Programme

sampe

Conference 23 Madrid

Date: 3 – 5 October 2023
Location: Euroforum El Escorial Madrid, Spain

TUESDAY 3 OCTOBER

Pre-Conference Tutorials and Showcases

by Spanish and Portuguese Composite related Companies and Institutes

13.30 **Entrance Euroforum El Escorial Madrid**
Registration Tutorial

14.00 - 17.00 **Tutorial 1** - Process Automation and Digitalization
Chair: Bernd Demel, Airbus Helicopters, Germany
Tutorial 2 - Sustainability
Chair: José Sanchez, SAMPE Ibérica, Spain

WEDNESDAY 4 OCTOBER

8.00 - 9.00 **Registration**

9.00 - 10.00 **Opening + Keynote** Plenary Opening Session
9.00 Welcome by Tamara Blanco, President SAMPE Ibérica
Opening by Guy Larnac, President SAMPE Europe
9.05 **Key-note speaker** Dr. William (Bill) Carter, Vice-President, Materials and Manufacturing Technology, The Boeing Company
Key-note speaker Airbus - to be announced
9.50 Presentation Winners 38th Students Seminar by the Jury Chair


Tamara Blanco


Guy Larnac


Dr. William (Bill) Carter

10.00 - 10.30 **Coffee Break**

10.30 - 12.30 **Session 1 - 6 talks**

Room 1 Auditorio 1 — COMPOSITES RECYCLING I

Session chair:

- *Upcycling Bring waste materials back into structural Parts* by Yannick Willemin, 9T Labs, Switzerland
- *A study on the mechanical recycling of continuous glass fiber reinforced nylon 6 profiles produced by in-situ pultrusion* by Michael Wilhelm, Fraunhofer Institute for Chemical Technology ICT, Germany
- *Extralife of Structural Thermoplastic CFRC Parts* by Patrice Lefebure, Airbus CRT France, France
- *Processing of recycled carbon fibre into unidirectional tapes - circular economy for green composites* by Felix Teichmann, Institut für Textiltechnik (ITA) Augsburg, Germany
- *Recycled Carbon Fibres for Circularity in the Manufacturing of Helicopter Parts* by Santiago Aranda Gallardo, Airbus Helicopters, Germany
- *Full and local reinforcement of CF-PP Flakes to create high performance parts with recycled base material* by Philipp Wigger, Aachen Center for Integrative Lightweight Production (AZL) of RWTH Aachen University, Germany

Room 2 Auditorio 2 — AEROSPACE MANUFACTURING

Session chair:

- *Design and manufacturing of a full composite integral wingbox* by Peio Olaskoaga, IDEKO, Spain
- *Industrial demonstrator of and advanced rear end in composites* by Luis Aliaga, Aernnova, Spain
- *High-rate, high-quality and low cost production solution for large composite aerostructure using Resin Transfer Moulding (RTM): Wing Spar demonstrator* by Alice Salmon, FIDAMC / Coexpair S.A., Spain/Belgium
- *Tail boom-outcome project: rear fuselage manufacturing process for fast rotorcraft platform (racer-rapid and cost effective rotorcraft)* by Maria Mora-Mendias, FIDAMC, Spain
- *Thermoplastic welding, Dry Fiber Pick and place, function integrated manufacturing* by Christoph Frommel, German Aerospace Center (DLR), Germany
- *Full-Scale Application of in-situ Automated Fiber Placement for the Production of a Fuselage Segment* by Dominik Deden, German Aerospace Center (DLR), Germany

Room 3 Sala 4 + 5 — LIQUID MOULDING & OOA MANUFACTURING

Session chair:

- *Improving the impact behaviour of carbon composites and the resin transfer moulding process by the integration of bi-component non-woven veils* by Adli Dimassi, Faserinstitut Bremen e. V., Germany
- *Resin Transfer Molding of Hollow Parts with In Situ Generation of Polyurethane Cores* by Alexander Faas, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Recent advances in epoxy resin technology for the manufacture of high-performance composites parts by Resin Transfer Moulding* by Krzysztof Gugula, Westlake Epoxy, Belgium
- *A new path for rotor blade manufacturing in Airbus Helicopters* by Bernd Demel, Airbus Helicopters, Germany
- *Solid Epoxy Prepregs with Patterned Resin Distribution for Out-of-Autoclave Processing* by Jan Philipp Janzen, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Tailored Non-Crimp Fabrics in Urban Air Mobility (UAM) – Evaluation of a suitable polymer-based binder material for processing dry UD tape-based tailored non-crimp fabrics in eVTOL propeller blades in terms of permeability and drapability properties* by Lars Linnemann, Fibraworks GmbH, Germany

Room 4 Sala 1 — TESTING AND CHARACTERIZATĒN I

Session chair:

- *Technique for Reconstructing Local Fibre Orientation in Sheet Moulding Compound Employing Surface Strain Measurements* by Hao Wang, Aachen Center for Integrative Lightweight Production (AZL) of RWTH Aachen University, Germany
- *Measuring techniques for prepreg tackiness: A comparative study* by Dennis Budelmann, Clausthal University of Technology, Germany
- *Integrated Process Monitoring for Robotic Draping of Carbon Fibre* by Dominik Zielinski, Profactor GmbH, Austria
- *Intelligent Process Monitoring for CFRP RTM production in Aerospace* by Nikos Pantelelis, Synthesites, Greece
- *Friction Measurement on Towpregs for the Filament Winding* by Benedikt Bergmann, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Spectroscopic Analysis of PrePregs* by Moritz Salzmann, Montanuniversitaet Leoben, Austria

12.30 - 14.00 **Lunch**

14.00 - 15.20 **Session 2 - 4 talks**

Room 1 Auditorio 1 — ADDITIVE MANUFACTURING

Session chair:

- *Experimental determination of mechanical properties of additively manufactured continuous carbon fibre reinforced polymer parts produced by a novel laser sintering process* by Michael Baranowski, Karlsruhe Institute of Technology (KIT), Germany
- *Hybrid Technology Development to Direct Print Thermoset Molds for Composites* by Ido De La Vega, Massivit 3D, Israel
- *3D printed composite parts with improved performance* by Tessa ten Cate, TNO - Brightlands Materials Center, Netherlands
- *Tubular Honeycomb for Crashworthiness Applications via ABS-R Additive Manufacturing* by Colleen Murray, University of Maryland, USA

Room 2 Auditorio 2 — THERMOPLASTIC WELDING

Session chair:

- *Development of induction welded horizontal tail plane based on ud carbon thermoplastic composite* by Maarten Bach, Daher/KVE, Netherlands
- *Conduction welding for a fuselage application – from thermal simulations to weld assembly* by Guillaume Vincent, IRT Jules Verne, France
- *Experimental joint strength assessment of overmoulded carbon fibre-reinforced PEEK/LMPAEK composites under quasi-static and fatigue loading* by Robert R. Enderle, Faserinstitut Bremen e. V., Germany
- *Optimizing Continuous Ultrasonic Welding Parameters for Enhanced Bonding in Carbon Fiber Thermoplastic Materials* by Roberto Guzman, University of Salamanca, Spain

Room 3 Sala 4 + 5 — INDUSTRIAL INNOVATĒN I

Session chair:

- *Seamless integration of electrical components in lightweight composite structures for UAVs* by Jascha Schmied, BĒNTEC - Bionic Composite Technologies AG, Switzerland
- *Mechanical GFRP-Fastening Systems For Demanding Industrial Applications* by Rudi Velthuis, Hitachi Energy, Switzerland
- *Performance targets and routes to achieve industrial adoption of structural power composites for fully electric transportation* by Emile Greenhalgh, Imperial College London, United Kingdom
- *To be announced*

Room 4 Sala 1 — TESTING AND CHARACTERIZATĒN II

Session chair:

- *Impact of impacts: Structural Health Monitoring of pressure vessels with fiber-optic sensors* by Jannick Fuchs, Institute for plastic processing (IKV) at RWTH Aachen University, Germany
- *Sensor for Quality Control of Semi-finished Materials from Recycled Carbon Fibre* by Alexander Walch, Profactor GmbH, Austria
- *Sensor-based and data-driven composites manufacturing optimization* by Nicholas Ecke, NETZSCH Process Intelligence GmbH, Germany
- *Elastic Sensor Fibers for Strain Sensing Applications* by Jeanette Ortega, RWTH Aachen University, Germany

15.30 - 16.00 **Coffee Break**

16.00 - 18.00 **Session 3 - 6 talks**

Room 1 Auditorio 1 — COMPOSITES RECYCLING II

Session chair:

- *Recycling of Aramid Thermoset Composites* by Walter Nijhuis, Teijin Aramid, Netherlands
- *Diverted from Landfill: Manufacture and characterisation of composites from waste plastic packaging and waste glass fibres for value-added products* by Kit O'Rourke, University of Edinburgh, United Kingdom
- *Thermoformable multilayer composite based on pcr PP and rCF nonwoven as a contribution to the circular economy* by Richard Vocke, Faserinstitut Bremen e. V., Germany
- *Recyclable Epoxy Resin Matrices for Sustainable Printed Circuit Board (PCB) Substrates - Influence of Matrix System on Dielectric Properties and Recyclability of GFRP* - by Martin Demleitner, Polymer Engineering - University of Bayreuth, Germany
- *Recycling strategies for CFRP aerospace components using the example of a drive shaft for a next generation geared jet engine* by Alrik Dargel, Technische Universität Dresden, Germany
- *New life for vacuum bags and carbon fibers* by Almudena Canas Rios,, Airbus Operations, Spain

Room 2 Auditorio 2 — THERMOPLASTICS I

Session chair:

- *Optimizing Processing Parameters for Glass Fiber Reinforced Polycarbonate LFT-D Composites* by Christoph Schelleis, Fraunhofer Institute for Chemical Technology, ICT, Germany
- *Inside hybridization of CF/PAEK hollow profiles by means of injection molding* by Veit Würfel, Technische Universität Dresden, Germany
- *Process development and characterization of a locally reinforced thermoplastic Sheet Molding Compound* by Sergej Ilinzeer, Fraunhofer Institute for Chemical Technology, ICT, Germany
- *Investigating the AFP Process Window for TC1225 UD Tapes using the Mandrel Peel Test* by Tom Asijee, TPRC / University of Twente, Netherlands
- *Lider project – bus techno brick: sustainable bumper for a helicopter by fibre reinforcement thermoplastic composite (frtc)* by Eduardo J. Martín Paradas, Airbus Helicopters España, Spain
- *To be announced*

Room 3 Sala 4 + 5 — BONDING & REPAIR

Session chair:

- *CFRP mini-hard patch bonded repairs* by Inés Nieto, Airbus Operations S.L., Spain
- *Self-Healable epoxy coatings reinforced with recycled carbon fibers* by Pablo Vazquez Sanchez, Airbus Operations, Spain and Alberto Jimenez, URJC Madrid, Spain
- *Production and torison testing of rotationally molded hybrid composited drive shafts* by Patrick Schaible, Karlsruhe Institute of Technology (KIT), Germany
- *Investigation of the adhesion strength of prepreg tapes to honeycomb cores for AFP-manufactured sandwich structures* by Nils Siemen, Technical University of Munich, Germany

38TH STUDENTS SEMINAR WINNERS

Session chair:

- *Best Master Student*
- *Best PhD Student*

Room 4 Sala 1 — MODELING & SIMULATĒN I

Session chair:

- *Virtual optimization of a sensor-based filling strategy for rtm processes* by David Faron, Technical University of Munich, Germany
- *Development of a digital twin for automated fiber placement* by Kevin Scheiterlein, Fraunhofer Institute for Casting, Composite and Processing Technology IGCV, Germany
- *Automated Fiber Placement: Modeling the influence of compaction roller properties on manufacturable geometries* by Tim Tiemann, Leibniz Universität Hannover, Germany

COMPOSITE PROCESSING

Session chair:

- *Study on industrial application of cfrp powder-epoxy towpreg: bike frame manufacturing via filament winding* by Louis Moore, The University of Edinburgh, United Kingdom
- *Investigation of Compaction Roller Pressure Effectiveness on Powder Epoxy Towpreg Consolidation* by Hanisa Hasrin, The University of Edinbrugh, United Kingdom
- *Experimental study on mechanical properties of composites manufactured by hand-layup and automated fiber placement (AFP) with different gap and staggering configurations* by Eylem Özen, ROKETSAN INC., Turkey

18.00- 18.30 **Break**

18.30 - 19.30 **Plenary Panel Discussions on Conference Theme related Topics**

19.30 - 21.30 **Happy Hour & Network Diner**

THURSDAY 5 OCTOBER

8.00 - 8.30 **Registration**

8.30 - 10.00 **Session 4 - 4 talks**

Room 1 Auditorio 1

COMPOSITES LIFE CYCLE ANALYSIS

Session chair:

SESSÉN KEYNOTE:

- *LCA of Carbon Fibres: exploring the reasons behind the hugely diverging published data* by Ignaas Verpoest, Composite Materials Group KU Leuven (Belgium), Belgium
- *Life cycle assessment of new TALGO lightweight prototypes* by Marta Cerdeira Peinado, TALGO, Spain
- *Composite enabled sustainable aviation* by Uwe Beier, Airbus CRT Germany, Germany
- *Life cycle analysis: A comparison of thermoset based autoclave curing, isothermal and variothermal press processing and automated fiber placement with in situ consolidation* by Vincent Backmann, Technical University of Munich, Germany

Room 2 Auditorio 2

THERMOPLASTICS II

Session chair:

SESSÉN KEYNOTE:

- *Thermoplastic Composites – SAMPE Technical Committee State of the Technology Assessment* by David Leach, ATC Manufacturing, USA
- *Optimization of laminate quality in thermoplastic automated fiber placement by repassing* by Kilian Seefried, Fraunhofer Institute for Casting, Composite and Processing Technology IGCV, Germany
- *Effect of surface preparation on paint adhesion to thermoplastic composites* by Marten van der Werff, Thermoplastic Composites Research Center, Netherlands
- *Development of a thermoplastic prepreg based on a partially polymerized reactive resin system* by Andreas Krämer, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany

Room 3 Sala 4 + 5

INDUSTRIAL INNOVATÉN II

Session chair:

SESSÉN KEYNOTE:

- *Fiber reinforcement composite materials solutions for civil work* by Bartolome Simonet, Nanotures S.L., Spain
- *Industry 4.0 implementation framework for composite manufacturing: From business requirements to system architecture* by Miroslav Stojkovic, Airborne Composites UK, United Kingdom
- *New core material ROHACRYL™ in wind blades – a model-based approach to weight reduction* by Henning Husmann, Evonik Operations & TPI Composites Germany, Germany
- *Thermal Cycling of Dahltram® 3D Printed Tooling* by Tomas Hadrava, Airtech, Luxemburg

Room 4 Sala 1

TESTING & CHARACTERIZATÉN III

Session chair:

SESSÉN KEYNOTE:

- *Saving resources by improving material test procedures and applying innovative simulation models* by Jens Bold, Boeing Research & Technology Europe, Germany
- *Out-of-plane strain measurements of CFRP with the use of triplane Digital Image Correlation* by Nikolas Korte, University of the Bundeswehr Munich, Germany
- *Characterization of mechanical properties of composite materials at cryogenic temperatures by means of destructive testing* by Jose-Maria Collado, Airbus, Spain
- *High-speed thermal mapping of composite materials during different mechanical tests of ultimate strength* by Oscar Rodera Garcia, Tampere University, Finland

10.10 - 10.30 **Coffee Break**

10.30 - 12.30 **Session 5 - 6 talks**

Room 1 Auditorio 1

BÉ SOURCES AND RECYCLABLE CHEMISTRIES

Session chair:

- *Optimized process design for the production of bio-based rPLA-organo sheets with bast fiber reinforcement* by Maximilian Salmins, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Thermal stability of an aeronautic-grade epoxy-based vitrimer* by Daniel Sánchez Rodríguez, Universitat de Girona, Spain
- *Vitrimeric resins based on AFD/epoxy for self-healing and reprocessing capabilities in composite structures* by Xoan Xosé Fernández Sánchez-Romate, Universidad Rey Juan Carlos, Spain
- *Lignin Derived Carbon Fibres - A Sustainable Alternative to Their Petroleum-Based Counterparts* by Mark Vaughan, University of Limerick, Ireland
- *Looking for improving sustainability in composite materials and manufacturing processes* by Cristina Elizetxea, TECNALIA, Spain
- *Thermomechanical healing, recycling, and thermoforming of a reversible cnt-epoxy / glass fiber composite* by Isaac Lorero, Universidad Rey Juan Carlos, Spain

Room 2 Auditorio 2

HYDROGEN STORAGE COMPOSITE TANKS

Session chair:

- *Hydrogen storage systems for mobile applications* by Nicole Motsch-Eichmann, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Lightweight and High-Pressure: Manufacturing Type 5 All-Composite Pressure Vessels for Gaseous Hydrogen Storage in Aerospace and Aviation* by Shamim Mondal, Infinite Composites Inc., USA
- *New design approach for multi-cell pressure vessels - Tension test of co-consolidated short-fiber reinforced threads on hollow thermoplastic profiles* by Jan Condé-Wolter, Technische Universität Dresden, Germany
- *Permeability assessment of biobased thermoplastic matrix laminated composite tubular sample under cryogenic thermomechanical loading* by Timothée Klein, Airbus CRT France, France
- *Crack analysis in CFRP by means of fiber optical sensors* by Josef Koord, German Aerospace Center (DLR), Germany
- *Development and optimization of graphene oxide filled epoxy composition for high toughness and gas barrier in liner-less type V hydrogen pressure vessels* by Florian Wanghofer, Polymer Competence Center Leoben GmbH, Austria

Room 3 Sala 4 + 5

GRAPHENE AND NANO-REINFORCED COMPOSITES

Session chair:

- *Enhancement in flexural fatigue response of graphene nanoplatelets coated unidirectional carbon fiber epoxy composites* by Alok Kumar Srivastava, Indian Institute of Technology Bombay, India
- *Effect of electrophoretically deposited graphene on carbon fiber fabrics on the deformation modes of composites under flexural and tensile loading* by Praveenkumar Jatothu, Indian Institute of Technology Bombay (IITB), India
- *Analysis of the compression strength after impact of woven carbon/epoxy laminates loaded with graphene particles* by Jorge Lopez Puente, Universidad Carlos III de Madrid, Spain
- *Dual curing epoxy-based system reinforced with CNT to allow thermal activation by Joule effect* by Ignacio Collado Ropero, Universidad Rey Juan Carlos, Spain
- *Strain sensors based on carbon nanoparticles-doped silicone rubber for biomedical purposes* by Antonio del Bosque, Universidad Rey Juan Carlos, Spain
- *Slot die coating as an industrially scalable method for depositing nanocellulose dispersions onto glass fiber fabrics* by Kim Anh Pham, Georgia Institute of Technology, USA

Room 4 Sala 1

MODELING & SIMULATÉN II

Session chair:

- *Artificial Intelligence methods for preliminary sizing of aircraft structures* by Raul Llamas Sandin, Airbus Operations, Spain
- *Automation of the composite manufacturing process simulation cycle* by Juan Manuel González-Cantero, Airbus Operations, Spain
- *Finite element simulation of process temperatures during laser based cutting of unidirectional CFRP and evaluation of heat affected zone* by Jan Keuntje, Laser Zentrum Hannover e.V., Germany
- *Model-driven Approach for integrated Design and Process Planning of Fiber Composite Aerostructures* by Maximilian Holland, Fraunhofer Institute for Casting, Composite and Processing Technology IGCV, Germany
- *Technology-driven modelling approach for the failure analysis of spatially curved laminates with discontinuous fibers* by Prof. Dr.-Ing. Neven Majic, Augsburg Technical University of Applied Sciences, Germany
- *To be announced*

12.30 - 14.00 **Lunch**

14.00 - 18.00 **Transport by bus Euroforum - Company Location vv.**

Leaving from 13.00 Hrs Return depening traffic >> 17.00 - 18.00 Hrs. At Euroforum

POSTER PRESENTATÉNS

- *Adapting intumescent/low-melting glass flame-retardant formulations for transfer to glass-fiber-reinforced composites and post-fire mechanical analysis* by Sruthi Sunder, Polymer Engineering - University of Bayreuth, Germany
- *Energy-efficient heating and drying with microwave radiation* by Andreas Bündgens, Institut für Textiltechnik (ITA) of RWTH Aachen University, Germany
- *3D surface rectification with abrasive waterjet machining: application to a carbon/epoxy master* by Agathe Jaillon, Bayab Industries, France
- *Use of biobased and sustainable materials in 3d composite printing* by Gorka Argandoña, NAITEC, Spain
- *Sustainability with Aramid and Carbon Fibers from TEIJIN* by Dr. Markus Schneider, TEIJIN Carbon Europe, Germany
- *Process characterization and modelling for the continuous production of fiber-metal-laminates* by Jonathan von Helden, Fraunhofer Institute for Production Technology IPT, Germany
- *Enhancing Fibraforce Technology – Development of a highly productive and efficient joining process for continuously manufactured thermoplastic cross-ply materials based on ultrasonic welding* by Lars Linnemann, Fibraworks GmbH, Germany
- *Application of Piezoelectric Stack Point Focusing Transducer Based on Orthotropic PZT Composite Material* by Ziping Wang, Jiangsu University, China
- *Non-destructive 3D Damage Distribution Analysis of Composite Materials using X-ray Computed Tomography* by Alba Pascual, IMDEA, Spain
- *Prediction of porosity in CFRP from ultrasonic signals using deep learning* by Alberto Vicente, IMDEA, Spain
- *Recycling of fibre reinforced plastic waste by pyrolysis: the experience of more than 10 years in the valorisation of the by-products* by Lopez-Uriona Barrenechea, Bilbao University, Spain
- *A Review of Shape Memory Polymer Applications in Tooling for Composite Manufacturing* by Fabian Neumann, German Aerospace Center (DLR), Germany
- *Energy optimized process design and scheduling in the field of large scale CFRP parts* by Jannis Eckhoff, Helmut-Schmidt-Universität, Germany
- *Digital process chain for thermoplastic structural components with local unidirectional reinforcements for aerospace applications* by Nithya Sindhe Narayana Rao, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Mechanical performance of unidirectional rCFRP for load-bearing applications* by Christian Becker, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Development of an innovative thermoplastic Door-Surround-Structure for a single-aisle-aircraft* by Jannis Hüppauff, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Advancements in Thermoplastic Composites for Next-Generation Aircrafts: A Study on Topology Optimization and Simulation Methodologies for the design of Door Surrounding Structures* by Vinay Nagaraj, Leibniz-Institut für Verbundwerkstoffe GmbH (IVW), Germany
- *Wire-shaped inserts for load-appropriate fiber reinforcement of injection-molded thermoplastic components – Development of an innovative process route* by Maximilian Rieger, Fraunhofer Institute for Casting, Composite and Processing Technology IGCV, Germany
- *Use of sustainable resins in composite tidal turbine blades: Pathway to circularity* by Ione Smith, University of Edinburgh, United Kingdom
- *Development of Tailored Fiber Placement Technology Using the Hybrid Fiber consisted of Poly(xylylene sebacamide) PA XD10 and Carbon Fiber* by Keisuke Ito, Mitsubishi Gas Chemical Company, Inc., Japan
- *Effect of functionalizing grid-like tape reinforcement structures for injection moulded components by means of 3d printing on shift fixation during mould filling and component properties* by Jan Petersen, Aachen Center for Integrative Lightweight Production (AZL) of RWTH Aachen University, Germany
- *Investigation of necessary consolidation degree and persisting of energy input during automated fibre placement* by Alexander Peitz, Aachen Center for Integrative Lightweight Production (AZL) of RWTH Aachen University, Germany
- *Investigation of the mechanical performance of hydrophobised hemp fibres in combination with polypropylene using pull-out tests* by Leonie Wesener, Institut für Textiltechnik (ITA) of RWTH Aachen University, Germany
- *Aeronautical vitrimer resin for prepreg application* by Elena Del Puerto Nevado, Airbus Operations, Spain
- *The novel 3D-contact angle method facilitating pretreatment quality control by untrained workers* by Dr. Thomas Willers, KRÜSS GmbH, Germany
- *Development of a Fixed Blade Interfacial Testing Rig for the Characterisation of Thermoplastic Composites used in Automotive Applications* by Dr Ross Forbes Minty, University of Strathclyde, United Kingdom
- *Advance fabrication of a drone using 3d printing with embedded sensors and wiring* by Rake Herrero, Fundacion I+D Automocion y Mecatronica (Naitec), Spain
- *Investigation of Thermoplastic Liners for Cryogenic Hydrogen Storage* by Ashley Chadwick, German Aerospace Center (DLR), Germany
- *High temperature processing of thermoplastic CF-PEKK laminates in an energy-efficient inductive double belt press* by Simon Greive, Aachen Center for Integrative Lightweight Production (AZL) of RWTH Aachen University, Germany
- *Newly developed concept for conformable hydrogen pressure vessels manufactured with tp-afp* by Christian Jäger, Technical University of Munich, Germany
- *Leveraging the Behavior of Interfaces in Composites and Coatings for Material Design* by Elaheh Sedghamiz, Schrodinger GmbH, Germany
- *Parasitic Effects of Load Introduction Points in Full-Scale Composite Tidal Turbine Blade Tests* by Miguel Angel Valdivia Camacho-1, University of Edinburgh, United Kingdom
- *Enabling discontinuous fibre composites in high-performance aerospace applications through robust simulation technology* by Connie Qian, University of Warwick, United Kingdom
- *SQRTM process. An innovative out of autoclave composites manufacturing process to enhanced CFRP versatility, quality and functionality. Bonding strategies for dynamic 3R-resin in functionalized composites surface* by Alain Leroy, Coexpair, Belgium
- *A More Sustainable Cricket Bat: From English Willow to Composite Materials* by Fred Zikry, The University of Edinburgh, United Kingdom
- *Curing of RTM manufactured parts using microwave technology* by Maximilian Steinhardt, Technical University of Munich, Germany
- *3D woven composites soft armor experimental performance evaluation* by Neha Junare, National Forensic Science University, India
- *Investigation of the interactions in the consolidation process of thermoplastic natural fibre composite* by Lars Wollert, Institut für Textiltechnik (ITA) of RWTH Aachen University, Germany
- *Enhancing sustainability of thermoplastic composite parts through backmolding of UD-Tapes with recycled PET materials* by Curdin Wick, OST - Eastern Switzerland University of Applied Sciences, Switzerland
- *Adapting intumescent/low-melting glass flame-retardant formulations for transfer to glass-fiber-reinforced composites and post-fire mechanical analysis* by Sruthi Sunder, Polymer Engineering - University of Bayreuth, Germany
- *Characterization and study of damage mechanisms of infusible thermoplastic and bio-epoxy based composites* by Gursahib Singh Bhatia, University of Limerick, Ireland
- *Reuse of Carbon Fiber Reinforced Thermoplastic parts by reversal-resistance welding in aeronautical industry* by Alejandro Marqués Paola, AITIIP Centro Tecnológico, Spain
- *Piezoresistive sensors based on epoxy nanocomposites for application as a gauge in exoskeletons* by Alberto Jiménez, Universidad Rey Juan Carlos, Spain
- *'Cold Welding': A Novel Technique for Joining Acrylic-Matrix Composite Parts* by Machar Devine, University of Edinburgh, United Kingdom
- *Manufacturing of closed cfrp cylindrical shells made by tailored fiber placement* by Caneron Welker, Leibniz-Institute of Polymer Research Dresden, Germany
- *Development of Insert Injection Molding with Composite Additive Manufacturing* by Makoto Inomoto, Mitsubishi Heavy Industries, Japan
- *Paving the way towards composite sustainable aerostructures inside Clean Aviation FASTER H2 programme* by Noelia Salmeron Perez, Airbus Operations, Spain
- *Full Scale multi-actuator tidal blade fatigue testing* by Sergio Lopez Dubon, University of Edinburgh, United Kingdom
- *An Approach to Load-Path-Optimized Path Generation in Automated Fiber Placement* by Raphael Höfer, Helmut-Schmidt-University / CTC, Germany
- *Healable composites benefits for industrial semi-finished products and aerospace applications* by Amaël Cohades, CompPair Technologies, Switzerland
- *The experimental and computational validation of an analytical pre-processor prediction tool for braiding.* by Beth Grimes, National Composites Centre, United Kingdom

38TH STUDENTS SEMINAR 2023

Jury 38th SE Students Seminar 23

Chairman
Christian Weimer, SAMPE Germany

Vice Chairman
Charlotte Salaun, SAMPE France

Members
Carwyn Ward, SAMPE UK & Ireland
Xoan Xosé Fernández Sánchez Romate, SAMPE Ibérica
Matthias Geistbeck, SAMPE Germany
Adrie Kwakernaak, SAMPE Benelux
Jim Johnson, SAMPE USA
Rich Caruso, SAMPE Global

Assistant
Eduardo Gonzalo, SAMPE Ibérica

STUDENT SEMINAR SPONSORS

JEC CONNECTING THE WORLD WITH COMPOSITES · AIRBUS · BOEING

- *Microstructural variability and its effect on mechanical properties of filament wound composites* by Shailee Upadhyay, KU Leuven, Belgium
- *Thermoplastic Composite Automated T-joint – The design of a fully automatic thermoplastic composite T-joint hot compressed air welding machine* by Mauryn de Graaf, University of Twente / TPRC, Netherlands
- *Hand-held contact angle measurements for adhesive bonding processes of composites* by Franziska Mews, Tampere University, Finland
- *Environmental aging tests for bio-material cores in composite sandwich panels* by Pauli Hakala, Tampere University, Finland
- *Development of optimization tools learning base of the R.Mo.S. Algorithm Application to the selection of eco-compatible substances for use in launcher structures* by Fournier Maïlys, Université Claude Bernard Lyon 1, France
- *Design and optimization of a tool for implementing composites with high thermal dynamics through the use of metal foams with controlled porosity* by BALTHAZAR Matthis, Nantes Université / IRT Jules Verne, France
- *Entwicklung eines repräsentativen Volumenelements zur Betrachtung von Schädigungsvorgängen in faserverstärkten Kunststoffen* by Martin Giersberg, RWTH Aachen, Germany
- *Machine learning algorithms for efficient process optimisation of variable geometries at the example of fabric forming* by Clemens Zimmerling, Karlsruhe University, Germany
- *Mechanical characterisation of short fibres reinforced polymers with recycled matrices* by Arianna Dinosio, Politecnico di Milano, Italy
- *A new compatible and sustainable composite material for the seismic and energetic upgrade of the historic building heritage* by Dora Pugliese, Università di Firenze, Italy
- *Multifunctional composites with 3R (recyclable, repairable and reshapable) properties based on a vitrimeric matrix.* by Javier Gómez Sánchez, University Rey Juan Carlos, Spain
- *A methodology for fatigue life prediction of a composite tank for liquid hydrogen storage* by Narcís Sera, University of Girona, Spain
- *Development of self-healable epoxy-based adhesives for wind-turbine blades* by Ander Aracama, EPFL / LPAC, Switzerland
- *Load introduction elements for FRP sandwich structures with thermoplastic matrix systems* by Gabriel Pulver, ETH Zürich / CMASLab, Switzerland
- *A Route to Certification of Bonded Thermoset Composite Structures via Resistance Welding* by Thomas Maierhofer, University of Bath, UK
- *A Novel Profiling Concept Leading to a Significant Increase in the Mechanical Performance of Metal to Composite Adhesive Joints* by Adam Whitehouse, Imperial College London, UK
- *Dynamic Polymer Networks: Enabling Reprocessable and Recyclable Composites* by Levi Hamernik, University of Southern Mississippi, USA

Preliminary Edition August 11 2023 - Subject to later Changes -