

LaserEMobility Worskop 2026

Preliminary Program

September 24, 2026

Time	Opening Plenary Session Day 1 <i>Location: Big Hall</i>
09.00am - 09.15am	Introduction Prof. Michael Schmidt <i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>
09.15am - 09.25am	Welcome Address Prof. Antonino Squillace <i>AITeM - Italian Manufacturing Association</i>
09.25am - 09.50am	Keynote Talk 1: Next level laser welding of battery packs at GROB Konstantin Hofmann <i>GROB-WERKE GmbH & Co. KG</i>
09.50am - 10.15am	Keynote Talk 2: Same laser. Better process – beam shaping for e-mobility manufacturing Dr. David Dung <i>Midel Photonics GmbH</i>
10.15am - 10.40am	Keynote Talk 3: Battery manufacturing: Update on process and quality control Klaus Löffler <i>Precitec GmbH & Co. KG</i>

10.40am - 11.15am: Coffee Break

Time	Parallel Session “Experimental” <i>Location: Big Hall</i>	Presenter	Parallel Session “Simulation” <i>Location: Conference Room K3</i>	Presenter
11.15am - 11.35am	Porosity-dependent ablation behavior of the Garnet-type solid electrolyte for solid-state batteries using ultrashort laser pulses	A. Gruendl <i>Technical University of Munich</i>	Forward thinking, inverse solving: data-driven weld pool prediction from CFD-simulated laser beam welding	J. Neuhauser <i>TU Wien</i>
11.35 am - 11.55am	Interaction regimes and contaminant-dependent removal mechanisms in nanosecond pulsed laser cleaning of nickel-plated steel battery tabs	D. Kaya <i>Bursa Uludag University</i>	Evaluation of the suitability and performance of a high-dynamic OCT scanner for inline weld penetration depth measurement in remote laser welding (<i>Industrial Talk</i>)	C. Fischer <i>Blackbird Robotics GmbH</i>
11.55am - 12.15pm	The use of burst mode in femtosecond and picosecond pulsed laser cutting of freestanding pure lithium metal anodes	G. Troyer <i>Politecnico di Milano</i>	Comparison between laser welding modelling approaches: from low fidelity numerical simulation to high fidelity and physics informed neural networks	S. Piandoro <i>University of Bologna</i>
12.15pm - 12.35pm	Picosecond laser cutting of lithium-ion battery for improved quality in electric mobility	O. Allegre <i>University of Manchester</i>	Stop guessing, start predicting: a universal digital twin for laser-based manufacturing (<i>Industrial Talk</i>)	T. Florian <i>TU Wien</i>

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12.35pm - 02.00pm: Lunch Break

Time	Parallel Session "Experimental" <i>Location: Big Hall</i>	Presenter	Parallel Session "Simulation" <i>Location: Conference Room K3</i>	Presenter
02.00pm - 02.20pm	Comparison of dynamic changes in the capillary geometry and laser back-reflection during deep penetration laser welding of copper using high-speed synchrotron X-ray imaging	T. Spieth <i>University of Stuttgart</i>	On the search of the origin of the humping phenomena in laser welding <i>(Industrial Talk)</i>	C. Duran <i>TU Wien</i>
02.20pm - 02.40pm	Copper hairpin welding utilizing a 4 kW blue laser: investigating deep penetration and conduction mode for spatter and porosity reduction	M. Zutt <i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>	Benchmarking precision in robotic laser beam welding using collaborative camera-based trajectory acquisition <i>(Industrial Talk)</i>	M. Bruni <i>Politecnico di Milano</i>
02.40pm - 03.00pm	Keyhole stability and mechanical performance of laser welded AA6005 under kHz-to-MHz frequency modulation via coherent beam combining	R. Bakhtari <i>University of Warwick</i>	Experimental and CFD analysis of core-ring beam shaping for near-infrared copper hairpin welding	S. Marimuthu <i>Manufacturing Technology Centre</i>
03.00pm - 03.20pm	Melting efficiency in high-speed copper welding with blue lasers	D. Dorschner <i>BTU Cottbus-Senftenberg</i>	Numerical study of metal mixing phenomena in laser beam welding of copper-aluminum thin sheets using a green laser beam source	M. Mustafa <i>Technische Universität Ilmenau</i>

03.20pm - 03.55 pm: Coffee Break

Time	Closing Plenary Session Day 1 <i>Location: Big Hall</i>
03.55pm - 05.15pm	Best Presentation Award & Closing Tbd Tbd

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September 25, 2026

Time	Opening Plenary Session Day 2 <i>Location: Big Hall</i>
09.00am - 09.15am	Introduction Prof. Ali Gökhan Demir <i>Politecnico di Milano</i>
09.15 am - 09.40am	Keynote Talk 1: Ferrari Luce batteries: Technologies and manufacturing solutions Dr. Massimiliano Luzi <i>Ferrari S.p.A.</i>
09.40am - 10.05am	Keynote Talk 2: Electrification of airplanes Michael Rasch <i>eMoSys GmbH</i>
10.05am - 10.30am	Keynote Talk 3: Unlocking the value of optical emissions – from monitoring data to process physics Christoph Franz <i>4D Photonics GmbH</i>

10.30am - 11.00am: Coffee Break

Time	Session “Advanced laser sources for e-mobility applications” <i>Location: Big Hall</i>
11.00am - 11.20am	Latest TRUMPF lasertechnologies for e-mobility Matthias Beranek <i>TRUMPF Laser- und Systemtechnik GmbH</i>
11.20am - 11.40am	IR and blue laser applications advancements in e-mobility sector Tugay Kurtay <i>Optoprim S.R.L.</i>
11.40am - 12.00pm	Driving e-mobility with blue diode lasers: a key technology for simplified and robust copper joining processes Mathias Schlett <i>Laserline GmbH</i>
12.00pm - 12.20pm	Practical evaluation of line cutting for e-mobility substrates Michael Steinert Lukas Mayr <i>Robust AO Maxphotonics GmbH</i>
12.20pm - 12.40 pm	Applications and potential of laser-based surface technology in the EV process chain – fast, reproducible, cost-effective Tobias Weichert <i>Clean-Lasersysteme GmbH</i>

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September 25, 2026

12.40pm - 02.15pm: Lunch Break

Time	Session "System technology for efficient laser welding" <i>Location: Big Hall</i>
02.15pm - 02.35pm	On the fly remote laser welding of battery applications with camera and OCT Richard Steinbrecht <i>iQLASE GmbH</i>
02.35pm - 02.55pm	Current trends in e-mobility applications Dr. Axel Luft <i>Scansonic MI GmbH</i>
02.55pm - 03.15 pm	Effect of oscillation frequency and amplitude on the beads quality in wobbling lap joint Cu/Al welding using high-power blue laser Carlo Alberto Biffi <i>CNR ICMATE</i>
03.15pm - 03.35pm	Welding with high power hybrid blue/NIR laser for e-mobility applications Giulio Borzoni <i>IMA EV-Tech</i>

Time	Closing Plenary Session Day 2 <i>Location: Big Hall</i>
03.35pm - 03.45pm	Closing Remarks Day 2 Dr. Dominic Bartels <i>Friedrich-Alexander-Universität Erlangen-Nürnberg</i>