly adjoining exhibition halls.

The World of Photonics Congress 2015 recorded 5,500 participants attending more than 2,700 scientific and practically-oriented lectures. 2017 sees a continuation of this upward trend: round about 3,000 lectures have been registered so far. A new conference named Digital Optical Technologies, keynote speeches and invited talks by famous scientists from all around the world, the presentation of innumerable awards, short courses and hands-on-sessions – the World of Photonics Congress is setting new records and offers a lot of new and exciting program highlights.

### Opening of World of Photonics Congress and LASER World of PHOTONICS and Plenary Talk

This year there is a particular focus on quantum technologies, which are currently enjoying considerable national and international support, with high expectations for their potential implementation in industrial applications. This is a common theme permeating the entire Congress program and begins with the inauguration of LASER World of PHOTONICS and the World of Photonics Congress on 26 June at 09:40 in the ICM International Congress Center Munich. The welcoming addresses will acknowledge the political and economic importance of optical technologies. Dr. Peter Leibinger, Vice Chairman of the Managing Board of TRUMPF and Chairman BMBF Advisory Board "Photonik Forschung Deutschland" (Photonics Research Germany) will

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present the current objectives of photonics research in Germany in his keynote address “Drawing on Photonics strength—taking up the challenge of Quantum Technologies”.

At 10:00 the multiple award-winning Prof. Dr. Jörg Wrachtrup will deliver his opening lecture “Putting a Spin on Photons”. Efficient matter photon interfaces are key ingredients of quantum technology. Quantum communication relies on photon storage and processing but spin photon interfaces can also increase the sensitivity of quantum sensors. Prof. Dr. Jörg Wrachtrup, who is the head of the 3rd Institute of Physics at the University of Stuttgart, received the first ever Zeiss Research Award this year. He has already won the Gottfried Wilhelm Leibniz Prize and Max Planck Research Prize for his research.

There is a dedicated session on Monday afternoon given over to the importance and foreseeable industrial use of quantum technologies: Prof. Tommaso Calarco, Director of the Institute for Complex Quantum Systems at the University of Ulm will be talking about the "The European Quantum Technologies Flagship Program" and Dr. Wilhelm Kaenders, President, TOPTICA Photonics AG, will be asking in his lecture "Time for Quantum Technologies?!", whether this highly topical research field has achieved industrial maturity.

## **The Conference Program of the World of Photonics Congress**

The World of Photonics Congress is among the foremost meeting places for the international photonics community and is an umbrella for six conferences as well as the practically-oriented Application Panels, held in the LASER World of PHOTONICS' exhibition halls. The most important scientific companies from the photonics arena are behind the high-powered lecture program:

- **CLEO®/Europe-EQEC:** The “**Conference on Lasers and Electro-Optics and the European Quantum Electronics Conference**” is the biggest conference at the World of Photonics Congress. With technical co-sponsorship provided by the European Physical Society (EPS), the

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IEEE Photonics Society (IPS) and the Optical Society (OSA), CLEO®/Europe-EQEC reflects a strong international presence in the complementary research traditions of laser science, photonics and quantum electronics. CLEO®/Europe-EQEC conference has become the benchmark conference where European researchers present their most groundbreaking results in a wide range of areas in fundamental optics and applied photonics. With recent advances in optical sources, new materials and novel approaches to manipulating and controlling light, 2017 promises to be the most exciting conference yet. The plenary lectures will be given by Prof. Sir David Neil Payne, Professor at the University of Southampton and Director of the Optoelectronics Research Centre, and Prof. Ferenc Krausz, Director at MPQ, Chair of Experimental Physics at LMU.

- **European Conferences on Biomedical Optics (ECBO):** The entire fascinating world of biophotonics in medicine and life sciences is the world of ECBO, sponsored by the two scientific societies The Optical Society (OSA) and The International Society for Optics and Photonics (SPIE). Presentations will cover basic science, novel technology and applications in the areas of advanced microscopy, clinical and biomedical spectroscopy, diffuse optical imaging, molecular imaging, optical coherence tomography and other coherence techniques, therapeutic laser applications, laser-tissue interactions, opto-acoustic methods, and other novel biophotonics techniques. The plenary speakers in 2017 are Prof. Ed Boyden, Massachusetts Institute of Technology, who will be talking about "Tools for Seeing and Controlling Biological System" and Dr. Aydogan Ozcan, UCLA, with his lecture entitled "Computational Microscopy, Sensing and Diagnostics".
- The European Optical Society (EOS) will hold their established conferences for the first time under one title: **EOS Optical Technologies**. EOS Optical Technologies addresses all aspects of

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optical technologies like development and manufacturing of optical systems and components, opto-fluidics, optomechanical engineering and light engineering. Prof. Demetri Psaltis, École Polytechnique Fédérale de Lausanne (EPFL), will give a plenary talk about “Optofluidics in solar energy harvesting”.

- **LiM - Lasers in Manufacturing**, conference is organized by the Wissenschaftliche Gesellschaft für Lasertechnik (WLT): The LiM focuses on the latest developments as well as future trends in the field of laser materials processing. This year's fascinating topics include Cutting and CFRP-Processing, Processing of Transparent Materials as well as Surface Treatment and Cladding. For the first time, there will also be a dedicated sub-conference on the subject of "Additive Manufacturing". This will see the Laser Institute of America (LIA), in a session of its own, talking about the status of additive manufacturing in the USA. The plenary speakers are Prof. Paulo J. Bartolo, Polytechnic Institute of Leiria (“Additive Biomanufacturing for Regenerative Medicine”) and Dr. Paul Hilton, TWI, Cambridge (“50 years of combining a focused laser beam with a high-pressure gas jet. Then and now.”)
- **Optical Metrology**, organized by SPIE Europe: The conference deals with optical metrology and the use of photonics in image processing. The symposium will highlight new optical principles and systems for metrology, videometrics and machine vision with applications in industrial design, production engineering, process monitoring, maintenance support, biotechnology, vehicle navigation, multimedia technology, architecture, archaeology and arts. Prof. Federico Capasso of Harvard University has been invited as a plenary speaker. His lecture is entitled: "Metasurface Diffractive Optics".
- The new conference, also organised by SPIE, is called **Digital Optical Technologies**. The symposium reflects trends in recent technologies such as 3D sensors, immersive multimedia, novel displays, light sources and imaging systems. A conference highlight are the hands-

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on sessions with augmented and virtual reality goggles. There are four systems available to visitors for testing:

- Microsoft HoloLens, Mixed Reality Untethered headset
- Oculus Rift CV1, VR Headset with Hand Controllers
- HTC Vive VR headset with hand controllers
- Sony PlayStation VR Headset with Hand Controllers

*The hands-on demos are free for Digital Optical Technologies registered attendees.*

## **Award ceremony**

As the biggest meeting place for photonics research in Europe, the World of Photonics Congress is also the perfect forum for award ceremonies. The WLT Award, the Herbert Walther Award, the OSA Fellow Member Recognition and the prizes of the EPS are among the accolades being bestowed on outstanding scientists and researchers in 2017 in recognition of their work.

For example the 2017 Herbert Walther Award will be awarded to experimental physicist Prof. Randall Hulet, Rice University, USA, for his groundbreaking research and discovery of the Bose-Einstein condensation in an atomic gas with attractive interactions.

## **The Congress application program at the photonics forums**

The World of Photonics Congress will be hosting daily practically-oriented events at the forums in exhibition halls A3, B2 and B3, which are open to every trade fair exhibitor, visitor and congress participant.

The sixteen application panels are sub-divided into four fields:

- Biophotonics and Medical Applications
- Optical Metrology and Imaging
- Laser and Optics
- Industrial Laser Applications

**The detailed 2017 Congress program can be downloaded [here](#).**

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## **LASER World of PHOTONICS**

The LASER World of PHOTONICS is the world's leading trade fair of the laser and photonics industry. World of Photonics Congress, Europe's largest photonics congress, will be taking place in parallel with the trade fair. The program comprises five scientific conferences of leading global organizations. Supplementing this Messe München will be offering practical lectures on the applications of photonics ("Application Panels"). The combination of trade fair and congress brings together research and application, thereby promoting the use and continued development of optical technologies. In 2015 the trade fair set an exhibitor record with 1,227 exhibitors from 42 countries. A total of 31,279 trade visitors from 72 countries entered the Messe München site. In 2015 the World of Photonics Congress registered 5,600 participants with an offering of more than 2,700 lectures and presentations including poster presentations. The LASER World of PHOTONICS has been organized every two years by Messe München since 1973; the next event will take place in Munich from June 26-29, 2017, the next World of Photonics Congress will take place in parallel from June 25-29, 2017 in the ICM - International Congress Center Munich. [www.world-of-photonics.com/index-2.html](http://www.world-of-photonics.com/index-2.html)

## **The LASER World of PHOTONICS global network**

LASER World of PHOTONICS has developed an international trade fair network. LASER World of PHOTONICS in Munich is the world's leading platform of the laser and photonics industry. World of Photonics Congress is Europe's largest photonics congress. LASER World of PHOTONICS CHINA and LASER World of PHOTONICS INDIA are leading regional trade fairs for laser and optical technologies and are staged annually in China (Shanghai) and India (alternating between Bangalore and New Delhi). With a total of 2,295 exhibitors and more than 92,000 visitors in Munich, China and India, Messe München is the world's leading trade fair organizer for lasers and photonics.

## **Messe München**

Messe München is one of the leading exhibition organizers worldwide with more than 50 of its own trade shows for capital goods, consumer goods and new technologies. Every year, a total of over 50,000 exhibitors and around three million visitors take part in more than 200 events at the exhibition center in Munich, at the ICM – Internationales Congress Center München and the MOC Veranstaltungszentrum München as well as abroad. Together with its subsidiary companies, Messe München organizes trade shows in China, India, Brazil, Russia, Turkey, South Africa, Nigeria, Vietnam and Iran. With a network of associated companies in Europe, Asia, Africa and South America as well as around 70 representations abroad for over 100 countries, Messe München has a global presence.

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