

CU Innovation Lab *Intelligent Composite Production*



On April 14/15, 2026, at the CFK Nord Research Center in Stade

Address: Ottenbecker Damm 12
21684 Stade
Germany

Moderation: Rolf Heusing, CU & Dr. Constantin Hildebrandt & Tobias Reincke, CTC

Composites United (CU) is proud to invite you to an Innovation Day dedicated to critical advancements in Intelligent Composite Production. This event is organized with the support of the CU working groups Digitalization as well as Artificial Intelligence. It will deeply explore the transformative power of Automation, Artificial Intelligence (AI), and digitalization within the manufacturing landscape. It is specifically tailored for industry leaders, pioneering researchers, skilled engineers, and forward-thinking innovators who are committed to revolutionizing production processes for enhanced efficiency, unparalleled precision, and crucial sustainability. In today's rapidly evolving industrial environment, embracing intelligent technologies is not merely an advantage but an essential step towards future-proofing composite manufacturing.

The event will feature an inspiring keynote address offering strategic insights, diverse presentations from experts and companies showcasing real-world applications and trends in intelligent composite manufacturing (including robotics, data-driven decision-making, and advanced analytics), and a significant technical deep dive by the Composite Technology Center's (CTC GmbH, an Airbus Company) "Laboratory for Intelligent Lightweight Manufacturing" (LaiLa) exploring their groundbreaking automated and AI-driven production research. This event is supported by the LaiLa project and the ResC4EU project.

We look forward to welcoming you! CU in Stade in November!

Agenda	Day 1, April 14, 2026, 11:00 am – 05:00 pm plus Evening Event
10:30 am	Registration, Warm-up with Coffee
11:00 am	Welcome & News from Composites United e. V. Marc Fette, <i>CTC GmbH</i> Constantin Hildebrandt, <i>CTC GmbH</i> Tjark von Reden, <i>Composites United e. V.</i>
11:15 am	KEYNOTE – Digital Transformation & AI Mischa Maier, Airbus
11:45 pm	Lunch Break with Networking
12:45 pm	AI Agents in Aerospace: Powering Smarter Ramp-Up & Sustainable Growth Erwin Siegel, Plataine
1:05 pm	Topic: Data acquisition and analysis along the entire process chain Dr. Joachim Starke, inno-focus
1:25 pm	AI-powered Threats, Human-Centered Defense: Cyber Security Culture in the AI age Peter Schäfer, Airbus Operations GmbH
1:45 pm	Topic: Digital Optimization of Composite Production Processes Marc Loegel, SWMS
2:05 pm	Artificial intelligence in composite processing: from sensor data fusion to predictive quality control Alexander Scherer, Symate GmbH

2:25 pm Coffee with Networking
Split up into groups & transition to the CFK Valley Technology building

3:00 pm Demonstrations of intelligent Composite production
2 demonstration cases for each participant, 4 parallel sessions

- **Stream 1: Fiber deposition – Session 1 & 2**
- **Stream 2: 3D Printing – Session 1 & 2**
- **Stream 3: Energy monitoring and simulation for factory design – Session 1 & 2**
- **Stream 4: Advanced analytics and knowledge-based decision making – Session 1 & 2**

5:00 pm End of the tours

7:00 pm until 10:00 pm Networking Evening Event @ Restaurant Die Insel in Stade
Casual dinner & drinks with lots of opportunity for networking. Enjoy a buffet dinner and some nice drinks and get in touch with participants, speakers and hosts!

10:00 pm End of Evening Event

Agenda Day 2, April 15, 2026, 8:30 am – 2:00 pm

8:00 am Registration, Warm up with Coffee

08:30 am Welcome
Marc Fette, *CTC GmbH*
Constantin Hildebrandt, *CTC GmbH*
Tjark von Reden, *Composites United e. V.*

08:40 am Intelligent Models & Algorithms for Complex Decision-Making Across the Aerospace Life Cycle
Felix Gehlhoff, Helmut Schmidt University (HSU)

09:00 am Bringing generative AI into industries with Siemens Industrial Copilots
André Scholz, Siemens AG Digital Industries

09:20 am TrustMe - Baseline for a Common AI Stack for trustworthy AI in Production
Matthias Radny, Airbus Aerostructures GmbH

09:40 am Scan and Spray: AI-Driven Pose Estimation and Automated Robot Programming in Aerospace Coating
Philip Koch, Fraunhofer IFAM

10:00 am Coffee break with Networking
Split up into groups & transition to the CFK Valley Technology building

10:30 am Demonstrations of intelligent Composite production
3 demonstration cases for each participant, 4 parallel sessions

- **Stream 1: Smart Assembly – Session 1, 2 & 3**
- **Stream 2: Data supported joining processes – Session 1, 2 (ultrasonic welding) & 3 (adhesive bonding)**
- **Stream 3: Smart drilling and virtual reality – Session 1 (Smart Drilling), & 2 (Virtual Reality)**
- **Stream 4: Factory automation, testing & cyber security – Session 1, 2 & 3**

AGENDA

- 1:15 pm **Resumé: Wrap-up and next steps**
Marc Fette, *CTC GmbH*
Constantin Hildebrandt, *CTC GmbH*
Tjark von Reden, *Composites United e. V.*
- 1:30 pm **Transition to open-end Networking**
Distribution of Lunch Bags for the trip home.

2:00 pm **End of Event**

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