



**Fraunhofer**  
ILT

Fraunhofer Institute for Laser  
Technology ILT

April 17–19, 2024 | Program

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# AKL'24 – International Laser Technology Congress

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# Welcome

## AKL'24 – International Laser Technology Congress

In these times of economic change, companies are looking for new ideas and technologies to better position themselves in a fiercely competitive environment. To help them keep abreast of such innovations, the International Laser Technology Congress AKL sheds light on the state of practice-oriented research in laser technology and provides insight into relevant and forward-looking industrial developments. Whether it's about new laser beam sources and laser applications or how digitization impacts production technology, you'll find an intensive exchange in the field of laser technology. Indeed, you are in good hands at AKL'24 – where inspiration, innovation and networking are guaranteed!

For the 14th time, laser manufacturers and laser users from different industries will meet at the biennial AKL. With over 500 participants, 80 presentations and 52 exhibitors, this congress has established itself in Europe as the leading forum for applied laser technology in production. The European Commission, the European Photonics Industry Consortium EPIC, OptecNet Deutschland as well as the industry associations SPECTARIS, VDA, VDMA and VDI assist the forum as supporting organizations.

Benefit from AKL's international character as it offers simultaneous translations in German and English. In addition, take advantage of the conference environment to learn more about the latest technological findings in numerous live presentations by Fraunhofer ILT. We are looking forward to your visit!

*Constantin Häfner*

Prof. Constantin Häfner

# Information, Inspiration, Networking

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## AKL'24 – Laser Applications of Tomorrow

### AKL'24 – Laser Technology Conference

The AKL'24 Laser Technology Conference provides a comprehensive overview of current developments in laser material processing in macro and micro areas and in laser beam development. Moreover, it offers laser manufacturers and users an ideal platform to intensively exchange ideas and experience.

### Accompanying Exhibition

International companies from laser engineering respectively photonics show innovative products and processes, encompassing all aspects of laser technology, to interested congress participants.

### Technology Business Day

The Technology Business Day is directed at leading managers and marketing directors who want specific information on the status and perspectives in the European, American and Asian laser markets.

### Expert Forums

- Functional Surfaces by Laser Processing
- Digitalization and AI in Photonic Production
- Quantum Technology and Photonics

If you would like to delve deeper into electronic layers, optical surfaces or tribology, wear and corrosion protection, you can look forward to exciting presentations in the forum functional surfaces by laser processing.



Furthermore you can expand your knowledge in digitalization and AI for photonic production as well as in quantum technology and photonics in separate forums. Use the forums to get in touch with recognised experts.

### Laser Technology Live

As a participant of AKL'24, you can experience laser technology live in about 60 demonstrations in Europe's largest laser system park at the Fraunhofer Institute for Laser Technology ILT and exchange ideas with Aachen researchers about the latest technological developments. Laser Technology Live is included for registered participants of April 18, 2024.

### Networking at Eurogress

The Networking at Eurogress gives you the opportunity to exchange experiences among experts.

### Innovation Award Laser Technology

The official presentation of the Innovation Award Laser Technology 2024 takes place during AKL'24 on Wednesday, April 17, 2024 at a festive dinner in the Coronation Hall of Aachen's town hall.

### Conference Language

Lectures are presented in English and German with simultaneous interpreting.

# Program Structure

Wednesday, April 17, 2024

Exhibition at Eurogress Aachen (accompanying)

ROOM EUROPA	ROOM BRÜSSEL	ROOM K1	ROOM K2
Technology Business Day	FORUM Functional Surfaces by Laser Processing	FORUM Digitalization & AI in Photonic Production	FORUM Quantum Technology & Photonics

Innovation Award Laser Technology 2024 in the Coronation Hall of Aachen Town Hall

Thursday, April 18, 2024

Exhibition at Eurogress Aachen (accompanying)

Gerd Herziger Session Impact of digitalization and AI on value creation and business models in laser technology			ROOM EUROPA
ROOM K1	ROOM BRÜSSEL	ROOM EUROPA	ROOM K2
Additive Manufacturing ■ Laser Powder Bed Fusion LPPF	Optical Systems ■ Optical systems & beam shaping	Laser Beam Sources ■ Solid state lasers & fiber lasers	Medical Technology ■ Laser systems for medical applications

Laser Technology Live with around 60 Live Presentations at Fraunhofer ILT

Networking at Eurogress Aachen

Friday, April 19, 2024

Exhibition at Eurogress Aachen (accompanying)

ROOM BRÜSSEL	ROOM K1	ROOM EUROPA
Cutting & Joining ■ Cutting ■ Welding ■ Joining of plastics & transparent materials	Surface Technology ■ Laser Material Deposition ■ Microstructuring ■ Polishing & thin film processing	Laser Beam Sources ■ Ultrashort-pulse lasers ■ Lasers with tailor-made wavelengths ■ Diode lasers

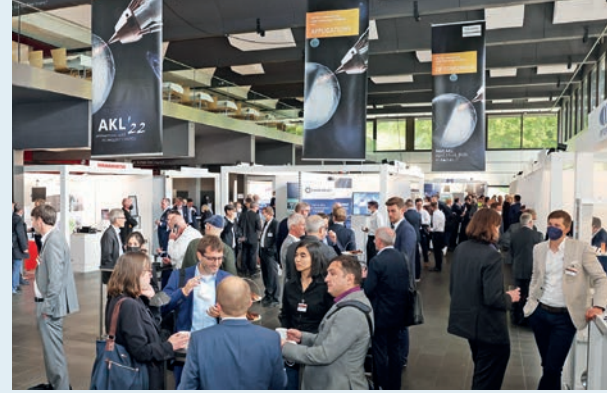
Final Lecture

ROOM EUROPA

*Subject to change without notice, especially venues and times.*

# Program – Expert Forums

Wednesday, April 17, 2024



## FORUM – Functional Surfaces by Laser Processing

from 8:00 Check-in and coffee reception

### Tribology, wear and corrosion protection

Chairman: Dr. Thomas Schopphoven, Fraunhofer ILT, Aachen (D)

**10:00 Functional surfaces by laser processing – a process overview**  
Dr. Christian Vedder, Fraunhofer ILT, Aachen (D)

**10:30 Modern solutions for modern manufacturing – Using laser material deposition to manufacture, repair and enhance complex parts**

Dr. Gentry Wood, Apollo-Clad Laser Cladding, Leduc (CAN)

**11:00 Applications and use cases for functional surfaces by Extreme High Speed Laser Material Deposition (EHLA)**  
Josh Barras, TWI Technology Centre (Yorkshire) Ltd, Catcliffe (UK)

**11:30 Laser processes for improving tribological properties**  
Dr. Thomas Kiedrowski, Robert Bosch GmbH, Renningen (D)

**12:00 Lunch – Visit of the accompanying exhibition**

### Electronic layers

Chairman: Dr. Christian Vedder, Fraunhofer ILT, Aachen (D)

**14:00 Laser systems for energy-efficient drying of battery electrodes**  
Dr. Simon Britten, Laserline GmbH, Mühlheim-Kärlich (D)

**14:30 Laser annealing for semiconductor production**  
Dr. Michael Grimm, 3D-Micromac AG, Chemnitz (D)

**15:00 LIFT for electronic layers**  
Dr. Ralph Domnick, Ara-Coatings GmbH & Co. KG, Nordhorn (D)

**15:30 Coffee break – Visit of the accompanying exhibition**

### Optical surfaces

**16:30 An overview of laser-based optics manufacturing**  
Dr. Edgar Willenborg, Fraunhofer ILT, Aachen (D)

**17:00 New developments in Selective Laser Etching (SLE) for photonic applications**  
Kaushik Budheliya, LightFab GmbH, Aachen (D)

Evening Event (19:00–23:00 Uhr)

## FORUM – Digitalization and AI in Photonic Production

from 8:00 Check-in and coffee reception

Chairman: Prof. Carlo Holly, Fraunhofer ILT, Aachen (D)

**10:00 Cooperation as a success factor – Integrating the digital ecosystems of users and laser manufacturers**  
Michael Lebrecht, Mercedes-Benz AG, Sindelfingen (D)

**10:30 OEE increase through digital networked manufacturing systems in laser material processing**  
Marco Holzer, TRUMPF Laser AG, Schramberg (D)

**11:00 Hey Siri! What is the quality of this laser weld?**  
Dr. Markus Kogel-Hollacher, Precitec Optronik GmbH, Neu-Isenburg (D)

**11:30 Quo vadis Additive Manufacturing? – Increase vertical market integration through digital production**  
Dr. Simon Höges, GKN Additive, Bonn (D)

**12:00 Lunch – Visit of the accompanying exhibition**

Chairman: Peter Abels, Fraunhofer ILT, Aachen (D)

**14:00 Automated non-destructive testing in battery production using laser-based excitation and detection of ultrasound**  
Dr. Wolfgang Rohringer, XARION Laser Acoustics GmbH, Wien (AT)

**14:30 Implementation of an AI-based process monitoring system to save on downstream quality assurance**  
Dr. Michael Ungers, Scansonics MI GmbH, Berlin (D)

**15:00 AI for laser welding: Where are the limitations?**  
Thibault Bautze-Scherff, Blackbird Robotersysteme GmbH, Garching bei München (D)

**15:30 Coffee break – Visit of the accompanying exhibition**

**16:30 Safe brake disk production with digital sensor technology**  
Stefan Mann, Fraunhofer ILT, Aachen (D)

**17:00 Sensors and data fusion for optimized process monitoring in any laser application**  
Christoph Franz, 4D Photonics GmbH, Isernhagen (D)

Evening Event (19:00–23:00 Uhr)

# Program – Forums

Wednesday, April 17, 2024



## FORUM – Quantum Technology and Photonics

from 8:00 Check-in and coffee reception

Chairmen: Dr. Bernd Jungbluth, Fraunhofer ILT, Aachen (D) and Florian Elsen, RWTH Aachen University – Chair for Laser Technology LLT, Aachen (D)

- 10:00 DLR Quantum Computing Initiative – Shaping the Quantum Computing Ecosystem in Germany**  
Dr. Karla Loida, DLR Quantencomputing Initiative, Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Köln (D)
- 10:30 MAGIC Quantum Computers**  
Dr. Michael Johanning, eleQtron GmbH, Siegen (D)
- 11:00 QRydDemo – A quantum computer demonstrator based on neutral atoms**  
Dr. Florian Meinert, Universität Stuttgart, Stuttgart (D)
- 11:30 Photonic Quantum Computing: superiority by excellent scaling capabilities**  
Dr. Stefan Hengesbach, QuiX Quantum B.V., Enschede (NL)
- 12:00 Lunch – Visit of the accompanying exhibition**
- 14:00 Quantum network demonstrations inside the lab and on metropolitan scale**  
Prof. Ronald Hanson, QuTech, Delft (NL)
- 14:30 Practical distribution of useful entanglement across New York City**  
Dr. Mehdi Namazi, Qconnect, Inc., New York (USA)
- 15:00 Application scenarios of quantum technology at Deutsche Telekom**  
Dr. Marc Geitz, Deutsche Telekom AG, T-Labs, Berlin (D)
- 15:30 Coffee break – Visit of the accompanying exhibition**
- 16:30 Low-noise quantum frequency converters for the quantum internet**  
Fabian Geus, Fraunhofer ILT, Aachen (D)
- 17:00 Enabling quantum technologies through scalable single photon detector solutions**  
Dr. Alexander Eich, Pixel Photonics, Münster (D)

Evening Event (19:00–23:00 Uhr)

## Technology Business Day

from 8:00 Check-in and coffee reception

### Laser markets

Chairman: Prof. Arnold Gillner, Fraunhofer ILT, Aachen (D)

- 12:30 Global and European market for laser sources**  
Dr. Thierry Robin, TEMATYS, Paris (F)
- 13:00 Heroes and rising stars in the German and global industrial laser market**  
Dr. Stefan Ruppik, Coherent, Hamburg (D)
- 13:30 Status quo and prospects for the U.S. laser market**  
Dr. Henrikki Pantisar, TRUMPF Inc., Farmington (USA)
- 14:00 Status quo and prospects of the Chinese laser market**  
Dr. Bo Gu, BOS Photonics, Boston (USA)
- 14:30 Coffee break – Visit of the accompanying exhibition**

### Laser applications in energy technology

- 15:30 Laser technology: Paving the way for fuel flexibility in gas turbines**  
Dr. Sebastian Piegert, Siemens Energy, Berlin (D)
- 16:00 Laser technology in the production of metallic bipolar plates – from application to series production**  
Patrick Müller, Gräbener Maschinentechnik GmbH & Co. KG, Netphen-Werthenbach (D)
- 16:30 Advances in dual-beam laser technology and real-time laser process monitoring for battery production**  
Stefano Cattaneo, IPG Photonics S.r.l., Cerro Maggiore (I)
- 17:00 Terawatt with light: Laser processes in photovoltaics – Manufacturing and potential of tomorrow**  
Andreas Brand, Fraunhofer-Institut für Solare Energiesysteme ISE, Freiburg (D)

## Evening Event

- 19:00–23:00 Dinner with presentation of the "Innovation Award Laser Technology"**  
in the Coronation Hall of Aachen's Town Hall



# Program AKL'24

Laser Technology Conference  
Thursday, April 18, 2024



## Gerd Herziger Session

from 7:30 Check-in and coffee reception

### Impact of digitalisation and AI on value creation and business models in laser technology

Chairman: Prof. Constantin Haefner, Fraunhofer ILT, Aachen (D)

- 8:30 Opening speech**  
Prof. Constantin Haefner, Managing director, Fraunhofer ILT, Aachen (D)
- 9:00 Digitalization and AI – How are digitalization and AI changing business models and value creation in laser technology?**
- Dr. Hagen Zimer, Member of the Management Board and CEO Laser Technology, TRUMPF SE+Co. KG
  - Dr. Christopher Dorman, Executive Vice President, Lasers Business, Coherent, Glasgow (UK)
  - Dr. Christoph Rüttimann, CTO Bystronic Group, Niederörsz (CH)
- 9:30 Panel discussion with speakers**
- 10:40 Coffee break – Visit of the accompanying exhibition**

### Digitization in Photonic Production

Chairman: Prof. Constantin Haefner, Fraunhofer ILT, Aachen (D)

- 11:10 Data analytics/AI – Rocket science or just standard? Examples and outlook**  
Werner Reichelt, Head of Sales Digital Business, Festo SE & Co. KG, Esslingen (D)
- 11:35 Status quo and perspectives of AI usage in laser beam joining of e-mobility components at Audi AG**  
Dr. Jan-Philipp Weberpals, Subject Specialist Laser Beam Processes for Car Body Construction and Electromobility Audi AG, Neckersulm (D)
- 12:00 Application of AI for smart design of optical systems used in laser material processing**  
Prof. Carlo Holly, RWTH Aachen University – Chair TOS, Aachen (D)
- 12:30 Lunch – Visit of the accompanying exhibition**

## 1 Session 1: Additive Manufacturing

### Laser Powder Bed Fusion LPBF

Chairman: Tim Lantzsch, Fraunhofer ILT, Aachen (D)

- 14:00 Additive Manufacturing for sustainable tooling applications**  
Dr. Stefan Leuders, voestalpine Additive Manufacturing Center GmbH, Düsseldorf (D)
- 14:30 High power laser technology for Area Printing® – A scalable powder bed metal Additive Manufacturing method**  
Dr. Andrew Bayramian, Seurat Technologies Inc., Wilmington (USA)
- 15:00 Status Quo and perspectives of AM for series production in the aerospace industry**  
Frank Rethmann, Airbus Helicopters Deutschland GmbH, Donauwörth (D)
- 15:30 Coffee break – Visit of the accompanying exhibition**
- 16:00 Shuttle transfer to Fraunhofer ILT**

## Laser Technology Live

- 16:30 Laser Technology Live at Fraunhofer ILT**
- 19:30 Shuttle transfer to Eurogress Conference Center**

## Evening Event

- 20:00–23:00 Networking with Snacks**  
at Eurogress Conference Center – Exhibitor area

# Program AKL'24

Thursday, April 18, 2024  
Sessions 1–4 parallel



## 2 Session 2: Optical Systems

### Optical systems and beam shaping

Chairman: Dr. Martin Traub, Fraunhofer ILT, Aachen (D)

- 14:00 **The shape of things to come: All-fiber kW beam shaping for high-productivity industrial processing**  
Dr. Andrea Braglia, nLIGHT Europe, Torino (I)
- 14:30 **Fast and adaptive beam steering with cascaded scan systems**  
Dr. Holger Schlüter, Scanlab GmbH, München (D)
- 15:00 **Complex freeform surfaces: Design and manufacture of low loss beam shapers for high power laser applications**  
Dr. Stephen Kidd, PowerPhotonic Ltd., Dalgety Bay (UK)
- 15:30 **Coffee break – Visit of the accompanying exhibition**
- 16:00 **Shuttle transfer to Fraunhofer ILT**

### Laser Technology Live

- 16:30 **Laser Technology Live at Fraunhofer ILT**
- 19:30 **Shuttle transfer to Eurogress Conference Center**

### Evening Event

- 20:00–23:00 **Networking with Snacks**  
at Eurogress Conference Center – Exhibitor area

## 3 Session 3: Laser Beam Sources

### Solid state and fiber lasers

Chairman: Hans-Dieter Hoffmann, Fraunhofer ILT, Aachen (D)

- 14:00 **Achieving the fiber laser stability at atom trap wavelengths**  
Thorge Holm, NKT Photonics Technology GmbH, Köln (D)
- 14:30 **High-power laser source with coherent beam combining and dynamic beam shaping for welding applications**  
Dr. Robert Bernhard, Civan Lasers Europe GmbH, Hannover (D)
- 15:00 **2  $\mu\text{m}$  fiber lasers for innovative applications**  
Dr. Peter Fuhrberg, Futonics Laser GmbH, Katlenburg-Lindau (D)
- 15:30 **Coffee break – Visit of the accompanying exhibition**
- 16:00 **Shuttle transfer to Fraunhofer ILT**

### Laser Technology Live

- 16:30 **Laser Technology Live at Fraunhofer ILT**
- 19:30 **Shuttle transfer to Eurogress Conference Center**

### Evening Event

- 20:00–23:00 **Networking with Snacks**  
at Eurogress Conference Center – Exhibitor area



# Program AKL'24

Thursday, April 18, 2024  
Sessions 1–4 parallel

## 4 Session 4: Medical Technology

### Laser systems for medical applications

Chairman: Dr. Achim Lenenbach, Fraunhofer ILT, Aachen (D)

- 14:00** **Minimally invasive laser surgery in cancer therapy**  
Dr. Karsten Sassenscheid, KLS Martin SE & Co. KG, Freiburg im Breisgau (D)
- 14:30** **Femtosecond laser surgery in ophthalmology**  
Dr. Gregor Stobrawa, Carl Zeiss Meditec AG, Jena (D)
- 15:00** **Stereotactic laser craniotomy for awake neurosurgery**  
PD Dr. Peter Reinacher, Universitätsklinikum Freiburg, Freiburg im Breisgau (D)
- 15:30** **Coffee break – Visit of the accompanying exhibition**
- 16:00** **Shuttle transfer to Fraunhofer ILT**

## Laser Technology Live

- 16:30** **Laser Technology Live at Fraunhofer ILT**
- 19:30** **Shuttle transfer to Eurogress Conference Center**

## Evening Event

- 20:00–23:00** **Networking with Snacks**  
at Eurogress Conference Center – Exhibitor area

Friday, April 19, 2024  
Sessions 5–7 parallel

## 5 Session 5: Laser Beam Sources

### Ultrashort-pulse lasers

Chairman: Dr. Peter Rußbüldt, Fraunhofer ILT, Aachen (D)

- 8:30** **Ultrashort-pulse lasers for processing with atypical wavelengths**  
Dr. Martynas Barkauskas, LightConversion, Vilnius (LT)
- 9:00** **Industrial 1 kW/10 mJ UKP-Laser**  
Dr. Dominik Bauer, TRUMPF Laser AG, Schramberg (D)
- 9:30** **Making ultrashort pulses shorter with multipass cells**  
Prof. Oleg Pronin, n2-Photonics GmbH, Hamburg (D)
- 10:00** **Coffee break – Visit of the accompanying exhibition**

### Lasers with tailor-made wavelengths

Chairman: Dr. Bernd Jungbluth, Fraunhofer ILT, Aachen (D)

- 11:00** **High energy UV lasers for display and green energy applications**  
Dr. Robin Rammelsberg, Coherent LaserSystems GmbH & Co. KG, Göttingen (D)
- 11:30** **Frequency-converted lasers for applications in the manufacturing industry**  
Dr. Dominik Bauer, TRUMPF Laser AG, Schramberg (D)
- 12:00** **New pulsed 3  $\mu\text{m}$  laser beam source – potential for revolution in plastic surface processing?**  
Edwin Büchter, Clean-Lasersysteme GmbH, Herzogenrath (D)

### Lunch – Visit of the accompanying exhibition

### Diode lasers

Chairwoman: Sarah Klein, Fraunhofer ILT, Aachen (D)

- 14:30** **Performance and power scaling of blue diode lasers**  
Dr. Matthias Ackermann, Laserline GmbH, Mülheim-Kärlich (D)
- 15:00** **Advanced VCSELs and new applications in heating and drying**  
Dr. Holger Mönch, TRUMPF Photonic Components GmbH, Aachen (D)
- 15:30** **Advances in laser diode pumps – pioneering high-energy DPSSLs for the petawatt regime**  
Dr. Steve Patterson, Leonardo Electronics US Inc., Tucson (USA)
- 16:00** **Final lecture: Photonics in focus – Laser inertial confinement fusion as an opportunity for industry**  
Prof. Constantin Haefner, Fraunhofer ILT, Aachen (D)
- 16:30** **End of the lectures**

## Friday, April 19, 2024

### Sessions 5–7 parallel

#### 6 Session 6: Cutting and Joining

##### Cutting

Chairman: Dr. Alexander Olowinsky, Fraunhofer ILT, Aachen (D)

- 8:30 High-speed Laser Blanking – higher productivity with a new concept**  
Hasan Sarac, Automatic-Systeme Dreher GmbH, Sulz am Neckar (D)
- 9:00 Remote operation for laser cutting – The path to autonomy**  
Benedikt Braig, TRUMPF Werkzeugmaschinen SE + Co. KG, Ditzingen (D)
- 9:30 Laser cutting for e-mobility**  
Dr. Frank Schneider, Fraunhofer ILT, Aachen (D)
- 10:00 Coffee break – Visit of the accompanying exhibition**

##### Welding

Chairman: Dr. André Häusler, Fraunhofer ILT, Aachen (D)

- 11:00 Next generation tactile laser welding and brazing – Innovation of a proven laser processing head technology**  
Dr. Björn Wedel, PT Photonic Tools GmbH, Berlin (D)
- 11:30 Process improvement through innovative beam shaping in laser welding**  
Gwenn Pallier, CAILABS, Rennes (F)
- 12:00 Laser meets synchrotron – Visualizing and understanding process dynamics in laser beam welding**  
Christoph Spurk, RWTH Aachen University – Chair for Laser Technology LLT, Aachen (D)
- 12:30 Lunch – Visit of the accompanying exhibition**

##### Joining of plastics and transparent materials

Chairman: Maximilian Brosda, Fraunhofer ILT, Aachen (D)

- 14:30 Welding of glass by USP lasers for electronics, semiconductors and medical applications**  
Dr. Jens Gottmann, LightFab GmbH, Aachen (D)
- 15:00 Machine concept for laser welding of plastics in flexible production scenarios**  
Manuel Sieben, PolyMerge GmbH, Geretsried (D)
- 15:30 Laser-based bonding of conducting metal path on thermoplastic textiles for smart textiles applications**  
Friederike Brackmann, Fraunhofer ILT, Aachen (D)
- 16:00 Final lecture: Photonics in focus – Laser inertial confinement fusion as an opportunity for industry**  
Prof. Constantin Haefner, Fraunhofer ILT, Aachen (D)
- 16:30 End of the lectures**

#### 7 Session 7: Surface Technology

##### Laser Material Deposition

Chairman: Dr. Thomas Schopphoven, Fraunhofer ILT, Aachen (D)

- 8:30 Light as eyes and as tools – High productivity and high resolution Laser Material Deposition**  
Hiroyuki Nagasaka, Nikon Corp., Kumagaya Saitama (JPN)
- 9:00 5-axis LMD at high speed – Challenges and applications**  
Dr. Johannes Finger, IIC-AM GmbH, Makino Asia Pte Ltd, Aachen (D)
- 9:30 Laser scanning in combination with hybrid repair process on molding tools**  
Thomas Hauke, DMG Mori Ultrasonic Lasertec GmbH, Stibshausen (D)
- 10:00 Coffee break – Visit of the accompanying exhibition**

##### Microstructuring

Chairman: Dr. Dennis Haasler, Fraunhofer ILT, Aachen (D)

- 11:00 High speed wafer grooving with UV-USP lasers (wafer scribing)**  
Dr. Kees Biesheuvel, ASMPT Laser Separation International (ALSI) B.V., Beuningen, (NL)
- 11:30 Unlocking nature's self-cleaning on PV panels through large-scale laser functionalization**  
Dr. Tim Kunze, Fusion Bionic GmbH, Dresden (D)
- 12:00 Laser material processing in the electronic consumables sector**  
Dr. Stefan Janssen, LG Electronics, Inc., Pyeongtaek (KOR)
- 12:30 Lunch – Visit of the accompanying exhibition**

##### Polishing and thin film processing

Chairman: Dr. Edgar Willenborg, Fraunhofer ILT, Aachen (D)

- 14:30 Laserprocesses in thin film technology: Applications and opportunities**  
Samuel Fink, Fraunhofer ILT, Aachen (D)
- 15:00 Using AI to automate and accelerate process parameter development for laser polishing of metals**  
Sven Linden, Fraunhofer ILT, Aachen (D)
- 15:30 Pulsed laser deposition in mass production for high-TC superconductor coatings**  
Dr. Ralph Delmdahl, Coherent LaserSystems GmbH & Co. KG, Göttingen (D)
- 16:00 Final lecture: Photonics in focus – Laser inertial confinement fusion as an opportunity for industry**  
Prof. Constantin Haefner, Fraunhofer ILT, Aachen (D)
- 16:30 End of the lectures**

# General Information

## Locations and Opening Hours

**On Site Check-in:** Eurogress Main Entrance,  
Monheimsallee 48, 52062 Aachen

### Expert Forums

- Functional Surfaces by Laser Processing
- Digitalization and AI in Photonic Production
- Quantum Technology and Photonics

Wednesday, April 17, 2024, 10:00–17:30 h

Check-in from 8:00 h, Eurogress Aachen

### Technology Business Day

Wednesday, April 17, 2024, 12:30–17:30 h

Check-in from 10:30 h, Eurogress Aachen

### AKL'24 – Laser Technology Conference

Thursday, April 18, 2024, 8:30–16:00 h

Friday, April 19, 2024, 8:30–16:30 h

Check-in, April 18/19, 2024 from 7:30 h, Eurogress Aachen

### Laser Technology Live

18. April 2024, 16:30–19:30 h

Fraunhofer ILT, Steinbachstraße 15, 52074 Aachen  
(for registered participants of April 18, 2024 included)

### Shuttle transfer on April 18, 2024

Eurogress – Fraunhofer ILT: 16:00–16:30 h

Fraunhofer ILT – Eurogress: 19:30–20:00 h



### Accompanying Exhibition

Wednesday, April 17, 2024, 12:00–17:00 h

Thursday, April 18, 2024, 10:30–16:00 h

Friday, April 19, 2024, 10:00–16:00 h

Eurogress: Foyer Europa, Brüssel (1st level)  
und K1–K3 (2nd level)

### Awards Ceremony with Dinner

Registration necessary (fee required)

Wednesday, April 17, 2024

19:00–23:00 h

Krönungssaal Rathaus, Markt, 52062 Aachen

### Networking with Snacks at Eurogress

Registration necessary (fee required)

Thursday, April 18, 2024

20:00–23:00 h

### Conference Language

Lectures are presented in English and German with simultaneous interpreting.

### Parking Garages

Near the conference locations:

- Eurogress / Parking Garage Eurogress, Monheimsallee (fee required)
- Coronation Hall / Town Hall: APAG Parking Garage Rathaus, Mostardstraße and Parking Garage Dom, Jesuitenstraße (fee required)

For further information regarding parking facilities in Aachen, please visit: [www.apag.de/en](http://www.apag.de/en)

# Participation Conditions

## Registration Fee

The registration fee includes conference proceedings, lunch or snacks, coffee breaks on the booked conference day as well as the Shuttle transfer to Laser Technology Live on Thursday, April 18, 2024 between Fraunhofer ILT and the City Center.

### Technology Business Day – April 17, 2024

- 430 € / 387 € (Early Bird Registration)
- 344 € (Members\*)

### Forum Functional Surfaces by Laser Processing – April 17, 2024

- 580 € / 522 € (Early Bird Registration)
- 464 € (Members\*)

### Digitalization and AI in Photonic Production – April 17, 2024

- 580 € / 522 € (Early Bird Registration)
- 464 € (Members\*)

### Forum Quantum Technology and Photonics – 17. April 2024

- 580 € / 522 € (Early Bird Registration)
- 464 € (Members\*)

### Evening Event on April 17, 2024

Dinner with presentation of the "Innovation Award Laser Technology"

- 120 € / Person (plus 19 % VAT)



## Early Bird Registration

Discounted registration fees until February 27, 2024!

### AKL'24 – Technology Conference (Day 1) – April 18, 2024

- 690 € / 621 € (Early Bird Registration)
- 552 € (Members\*)

### AKL'24 – Technology Conference (Day 2) – April 19, 2024

- 690 € / 621 € (Early Bird Registration)
- 552 € (Members\*)

### Evening Event on April 18, 2024

Networking with Snacks at Eurogress

- 80 € / Person (plus 19 % VAT)

### \* Members

As a member of Arbeitskreis Lasertechnik AKL e.V., the European Laser Institute ELI e.V. or a scientific organization (universities, institutes of technology, Fraunhofer Institutes and research facilities), you are entitled to a discount of 20 % on conference fees as long as you book by February 27, 2024.

### Registration

To register please use the form provided online at [www.lasercongress.org](http://www.lasercongress.org). Please note the reduced participation fees for registration by February 27, 2024. Once you have signed up you will receive a confirmation of participation as well as your invoice, which can only be paid by bank transfer.

### Registration Deadline March 28, 2024

## Contact

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### Organization

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### Supporting Organizations

- EPIC – European Photonics Industry Consortium
- European Commission
- OptecNet – Competence Networks for Optical Technologies
- Photonics Germany – German Photonics Industry Alliance
- SPECTARIS – German Industry Association for Optical, Medical and Mechatronical Technologies
- VDA – German Association of the Automotive Industry
- VDI Technology Center
- VDMA – German Engineering Federation

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