LASER MOBILITY

CONFERENCE DAY 1 - October 7th - Morning	
08:00	**Registration**
09:00	Opening Remarks - Prof. Alessandro Fortunato
09:10	Greetings from **Bi-Rex** - Prof. Luca Tomesani
09:20	Greetings from **AITeM** - Prof. Antonino Squillace
Session 1 - Moderator: **Prof. Alessandro Fortunato**	
09:30	Klaus Löffler - **Precitec** - On the way to Battery Production with Zero Defects with the Use of AI and Photonics
10:00	Carolina Magrini - **Unversity of Bologna** - Lasers4NetZero - Advancing Laser Technologies for Net Zero EV Manufacturing
10:20	Eveline Reinheimer - **Porsche** - Using Optical Coherence Tomography to Better Detect Defects During Laser Welding of Hairpins
10:40	**Coffee Break & Poster Session**
Session 2 - Moderator: **Prof. Leonardo Caprio**	
11:10	Stefano Zarini - **Optoprim** - From Market Requirements to Disruption: An Overview of Trends in Emobility
11:30	Lukas Mayr - **MAXphotonics** - From Lab to Road: Innovative Products for a Reliable High Volume Production in E-mobility
11:50	Christo Gavrilov - **nLight** - Data Driven Process Development, Monitoring and Quality Assurance for E-mobility Laser Welding Applications
12:10	Walter Gensabella - **Luxinar** - Laser Cutting of Battery Electrodes
12:30	Matteo Colopi - **IPG Photonics**- Laser Solutions for Superior Performances in E-mobility Welding
12:50	**Lunch**

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CONFERENCE DAY 1 - October 7th - Afternoon	
Session 3 - Moderator: **Prof. Alessandro Ascari**	
14:00	Ralf Nürnberg - **BlackBird** - Highest Precision, Monitored Quality and Turbo Speed: Laser Welding On The Fly in E-Mobility
14:20	Andre Eltze - **Laserline** - E-mobility with Diode Lasers: from High Power to High Brilliance
14:40	Richard Steinbrecht - **Lessmüller** - Optical Coherence Tomography (OCT) as Versatile Sensor for Laser Welding
15:00	Maximilian Schmöller - **SBP** - Laser Technology and Automation in E-Mobility - The Journey from Concept to Reality
	Coffee Break & Poster Session
Session 4 - Moderator: **Prof. Michael Zäh**	
16:00 16:20	Jean Pierre Bergmann - **Technische Universität Ilmenau** - Laser Welding of Aluminum to Copper: a Comparison to other Technologies and an Insight in new Laser-based Approaches
	Dexiang Zha - **Univeristy of Bologna** - AI-Enhanced Prediction of Welding Temperature Fields: From PINNs to PI-DeepONet
16:40	Dominic Bartels - **Friedrich-Alexander-Universität Erlangen-Nürnberg** - Influence of Different Laser Wavelengths on the Process Regimes in Laser Welding of Copper
17:00 17:20 17:40	Alena Gründl - **Technische Universität München** - Process Strategies for the Laser-Based Surface Treatment of Garnet-Type Ceramics Used in Solid-State Batteries
	Reshad Bakhtari & Sattar Ghasemi - **University of Warwick** - Dynamic Laser Beam Shaping with Coherent Beam Combining and Real-Time Process Control for Battery Pack Welding
	Matteo Ortolani - **Polytechnic of Milan** - Monitoring Solutions for Hairpin Welding with Blue/NIR Laser
18:00	Riccardo Pelaccia - **University of Modena-Reggio Emilia** - Laser-Textured 3D Copper Current Collectors for Enhanced Lithium Metal Battery Performance
18:20	Tine Brezan - **University of Ljubljana** - Using Physical Modelling to Optimize Camera Based PID Control System for Laser Welding of Copper
	Aperitif & Poster Session

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CONFERENCE DAY 2 - October 8th - Morning	
08:00	**Registration**
09:00	Opening Remarks - Prof. Ali Gökhan Demir
Session 1 - Moderator: **Prof. Ali Gökhan Demir**	
09:10	Giacomo Papotti - **Automobili Lamborghini** - HV Battery Housing Designfor Supersport Car Application
09:30	Flavia Lerra - **Ferrari** - Ferrari: Laser Welding Technology Application in High-Voltage Battery
09:50	Matteo Dal Corso - **Ducati** - The Challenge of Electrification for Ducati
10:10	**Coffee Break & Poster Session**
Session 2 - Moderator: **Prof. Michael Schmidt**	
10:40	Etienne Caracciolo - **Coherent** - Powering E-Mobility with Light: Advanced Laser Beam Shaping, Wavelength Selection, Processing Heads, and Sensors
11:00	Matthias Beranek - **Trumpf** - Fully Adaptive Lasersystems for Maximum First Pass Yields in E-Mobility Manufacturing
11:20	Axel Luft - **Scansonic** - Highly Productive E-mobility Applications with a Focus on Welding Contacts for Cylindrical Batteries
11:40	Ruben Hartwig - **Primes** - When Rayleigh Falls Short: New Metrics for Evaluating Industrial Laser Beams
12:00	Vincenzo Abbatiello & Antonio Rossi - **EOS & Addtoshape** - Design and Production ofAxial Flow Electric Motors with PBF Technology
12:20	Filippo Palo - **Flow3D** - Influence of Laser Beam Shape on Process Stability and Keyhole Porosity in Automotive Laser Welding Applications
12:40	**Lunch**

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CONFERENCE DAY 2 - October 8th - Afternoon	
Session 3 - Moderator: **Dr. Federico Capucci**	
14:00	**Round Table** with the Regional Vice-President, end users and Unibo representatives
14:40	**Coffee Break & Poster Session**
Session 4 - Moderator: **Fabian Vieltorf**	
15:10	Frederik Wolf - **Midel Photonics** - Next-Level Laser Welding in E-Mobility: Enabling Advanced Polymers and Robust Battery Joints through All-Reflective Beam Shaping
15:30	Giulio Borzoni - **IMA EV-TECH** - Development of a Hybrid Blue/NIR Wavelength Solution for Laser Welding of Cu Hairpins
15:50	Giuliano Ellena - **Podium** - Laser Welding in Battery Manufacturing: From Process Development to Industrialization and Rail & Aerospace Regulatory Compliance
16:10	Aki Piiroinen - **University of Turku** - Challenges of Laser Welding in Electrical Connections with Additive Manufacturing Components
16:30	Florian Hermann & Daniel Weller - **Precitec & ElringKlinger**- Real-Time Process Monitoring of Laser Cleaning to Improve Welding Quality in Battery Cell Contacting Systems
16:50	Carlo Alberto Biffi - **CNR** - Effect of Wobbling in Dissimilar Cu/Al Welding Using High-power Blue Laser on Bead Quality, Microstructure and Mechanical Response
17:10	David Kolb - **Aalen Hochschule** - Innovative Laser-Based Approaches for Enhancing PBF-LB/M of Soft Magnetic Components for Electric Drives
[illegible]	**Final Remarks - Prof. Alessandro Fortunato**

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