

CU Innovation Day „Tailored Structures”



7th – 8th October 2026

Universität Stuttgart

Institute of Aircraft Design (IFB)

Universitätsstraße 28-34

70569 Stuttgart



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	How Materials Selection for TFP Allows Innovative Industrial Parts Aymeric Azran/Valia Neury, NOBRAK
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, fibonic 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
12:20 - 12:40	Combining ATL, TFP, CNC Cutting and Vacuum Chamber Infusion – Recent collaborative developments in preforming and impregnation Benjamin Grisin, M&A Dieterle GmbH and IFB
12:40	Closing Note and Departure

