ITHEC 2026

8th International Conference
& Exhibition on
Thermoplastic Composites

Programme

28 - 29 October 2026
Messe Bremen, Germany

www.ithec.de

Last updated:
21 October 2026

PROGRAMME

	HANSE SAAL	KAISEN SAAL	LLOYD SAAL	HANSE SAAL	FOYER
9:00	**Welcome** by Prof. David May & Tjark von Reden				
9:30	**Keynote** "The future of flight - The contribution of thermoplastic materials"; Isabell Gradert, VP Research & Technology Germany, AIRBUS				
	JOINING TECHNOLOGIES 1	**TRANSPORT, AUTOMOTIVE & ENGINEERING**	**EMERGING TECHNOLOGIES 1**	**POSTER SESSION**	**EXHIBITION**
10:20	Development of a CF/LMPAEK Stiffened Skin Demonstrator for a Slide Raft Container using Thermoforming and Robotic Continuous Ultrasonic Welding NIGEL VAN NIEROP, SAM XL	Challenges in Extrusion-Based Thermoplastic Pultrusion of Glass and Hemp Fiber Reinforced Profiles DANIEL BREINL, FRAUNHOFER INSTITUTE FOR MACHINE TOOLS AND FORMING TECHNOLOGY IWU	Thermoplastic Sheet Winding for High-Performance Pressure Vessels – Pathways towards Type V Tanks JENS EMMRICH, TU CHEMNITZ-PROFESSORSHIP OF LIGHTWEIGHT STRUCTURES / POLYMER TECHNOLOGY	In addition to the conference presentations, 10 experts will be presenting their work in the form of research posters. The poster area is located in the Hanse Saal.	The exhibition at ITHEC showcases the latest products, technologies and services offered by over 30 leading companies and research institutions in the field of thermoplastic composites.
10:45	Novel Induction Welding Methodology for Welding of Thick LMPAEK Composite L-Stiffeners to Thick Skins Using Electro-magnetic-Thermal Process Development KASPER SIJMONS, NETHERLANDS AEROSPACE CENTRE (NLR)	Investigation in the formation of warpage during the stamp forming process of GF/PA6 laminates as a result of temperature and layup configuration HANNAH DECKER, FRAUNHOFER INSTITUTE FOR CHEMICAL TECHNOLOGY ICT	Capabilities of Robot-Based Double-Sided Incremental Hot-forming of Fiber-Reinforced Thermoplastics CHRISTIAN-ANDRÉ KEUN, COMPRISETEC GMBH		
11:10	COFFEE BREAK		COFFEE BREAK		
11:40	Development of a process-modelling tool for thermoplastic composites welding technologies FRANCESCO RONDINA, THERMOPLASTIC COMPOSITES RESEARCH CENTER (TPRC)	Hybrid Thermoplastic Composite Power Tool Manufactured in an Integrated Tape Winding and Inside-Molding Process MICHAEL STEGELMANN, ANYBRID GMBH	Repair of thermoplastic composite skins by melting, a practical approach PETER NIJHUIS, NETHERLANDS AEROSPACE CENTRE (NLR)	During part of the lunch breaks (between 13:40 and 14:50), the poster presenters will be available at their posters to answer questions.	
12:05	Simulation-Aided Development of an Induction Welding Process for a Curved Thermoplastic Door Panel THOMAS HOFFMANN, LEIBNIZ-INSTITUT FÜR VERBUNDWERKSTOFFE	Thermoplastic Composite Hydrofoils for Offshore Sailing: From Material Selection to In-Service Structural Validation ADRIEN MARCHANDISE, AVEL ROBOTICS, OPENSEA LABS, UNIVERSITÉ BRETAGNE SUF	Electrical Conductivity of Low-Shear Recycled C/PPS as a Multi-Functional Performance Indicator in Aerospace YANNICK BUSER, THERMOPLASTIC COMPOSITES APPLICATION CENTER (TPAC)		
12:30	Comparative evaluation of Continuous Ultrasonic Welding, Induction Welding and Conduction Welding of CF/LMPAEK: Performance and application potential ABHAS CHOUDHARY, SAM XL	Thermoplastic Composite Pipes (TCP) for Hydrogen Distribution: Design, Qualification, and Performance PETER HANSEN, HIVE COMPOSITES	Manufacturing approach for loadbearing thermoplastic pressure vessels CEDRIC FUCHS, LEIBNIZ-INSTITUT FÜR VERBUNDWERKSTOFFE		
13:00	LUNCH		LUNCH	POSTER PRESENTER Q&A	LUNCH
	STRUCTURES & PROCESSES	**EMERGING TECHNOLOGIES 2**	**JOINING TECHNOLOGIES 2**	**POSTER SESSION**	**EXHIBITION**
15:00	Thermoforming of advanced Thermoplastic Sandwich Structures for use in Secondary Aircraft Structures RALF SCHLIMPER, FRAUNHOFER INSTITUTE FOR MICROSTRUCTURE OF MATERIALS AND SYSTEMS IMWS	A systematic approach of investigating the damage-dependent gas permeability properties of CF-PA11 composite JAN CONDÉ-WOLTER, DRESDEN UNIVERSITY OF TECHNOLOGY	Assessing weld quality and process efficiency when resistance welding CF-LMPAEK composite: effect of heating element type MARCELA MATUS-AGUIRRE, COGIT COMPOSITES		
15:25	Thermoplastic Composite Control Surface STEPHAN BECKER, FACC OPERATIONS GMBH	Continuous Recycling of Thermoplastic Composites: From Pilot Projects to Industrial Implementation HANS LUINGE, SPIRAL RECYCLED THERMOPLASTIC COMPOSITES BV	An Experimental and Numerical Investigation into Contact Pressure Distribution in CF/PEKK Omega Hat and Skin Assemblies MOLLY HALL, UNIVERSITY OF SOUTHERN QUEENSLAND		
15:50	Manufacturing Process of a Thermoplastic Composite Access Door for Auxiliary Power Unit Maintenance ISABEL MARTÍN, FIDAMC & JORGE MARTÍNEZ, SONACA	CONTIjoin – Laser In-Situ Welding for High-Rate Manufacturing of Thermoplastic Rotor Blade Spar Caps MAURICE LANGER, FRAUNHOFER IWS	Design, Manufacturing and Test of a Highly Loaded H2 Tank Mount MATTHIAS HORN, GERMAN AEROSPACE CENTER (DLR), INSTITUTE OF STRUCTURES AND DESIGN		
16:15	COFFEE BREAK		COFFEE BREAK		
16:45	In-situ AFP: One technology – Two solutions. Or: How to produce a differential cryogenic tank with only one technology MATTHIAS BEYRLE, GERMAN AEROSPACE CENTER (DLR), CENTER FOR LIGHTWEIGHT-PRODUCTION-TECHNOLOGY	Characterization of thermoplastic composites for cryogenic and energy storage applications ALBERTO LARIO CABELLO, TORAY ADVANCED COMPOSITES	Scalable manufacturing of media-tight hybrid connections by using the hyJOIN® process TILMAN GÜNTHER, HYJOIN GMBH		
17:10	Numerical Modelling and Optimisation of Interface Temperature Uniformity in Resistance Welding of Novel Aerospace Thermoplastic Composite Joints WANRAPEE WANNAWITAYAPA, UNIVERSITY OF SOUTHERN QUEENSLAND	Tailored Fiber Placement of Poly(xylylene sebacamide)/Carbon Fiber Hybrid Yarns for Thick Thermoplastic Composite Structures SASCHA BRUK, LEIBNIZ-INSTITUT FÜR POLYMERFORSCHUNG DRESDEN	Highly Loaded Thermoplastic Wing Rib MARTIN DENIZE & MICKAËL PONTILLO, DAHER		
17:40	**BEST PAPER & BEST POSTER AWARD**				
19:00	**RATSKELLER DINNER**		**RATSKELLER DINNER**		

28 OCTOBER

PROGRAMME

29 OCTOBER

	HANSE SAAL	KAISEN SAAL	LLOYD SAAL	HANSE SAAL	FOYER
	MATERIALS PROCESSING	**TRANSPORT, AUTOMOTIVE & ENGINEERING 2**	**MATERIAL INSIGHTS 1**	**POSTER SESSION**	**EXHIBITION**
8:30	Resource-efficient production of organosheets from rCF for thermoformed aerospace structures JOHANNES TIETZE, SÄCHSISCHES TEXTILFORSCHUNGSINSTITUT	Advanced Thermoplastic Composite Materials for Next Generation BEV Battery Systems TOBIAS HALL, KAUTEX TEXTRON GMBH & CO. KG	Performance evaluation of HPHT exposed thermoplastic composites recovered from energy applications CHUNDU TAMANG, UNIVERSITY OF SOUTHERN QUEENSLAND	In addition to the conference presentations, 10 experts will be presenting their work in the form of research posters. The poster area is located in the Hanse Saal.	The exhibition at ITHEC showcases the latest products, technologies and services offered by over 30 leading companies and research institutions in the field of thermoplastic composites.
8:55	Advancements in high volume manufacturing of discontinuous long fibre thermoplastic composites SÉBASTIEN KOHLER, GREENE, TWEED & CO.	Innovative Approaches for Sustainable, Stable, and Automatable Metal–Plastic Joining ANNETT KLOTZBACH, ENABLING CONNECTIONS GMBH	Thermoplastic vs Thermoset Matrix Continuous Fibre Composites: a Comparative Analysis of Compressive Strength Using Analytical Modelling and Experimental Characterisation KELIG HAREL, INSTITUT DE RECHERCHE DUPUY DE LÔME		
9:30	**Keynote** "Thermoplastic Composites for Profiles, Vessels and Beyond: From Innovation to Industrial Success"; Matthias Heinrichs, Director Sales AVANCO Composites GmbH & Managing Director XELIS GmbH				
10:10	COFFEE BREAK		COFFEE BREAK		
	JOINING TECHNOLOGIES 3	**TRANSPORT, AUTOMOTIVE & ENGINEERING 3**	**EMERGING TECHNOLOGIES 3**	**POSTER SESSION**	**EXHIBITION**
10:40	Simulation-assisted process design for sustainable high-rate manufacturing JAN YORRICK DIETRICH, FASERINSTITUT BREMEN (FIBRE)	Replacing Mica: A Hybrid Material Approach to Battery Case Fire and Thermal Protection MAXIMILIAN SCHAEFER, SGL	Influence of Ageing on the Tack and Draping Behavior of Partially Polymerized Thermoplastic Prepregs ANDREAS KRÄMER, LEIBNIZ-INSTITUT FÜR VERBUNDWERKSTOFFE	During part of the lunch breaks (between 13:40 and 14:50), the poster presenters will be available at their posters to answer questions.	
11:05	Advancing Robotic Ultrasonic Welding: Sensor-Based Control and Integrated Inspection for Complex Thermoplastics MARYAM AHANPANJEH, HELMUT SCHMIDT UNIVERSITY, CTC	Thermoplastic Composite Sandwich Structures and Novel TS-Molding Process for Sustainable Mobility VARUN KUMAR MINUPALA, FRAUNHOFER IMWS	Embeddable Shape Sensor: New Tool for In-situ Deformation Measurement During Stamp Forming KIICHI CHIKAMORI, THE UNIVERSITY OF TOKYO		
11:30	Thermoplastic Resistance Welding of a Door Surround Structure SIMON BAUER, GERMAN AEROSPACE CENTER (DLR), INSTITUTE OF STRUCTURES AND DESIGN	Quiet, Lightweight, Scalable: High-Rate Manufacturing of Next-Generation Thermoplastic Composite Drone Rotor Blades EVA KOBLER, ENGEL AUSTRIA GMBH	Methodical Design and Construction of a Creep Testing Machine for Composite Cruciform Specimens Under Biaxial Loads OLIVER WEBER, OTH REGENSBURG		
12:05	**Panel Discussion** hosted by *CompositesWorld*: High-rate Thermoplastic Composite Aerostructures: Ready or Not? HOST: GINGER GARDINER · PANELISTS: MAARTEN BACH (KVE COMPOSITES GROUP) · ALLISON CHRISTY (NASA GLENN RESEARCH CENTER) · MOLLY HALL (CENTRE FOR FUTURE MATERIALS, UNISQ) · KATHARINA KOSCHEK (FRAUNHOFER IFAM) · DAVID LEACH (COMPOSITE MATERIAL SOLUTIONS) · ANGELOS MIARIS (AIRBUS AEROSTRUCTURES)	Lightweight structural components by continuous fiber additive manufacturing TESSA TEN CATE, TNO	Process Development of Carbon Fiber Thermoplastic UD Tapes for AFP LUTZ PANDER, CETEX INSTITUT		
12:30		Characterization of Fabric Distortion in Thermoplastic Composites using Broadband Acoustic Waves PHILIPP BRANDES, KUNSTSTOFFTECHNIK PADERBORN (KTP)	Manufacturing of a thermoplastic composite aileron demonstrator by in-situ consolidation JORGE MARTÍNEZ, SONACA		
13:00	LUNCH		LUNCH	POSTER PRESENTER Q&A	LUNCH
	MATERIAL INSIGHTS 2	**EMERGING TECHNOLOGIES 4**	**MATERIALS**	**POSTER SESSION**	**EXHIBITION**
15:00	Expanding Industrial Design Space in Thermoplastic Composites: Thin-Ply braids enable PAEK structures that go beyond the limitations of the AFP process whilst offering good weldability PASCAL KUBE, TEIJIN CARBON EUROPE GMBH	Accelerating Thermoplastic Composite Manufacturing Through Induction Heating and Controlled Cooling KENNETH FROGNER, COREBON AB	Spinning of hybrid yarns for thermoplastic multi-matrix composites manufactured via tailored fiber placement MORGAN RENARD, LEIBNIZ-INSTITUT FÜR POLYMERFORSCHUNG DRESDEN		
15:25	High-Performance Thermoplastic Material Solutions for High-rate Manufacturing of Airframe Structures LAMIA SALAH, TORAY ADVANCED COMPOSITES	Functional Sensor Networks for Structural Health Monitoring in Aircraft Structures – The FuSeVaria Project JULIAN KUKLIK, LASER ZENTRUM HANNOVER & SVEN BLÜMEL, MACKSMATEC GMBH	Innovative yarn constructions for functional, bio-based and high-impact composite applications CHRISTIAN HERRMANN, ITM DRESDEN		
15:50	Micromechanical Damage Initiation in Thermoplastic CFRP under Cryogenic Conditions PATRICK NOWAKOWSKI, FASERINSTITUT BREMEN (FIBRE)	Assessment of repeated reconsolidation repairs for impact damaged thermoplastic composites ARTHUR HAVERKORT, THERMOPLASTIC COMPOSITES RESEARCH CENTER (TPRC)	Highly Oriented rCF-PAEK Tapes for Complex Thermoplastic Composite Structures: Drapability, Damping and Impact Performance CHRISTIAN GARTHAUS, HERONE GMBH		
16:15	COFFEE BREAK		COFFEE BREAK		
16:45	Crystallisation in LMPAEK Polymers and their Composites: An Investigation of Model Accuracy MOLLY HALL, UNIVERSITY OF SOUTHERN QUEENSLAND	3D Non-Destructive Mapping of Crystallinity in Thermoplastic Composite Parts Using X-Ray Diffraction PETER FROBERG, THIAX	Industrialization of Recycled Carbon Fibers for Structural Thermoplastic Compounds: From Waste Stream to High-Performance Applications MARCEL SITTEL-FARAJ, CARBON FIBER CONVERSIONS GMBH		
17:10	Composite thermoforming of surface functionalised stiffeners for aircraft structures DANIEL FRICKE, GERMAN AEROSPACE CENTER (DLR), INSTITUTE OF STRUCTURES AND DESIGN	Development of Joint Free and Structurally Integrated Thermoplastic Composite Connecting Elements Using Partially Flowable Textile Constructions LUKAS MÖLLER, INSTITUTE OF TEXTILE MACHINERY AND HIGH PERFORMANCE MATERIAL TECHNOLOGY DRESDEN	Advanced Manufacturing of Complex-Shaped Thermoplastic Composites: Process Capability and Material Performance of TFP-Based GF/PA6 Hybrid Structures KAI UHLIG, LEIBNIZ-INSTITUT FÜR POLYMERFROSCHUNG DRESDEN		
17:40	**Farewell** by Prof. David May & Tjark von Reden				

PANEL DISCUSSION

High-rate Thermoplastic Composite Aerostructures: Ready or Not?

Thermoplastic composite (TPC) clips, brackets and interior fittings have been well-proven in A350 and B787 production, while welded leading/ trailing edges and rudders have been flying for decades. And yet the signal for commercial next-gen single aisle and air mobility platforms is “not yet”. Perceived gaps include inspection and certification of welded UD/ primary structures, proper adhesion of paints and coatings, validated repair procedures and cost of materials/ manufacturing. Our panel of experts — from OEM program managers to welding experts to TPC engineers with years of parts fabrication experience — will discuss these issues, as well as the competition from high-rate thermosets and soon-to-be commercialized reformable and recyclable epoxy-based vitrimers.

Panel Discussion

29 October 2026
12:05 - 13:00
Hanse Saal

Panelists

Maarten Bach
Business Line Manager Thermoplastics
KVE Composites Group

David Leach
Principal
Composite Material Solutions

Allison Christy
NASA Glenn Research Center

Angelos Miaris
Program Manager
Airbus Aerostructures Bremen

Molly Hall
Research Fellow Thermoplastics
Centre for Future Materials, UniSQ

Hosted by CompositesWorld

Ginger Gardiner
Executive Editor
CompositesWorld

Katharina Koschek
Head of Adhesives and Polymeric Materials
Fraunhofer IFAM

28 OCTOBER

POSTER SESSION

28 – 29 OCTOBER

POSTER SESSION IN HANSE SAAL

01 Press-Moldable Nonwoven CFRTP Intermediates from Recycled Long Carbon Fibers for Complex-Shaped Components and Carbon Fiber Circularity
GABRIEL FORTIN, YUHO CO., LTD.

02 Recyclability and functional stability of antimicrobial plastics based on cationic polymers
LINDA HÄNEL, STEINBEIS INNOVATIONSZENTRUM

03 Integrated Manufacturing of Thermoplastic Composites: Combining Large-Scale Tooling and Automated Ultrasonic Welding for Scalable Production
MARCEL BÖING, GRUNEWALD GMBH & CO. KG

04 Experimental Characterization and Mesoscale Finite Element Modeling of Novel CF-LMPAEK Thin-Ply Composite
JOANNA REHFELDT, DRESDEN UNIVERSITY OF TECHNOLOGY

05 Thermoformed Frames and Conduction Welding Joints for Aircraft Upper Shell Reinforcement Structures
LORENA MORENO, FIDAMC

06 A New Evaluation Approach for Asymmetrical Material Properties in Composite Materials
JONAS SCHALL, UNIVERSITY OF APPLIED SCIENCES TRIER

07 Toward the industrialization of sequential ultrasonic welding for aerospace sector
MOHSEN BAHRAMI, AIMEN TECHNOLOGY CENTRE

08 Durability of TPc/Stainless steel assemblies manufactured by co-consolidation
OCÉANE NITUSGAU, UNIVERSITÉ DE TOULOUSE, RATIER-FIGEAC

09 Comparative Analysis of Laser Wavelength Effects on Cutting of Polymers and Fiber-Reinforced Composites
MADLEN BORKMANN, SÄCHSISCHES TEXTILFORSCHUNGSINSTITUT (STFI)

10 Impact of processing parameters in electric resistance welding of Elium-GF composites using carbon fibre-based welding elements
JAN YORRICK DIETRICH, FASERINSTITUT BREMEN (FIBRE)

POSTER PRESENTER Q&A

During part of the lunch breaks (between 13:40 and 14:50), the poster presenters will be available at their posters to answer questions