

CU Innovation Day „Tailored Structures”



7th – 8th October 2026

Universität Stuttgart

Institute of Aircraft Design (IFB)

Universitätsstraße 28-34

70569 Stuttgart



IFB
Institut für Flugzeugbau
Institute of Aircraft Design



Organized by the CU “Tailored Structures” working group and the IFB at the University of Stuttgart, this event once again provides a platform for professional exchange on the topic of fiber-reinforced composite structures with the greatest possible lightweight design potential and their variable-axial properties. The focus is on current advances in the design, fabrication, and application of ultralight structures.

Wednesday 7th October 2026	
12:00 – 13:00	Arrival: Networking / Lunch
13:00 – 13:20	Welcome Note AG Tailored Structures
13:20 – 13:40	Life-Cycle-Informed Tailored Fiber Placement for Lightweight Natural-Fiber Composite Structures Ahmed Elfeky, The German University in Cairo
13:40 – 14:00	Combining ATL, TFP, CNC Cutting and Vacuum Chamber Infusion – Recent collaborative developments in preforming and impregnation Benjamin Grisin, M&A Dieterle GmbH and IFB
14:00 – 14:20	Experimental Manufacturing of Selectively Reinforced Sandwich Structures Using TFP Johannes Baur, IFB, Universität Stuttgart
14:20 – 15:20	Coffee Break / Networking
15:20 – 15:40	Fibronic Fiber Placement: Tailored Fiber Architectures for Scalable Lightweight Structures Joanna Geschev, fibionic GmbH
15:40 – 16:00	Robotic Fiber Placement on Adaptable Free-Form Moulds with Polarization-Based Gap Detection Davide Zhou, University of Pavia
16:00 – 16:20	Integration of Local Tailored Fiber Placement Reinforcements into Filament-Wound Structures Tales Lisboa, Leibniz-Institut für Polymerforschung Dresden e. V.
16:20 – 16:40	Tailored Fibre Architectures for Additively Manufactured Bistable Lattice Booms Joanna Wong, University of Calgary
16:40 – 18:00	Lab tour and Networking

Thursday 8th October 2026	
08:30 – 08:40	From Industrial Challenges to Tailored Solutions Christoph Lahmeyer, Recaro Aircraft Seatings
08:40 – 09:00	Tailored Fiber Placement (TFP) for Advanced Ballistic Protection Systems Martin Hofmann, FilaCon Systems
09:00 – 09:20	Consolidation Behavior of Tailored Fiber Placement LM-PAEK Hybrid Preforms for Complex-shaped Structures Marius Möller, Faserinstitut Bremen
09:20 – 09:40	High-fidelity Card Sliver for Realigned Carbon Staple Fiber Products in Structural Applications - Closing the Loop on Tailored Fiber Placement Sebatian Bühler, BIONTEC: HiCarR
09:40 – 10:00	Development of Methods and Processes for the Infiltration of High-Strength, Topology-Optimized Fiber-Plastic Composite Components with Variable-Axial Fiber Architecture Cameron Welker, Leibniz-Institut für Polymerforschung Dresden e. V.
10:00 – 11:00	Coffee Break / Networking
11:00 – 11:20	EDOstructure and EDOpath – Recent Advances in the Leading CAE Solution for Tailored Fiber Placement Lars Bittrich, Complex Fiber Structures GmbH
11:20 – 11:40	Multi-Objective Optimization of Natural Fiber-Reinforced Composites with Tailored Carbon Fiber Reinforcements Niklas Frank, IPEK, Karlsruher Institut für Technologie
11:40 – 12:00	From FEM Result to Series Parts: An Industrialised TFP Process Chain – Variable-Axial Preforming meets Net-Shape 3D Forming Steliyan Vasilev, ZSK Stickmaschinen
12:00	Closing Note and Departure

