

**WORKSHOP**  
**Innovative Product Development by Additive Manufacturing**  
**September 29, 2026**

**PROGRAM**

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| <b>08.30</b>         | <b>Registration</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>09.00</b>         | <b>Welcome</b><br>Prof. Dr.-Ing. R. Lachmayer, Leibniz Universität Hannover, IPeG<br>Prof. Dr. D. Kracht, Laser Zentrum Hannover e.V.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>09.15 – 10.00</b> | <b>Innovative Design and Optimization Methods I</b><br><br><b>AI-supported workflow in the early phase of SGE - System Generation Engineering: An exploratory study using an additively manufactured medical device</b><br>Anusch Musawi, Hamburg University of Technology<br><br><b>AI-Assisted Automation of Sustainability Assessment for Additive Manufacturing: Bridging Engineering Requirements and Environmental Assessments</b><br>Rasool Okhovat, TU Berlin<br><br><b>Towards Transferable Development of Individualised Additive Manufacturing under Defence Constraints</b><br>Siddhartha Biswas, University of the Bundeswehr Munich                                                                                                                                                                                                                              |
| <b>10.00 – 10.30</b> | <b>Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>10.30 – 11.30</b> | <b>Advanced Additive Manufacturing Processes I</b><br><br><b>A Geometry-Based Evaluation Framework for Laser Powder Bed Fusion Incorporating Beam Shaping</b><br>Laura Sun, TU Darmstadt<br><br><b>Influence of Substrate Heating and Stress-Relief Annealing on the Geometrical Accuracy of PBF-LB/M-Manufactured Ti-6Al-4V IBS Grid Structures</b><br>Dr.-Ing. Michael Müller, Laser Zentrum Hannover e.V.<br><br><b>Influence of Welding Parameters in Laser-Based Directed Energy Deposition on the Manufacturing of Support-Free Bridge Structures Using Embedded Wire Scaffolds</b><br>Marvin Spengler, University of Applied Sciences and Arts Hannover<br><br><b>Investigation of Recycled MAR-M247 Powder Feedstock from Aircraft Engine Scrap and Process Development for Laser-Based Directed Energy Deposition</b><br>Antonios Giourgias, MTU Maintenance Hannover |
| <b>11.30 – 13.30</b> | <b>Lunch Break   Demonstration and tour in the LZH test field   Poster AM2H2</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|                          | <p><b>Poster AM2H2</b></p> <p><b>Material Concept for Additively Manufactured Ammonia Crackers</b><br/>Niclas Zerner, TU Clausthal</p> <p><b>Development of a hybrid laser system for simultaneous wire and powder deposition</b><br/>Christian Schröder, University of Applied Sciences and Arts Hannover</p> <p><b>Additive Manufacturing of Graded 316L/IN625 Components for Ammonia Reformers</b><br/>Marco-Nicolas Galati, Laser Zentrum Hannover e.V.</p> <p><b>Topology Morphing for Wire DED:<br/>Optimizing Surface-to-Volume Ratios for Compact Additive Heat Exchangers</b><br/>Kiran Pabha, Laser Zentrum Hannover e.V.</p> <p><b>Multi-Material PBF-LB Process Development for Ammonia Reactors</b><br/>Ina Meyer, Leibniz University Hannover, IPeG</p> <p><b>Multi-Objective Optimization of Ammonia Decomposition Reactors</b><br/>Lennart Mesecke, Leibniz University Hannover, IPeG</p> |
| <b>13.30 –<br/>14.15</b> | <p><b>Novel Applications of Additive Manufacturing</b></p> <p><b>Algorithm-based design of flow channels in high-performance ceramic components</b><br/>Dr.-Ing. Stefan Holtzhausen, TU Dresden</p> <p><b>A Methodology for Identifying AM Use Cases:<br/>Redesign and Validation of a Recurve Bow and Compliant Bicycle Stem</b><br/>Hussein Tarhini, Leuphana University of Lüneburg</p> <p><b>From Printed Defects to AR Inspection: Additive Manufacturing<br/>as an Enabler of Defect Data Generation for AI-Based Quality Assurance</b><br/>Finn Lukas Budde, Paderborn University</p>                                                                                                                                                                                                                                                                                                              |
| <b>14.15 –<br/>14.35</b> | <b>Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>14.35 –<br/>15.20</b> | <p><b>Innovative Design and Optimization Methods II</b></p> <p><b>A feasibility assessment workbench for<br/>orientation-dependent part analysis in metal additive manufacturing</b><br/>Claudius Ellsel, TU Berlin</p> <p><b>Nesting Trade-Offs in Sinter-Based Additive Manufacturing:<br/>Support Minimization vs. Furnace Utilization</b><br/>David Stachg, Hamburg University of Applied Sciences</p> <p><b>Topology Optimisation-Informed Graded<br/>Connectors for Stress Mitigation in Additively Manufactured Lattices</b><br/>Dr.-Ing. Tobias Rosnitschek, University of Bayreuth</p>                                                                                                                                                                                                                                                                                                           |
| <b>15.20 –<br/>15.40</b> | <b>Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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| <p><b>15.40 –<br/>16.25</b></p> | <p><b>Advanced Additive Manufacturing Processes II</b></p> <p><b>Toward Lights-Out FLM Print Farms:<br/>Automated Build-Plate Exchange, Cache/Storage, and AI-Based Readiness Inspection</b><br/>Prof. Dr. Marcus Menzel, Ostfalia University of Applied Sciences</p> <p><b>Physics-Informed Modelling of Substrate Temperature in Large-Format Additive<br/>Manufacturing: Single-Operating-Point Feasibility Study and Identifiability Analysis</b><br/>Roberto Seyfert, Fraunhofer IWU</p> <p><b>Function-Related Energy Efficiency of FFF-Printed PLA Infill Structures under Compressive<br/>Loading: An Experimental Comparison of Cross, TPMS-D and TPMS-G Patterns</b><br/>Haoze Wang, TU Ilmenau</p> |
| <p><b>16.25</b></p>             | <p><b>Farwell</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |