Institut für Produktentwicklung & Gerätebau

LASER ZENTRUM HANNOVER e.V.

# WORKSHOP
# Innovative Product Development by Additive Manufacturing
# September 17, 2025

## PROGRAM

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| **08.30** | **Registration** |
| **09.00** | **Welcome**<br>Prof. Dr.-Ing. R. Lachmayer, Leibniz Universität Hannover, IPeG<br>Prof. Dr.-Ing. S. Kaierle, Laser Zentrum Hannover e.V. |
| **09.15 – 10.15** | **Advanced Additive Manufacturing Processes**<br><br>**Metallic and ceramic materials for the additive manufacturing of components for sustainable hydrogen production**<br>Niclas Zerner, TU Clausthal<br><br>**Real-Time In-Situ Filament Shape Detection via Optical Ellipse Fitting**<br>Prof. Dr. Marcus Menzel, Ostfalia Hochschule für Angewandte Wissenschaften<br><br>**Load Introduction in Electrochemically Metallized Polymer Lattice Structures: Experimental Evaluation of Interface Design Concepts**<br>Marco Noack, TU Darmstadt |
| **10.15 – 10.35** | **Break** |
| **10.35 – 11.55** | **Innovative Design and Optimization Methods**<br><br>**Automated Design and Validation of Components with Local Material Properties in Metal Additive Manufacturing**<br>Philipp Sauberzweig, Fraunhofer IAPT<br><br>**To be announced**<br>Dr.-Ing. Marius Lammers, INLEAP Photonics GmbH<br><br>**An Industry Compatible Framework for Automated Part Identification in Metal Additive Manufacturing**<br>Claudius Ellsel, TU Berlin<br><br>**To be announced**<br>Antonios Giourgas, MTU Maintenance Hannover |
| **11.55 – 12.40** | **Lunch Break** |
| **12.40 – 13.45** | **Demonstration of AM Machines at the new research building “SCALE”** |

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| **13.45 – 14.45** | **Poster session: Printed Optics – PhoenixD**<br><br>**A Phase Transformation Model for Glas with Thermo-Mechanical Coupling Using Neighbor Element Method for 3D-Printing**<br>Tobias Rudolf, Leibniz University Hannover, IKM<br><br>**In-line metrology for two-photon polymerization**<br>Hannes Robben, Leibniz University Hannover, HOT<br><br>**Damage Potential of Post-Processing Methods in Vat Photopolymerization of Additively Manufactured Glass Components**<br>Simon Teves, Leibniz University Hannover, IPeG<br><br>**Review on rotative printing for high-volume polymer waveguide processing**<br>Jonathan Pleuß, Leibniz University Hannover, ITA |
| **14.45 – 15.05** | **Break** |
| **15.05 – 16.05** | **Novel Applications of Additive Manufacturing**<br><br>**Integration of virtual laboratories and additive manufacturing for customizable medical training systems**<br>Anastasiia Lytvyn, Kharkiv National University of Radioelectronics<br><br>**Advanced Additive Manufacturing Processes**<br><br>**Novel high-deposition AM technology using forming jaws with the laser-assisted double-wire with non-transferred arc process**<br>Alexander Barroi, Laser Zentrum Hannover e.V.<br><br>**Quality analysis in rubber 3D printing: Worlds first 3D printed rubber benchy**<br>Hans Helge Schwieger, Leibniz University Hannover, ITA |
| **16.05** | **Farwell** |