

# EALA – EUROPEAN AUTOMOTIVE LASER APPLICATIONS 2021

## 22<sup>ND</sup> EUROPEAN EXPERT CONFERENCE

TUE / MAY 18

CEST  
(UTC+2)

9.45 H **Welcome and conference introduction**

*Dr. Dirk Meine, Automotive Circle, DE*

### LASER APPLICATION IN E-MOBILITY I: WELDING COPPER

10.00 H **Efficiency considerations in laser beam welding of copper alloys for e-mobility**

*Dr. Jan-Philipp Weberpals, Audi AG, DE*

10.30 H **Copper welding with high brightness center mode fiber lasers**

*Klaus Kleine, Dr. Peter Kallage, Coherent Inc., DE*

11.00 H **System design for reliable and robust laser-welding of copper in automotive series production**

*Pravin Sievi, Scansonic MI GmbH, DE;*

11.30 H **BREAK**

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12.30 H **Further developments for blue diode lasers and their accessories lead to new applications and options in processing copper and other materials**

*Markus Rütering, Laserline GmbH, DE*

### LASER APPLICATION IN E-MOBILITY II: FUEL CELLS AND BATTERY SYSTEMS

13.00 H **Laser applications along the process chain of fuel cells – focus on bipolar plates**

*Dr. Isabel Thome, Trumpf Laser- und Systemtechnik GmbH, DE*

13.30 H **BREAK**

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14.30 H **Large scale serial production implementation of inline coherent imaging of Li-ion cylindrical cell traction battery assemblies**

*Paul Webster, Ph.D., IPG Photonics (Canada) Inc., CA;*

*Dr. Mohamed Al-Badani, Jaguar Land Rover Ltd., UK*

15.00 H **How lasers improve battery production**

*Dr. Alexander Olowinsky, Fraunhofer Institute for Laser Technology ILT, DE*

15.30 H **Automated laser-GMA hybrid welding of car battery housings - Cost-optimised solution in the service of electric mobility**

*Dr. Herbert Staufer, Fronius International GmbH, AT*

16.00 H **END OF THE DAY'S PROGRAM OF PRESENTATIONS**

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Each presentation is followed by 10 minutes of live discussion and Q&A with the speaker

# EALA – EUROPEAN AUTOMOTIVE LASER APPLICATIONS 2021

## 22<sup>ND</sup> EUROPEAN EXPERT CONFERENCE

WED / MAY 19

CEST  
(UTC+2)

9.50 H **Welcome and conference day introduction**

*Dr. Dirk Meine, Automotive Circle, DE*

### LASER BEAM SHAPING AND MODULATION

10.00 H **New ways in laser welding and cutting applications by DDL (Direct Diode Laser) with wavelength beam combining technology and the future possibility of ultra-bright blue laser sources**

*Peer Schumacher, Panasonic Industry Europe GmbH, DE*

10.30 H **New developments in laser welding with dynamic beam shaping for high seam quality and robust processes**

*Dr. Dirk Dittrich, Fraunhofer IWS, DE*

11.00 H **Dynamic laser beam shaping for laser aluminium welding in e-mobility applications**

*Jesús Jiménez, Valeo Spain, ES; Dr. Eyal Shekel, Civan Advanced Technologies; IL*

11.30 H **BREAK**

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12.30 H **Laser beam welding of aluminum: Improving performance by means of adapted beam shaping**

*Daniel Böhm, Dr. Jan-Philipp Weberpals, Audi AG, DE*

13.00 H **Relevance of focusshift in production**

*Dr. Thomas Umschlag, Primes GmbH, DE*

### NEW APPLICATIONS

13.30 H **EUV lithography for semiconductor manufacturing**

*Dr. Michael von Borstel, Trumpf Lasersystems for Semiconductor Manufacturing GmbH, DE*



14.00 H **BREAK**

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15.00 H **Laser cladding for the next generation of brake discs**

*Dr. Thomas Molitor, Laserline GmbH, DE*

15.30 H **Laser manufacturing of sheet metal to complete parts**

*Prof. Dr. Morten Kristiansen, Aalborg University, Department of Materials and Production, DK*

16.00 H **END OF THE DAY'S PROGRAM OF PRESENTATIONS**

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# EALA – EUROPEAN AUTOMOTIVE LASER APPLICATIONS 2021

## 22<sup>ND</sup> EUROPEAN EXPERT CONFERENCE

THU / MAY 20

CEST  
(UTC+2)

9.50 H **Welcome and conference day introduction**

*Dr. Dirk Meine, Automotive Circle, DE*

### PROCESS CONTROL I: OCT AND IMAGING

10.00 H **Challenges of modern production in terms of e-mobility and a comprehensive approach, based on scanner technology to produce on premium quality level**

*Lutz König, Precitec GmbH & Co. KG, DE; N. N., Mercedes-Benz AG, DE*

10.30 H **OCT for e-mobility applications**

*Jan-Patrick Hermani, Trumpf Laser GmbH, DE*

11.00 H **Live measurement of welding depth and seam inspection with Optical Coherence Tomography (OCT)**

*Richard Steinbrecht, Lessmüller Lasertechnik GmbH; Marius Schwarz, Mercedes-Benz AG; DE*

11.30 H **BREAK**

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### PROCESS CONTROL II: SENSORS AND SIMULATION

12.30 H **Intelligent optics, intelligent sensors: solutions for e-mobility**

*Jens Reiser, Precitec GmbH & Co. KG, DE*

13.00 H **Next level process monitoring – New examples of monitoring e-mobility applications**

*Christoph Franz, 4D Ingenieurgesellschaft für Technische Dienstleistungen mbH, DE*

13.30 H **BREAK**

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14.30 H **Pyrometer for temperature and melt pool size control in AM processes**

*Dr. Helmut Kriz, Sensortherm GmbH, DE*

15.00 H **CFD simulations for laser welding**

*Pareekshith Allu, Flow Science, Inc., US*

15.30 H **Panel Discussion**

*OEM Advisory Board experts on current challenges and future expectations on laser technology in automobile production.*

ca. 15.50 H **Conclusive remarks, farewell address and end of the conference program**

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*(Conference program is subject to change  
Status as of: May 5th, 2021)*