

## WG Manufacturing Process Simulation

CU Theme Day „AI & Digitalization in Process Simulation“

at Technology Centre Augsburg (TZA) (Am Technologiezentrum 5, 86159 Augsburg) on 25 February 2026

Moderation:

- Prof. Dr.-ing. Mathias HARTMANN (Technische Hochschule Deggendorf)
- Dr. Ir. Johannes Mattheus BALVERS (AIRBUS Helicopters)

On 25 February, the CU working group “Manufacturing Process Simulation” will entirely focus on the topic Artificial Intelligence and Digitalization in Process Simulation. Research approaches will be presented and future developments of this field will be discussed.

This event will be held in English.

### Agenda

10:00	<b>Welcome, News from Composites United e.V., Objectives of the Day</b> Mathias HARTMANN & Jordy BALVERS Stefan STEINACKER, Composites United e.V.
10:10	<b>KEYNOTE: Differentiable Simulations for Composite Optimization</b> Nils MEYER, Juniorprofessur Data-Driven Product Engineering and Design at MRM, Universität Augsburg
10:55	<b>Machine Learning Algorithms for a Complex Draping Process (title tbc)</b> Jan SEIFFERT, Chair of Carbon Composites at Technical University of Munich (TUM-LCC)
11:20	<b>Coffee Break</b>
11:40	<b>Physics-Informed Graph Neural Networks for Structural and Manufacturing Process Simulations on Arbitrary Geometries</b> Tobias WÜRTH, Karlsruhe Institute of Technology (KIT)
12:05	<b>Application of Physics Informed Neural Networks &amp; Overview of ML4SIM Project</b> Miro DUHOVIC, Leibniz-Institut für Verbundwerkstoffe (IVW)
12:30	<b>Machine Learning for Predicting Flow Velocity Fields in Large 3D Fibrous Microstructures</b> Stefano CASSOLA, Leibniz-Institut für Verbundwerkstoffe (IVW)
12:55	<b>Lunch Break</b>
13:40	<b>Surrogate Modelling with Artificial Neural Networks in Composite Manufacturing Processes</b> David DROSTE, Faserinstitut Bremen e.V. (FIBRE)
14:05	<b>Deep Learning-Based Flow Front Detection for In-Plane 1D Permeability Measurement</b> Xiaohui Zhang, Clausthal University of Technology
14:30	<b>Fast Approximation of Warpage in Fiber-reinforced Injection Moulding with Differentiable FEM</b> Julian GREIF, Institute for Materials Resource Management (MRM at University of Augsburg)

# AGENDA

---

14:55    **Available Presentation Slot**

---

15:20    **Wrap-up & Conclusion**

---

15:30    **End of the Event**

---