

HyPo2026

Conference on Hybrid Porous Materials

October 13–14, 2026
RPTU Kaiserslautern-Landau

Tuesday, October 13		
start	end	Talk
09:00	09:10	Opening and Welcome Jan C. Aurich
Session 1: Modeling of Additive Manufacturing Processes and Hybrid Porous Materials Chair: Dustin Roman Jantos		
09:10	09:55	Invited Talk Thermomechanically coupled FE Modeling of Metal AM Andreas Menzel
09:55	10:20	Modeling of Porous Materials Across Multiple Scales Julian Dahler
10:20	10:45	Coffee Break
10:45	11:10	Computation of the Effective Fracture Toughness of HyPo-Materials Alexander Schlüter
11:10	11:35	Feature-based Residual Stress Prediction in AM Components Alfred Jose Puthoor
Session 2: Manufacture and Characterization of Functionally Graded Materials Chair: Thomas Hassel		
11:35	12:20	Invited Talk DeLong Diagram as a Methodological Basis for Functionally Graded Additive Structures Jonas Hensel
12:20	13:20	Lunch Break
13:20	13:45	Spatially Controlled Material Gradation by DED-LB Lars Bachert
13:45	14:10	Material-Graded Structures Produced with WAAM Maximilian Faßhauer
14:10	14:35	Tailoring Material Properties by Grading Chemical Composition in AM Steels Marc Alexander Hoffmann

Session 3: Additive Manufacturing: Process Strategies, Monitoring & Control		
Chair: Jacques Platz		
14:35	15:20	Invited Talk Hybrid Additive Manufacturing Approaches Jan T. Sehart
15:20	15:45	Coffee Break
15:45	16:10	Multimodal Anomaly Detection for Powder-Fed Laser-Based DED Saurabh Varshneya
16:10	16:35	Multimodal In-Situ Monitoring of Laser-Based DED Peter Shobowale
16:35	17:00	Compensation-Aware Path Planning with Deposition Simulation for WAAM Simon Kleinschmidt
19:00		Conference Dinner Fritz-Walter-Stadion, FCK Gastronomie GmbH, Fritz-Walter-Straße 1
Wednesday, October 14		
Chair: Jan Aurich		
08:45	09:30	Invited Talk Bubble formation and evolution in laser directed energy deposition additive manufacturing of recycled materials Sarah Wolff
09:30	09:55	Invited Talk Additive Manufacturing towards Calibration Artifacts for Hybrid Porous Materials Georg von Freymann
Session 4: Metrology & Processing and Characterization of Porous Materials		
Chair: Christian Klose and Jörg Seewig		
09:55	10:20	From Powder to Aluminum Foams: Alloy Design and Process Development Jannes Mevert
10:20	10:45	Coffee Break
10:45	11:10	Resonance-based Analysis of Cyclic Damping and Fatigue Behaviour of AM Foam Compounds Sven Harbusch
11:10	11:35	Characterisation and Tensile Testing of Thin AlSi10Mg-Foam-Walls Adrian Triebe
11:35	12:20	Invited Talk Measuring more with less: in-process metrology for sustainable manufacturing Samanta Piano
12:20	13:20	Lunch Break
13:20	13:45	A Data Fusion Approach for Multiscale and Hybrid Surface Topography Metrology Oumaima Guissem

Session 5: Design and Monitoring of Hybrid Porous Components**Chair: Bastian Blinn**

13:45	14:10	Towards Practical Applications of Topology Optimization of Porous Materials Ján Pravda
14:10	14:35	From Material Homogenization to Component Design Maximilian Alexander Bähr-Sandig
14:35	15:00	Coffee Break
15:00	15:25	Numerical Investigation into Elastohydrodynamic Lubrication in Layered Systems Olaf Grutza
15:25	15:50	Thin-Film Strain Gauges integrated into DED-LB Components Eileen Müller
15:50	15:55	Closing Remarks
15:55		End of Conference