Thursday, 21st September

Registration from 09:00 am

Welcome and Opening
Keynote speeches

Lunch

Session 1.1
Preform Materials, Semi-Finished Products and Composite Structures

Session 2.1
Processing, Systems and Application for Mass Production

Session 4.1
Smart Systems Integration

Networking coffee

Poster session

Session 2.2
Processing, Systems and Application for Mass Production

Special Session
International Lightweight Innovation Networks

Networking coffee

Session 3.1
Modelling and Simulation of Hybrid Structures and their Production Processes

Session 1.2
Bio-based Composite Structures

Session 4.3
Smart Systems Integration

Session 4.2
Processing, Systems and Application for Mass Production

Parallel Events

SAB-Meeting (only for Members of the Scientific Advisory Board)
17:00 - 18:00

Conference dinner at pumpwerk eins
Best Paper/Poster Award

Friday, 22nd September

Registration from 08:30 am

Guided tour MERGE Technology Centre
Lunch

Session 3.2
Modelling and Simulation of Hybrid Structures and their Production Processes

Session 2.4
Processing, Systems and Application for Mass Production

Session 1.4
Preform Materials, Semi-Finished Products and Composite Structures for Lightweight Design

Session 4.2
Smart Systems Integration

Networking coffee

Discussion/Closing remarks

Session 3.1
Modelling and Simulation of Hybrid Structures and their Production Processes

Session 2.2
Processing, Systems and Application for Mass Production

Parallel Events

„MERGE Unternehmerforum“ including World-Café
10:00 - 14:00

10:00 - 12:00
13:00 - 14:30
15:00 - 16:30
17:00 - 18:00
19:30
**Programme Thursday, 21st September**

**Registration** from 09:00

**Welcome**
Uwe Gaul, Saxon State Secretary, Ministry for Higher Education, Research and the Arts
Sören Ulte, Managing Director of Economic Development Corporation, City of Chemnitz

**Keynote speeches**

**Materials Meet Changes in Automotive Applications**
Dr. Olaf Täger, Volkswagen Aktiengesellschaft

**Industry 4.0: Impacts on control and switchgear construction**
Uwe Scharf, RITIAL GmbH & Co. KG

**12:00 Lunch**

**Parallel Sessions 13:00 - 14:30**

**Session 1.1**
**Preform Materials, Semi-Finished Products and Composite Structures**
Chairman: 
Dr. Rafael Codeiro

**13:00**
Tailored film placement in thermoplastic composites
Dr. Inigo Jimenez et al., College Institute of Polymer Research Dresden, R. Neuss, Fraunhofer IWM, D. Gerrey, SAVNS (B)

**13:25**
Comparison of manufacturing fiber-metal laminates on thermoplastic and thermosetting material. Analysis of mechanical properties and economic effects
St. Sadowski, C. Symerman, Dr. A. Schmidt, et al., CUT

**13:45**
Automated welding of fiber-reinforced structural components
R. Holzmann, R. Riechmann, C. Teichert, CUT

**14:10**
Influence of the cooling behaviour on the mechanical properties of hybrid laminates with carbon fiber-reinforced plastics
J. Clug, Prof. D. Nordt, et al., CUT, S. Narski, Centra Institute of textile-and-process engineering machines non-profit GmbH

**Session 1.2**
**Smart Systems Integration**
Chairman: 
Prof. André Wagenführ

**13:00**
Additive manufactured structures with improved properties for tissue engineering
Prof. Dr. L. Lühe, M. Markert, Fraunhofer HMI, J. Eiermann, University of Regensburg, H. A. Oenner, Fraunhofer National Research Council of India (B)

**13:25**
The most fragile structures made by remote laser cutting
R. Hausmann, Prof. H. Bey, Technische Universität Dresden, Fraunhofer IWM, Dr. H. Hesse, et al., Fraunhofer IWK

**13:45**
How additive manufacturing technology for fiber-reinforced plastics in skeleton structure
H. Thirunavan, BWG Group, J. Bier, Fraunhofer HMI, Prof. I. Krikel, CUT

**14:10**
High-performance machining of fiber-reinforced materials with hybrid-ultrasonic assisted cutting
Dr. A. Stoll, H. Häger, A. Booth, et al., Fraunhofer IFF

**Session 2.1**
**Processing, Systems and Application for Mass Production of Lightweight Structures**
Chairman: 
Dr. Philipp Schröder (NTU)

**13:00**
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**Session 2.2**
**Processing, Systems and Application for Mass Production of Lightweight Structures**
Chairman: 
Prof. Dr. Rafael Codeiro

**13:00**
FAMULUS: Bridging the gap between steel and fibre-reinforced materials
W. Haimer, Dr. L. Mothe, Center of Maritime Technologies e.V.

**13:25**
Advanced joining technology for the production of highly stressed lightweight structures, with fibre-reinforced plastics and metal
Prof. H. Stadl, T. Kramer, T. Steck, Brandenburg University of Technology Cottbus-Senftenberg

**13:45**
Investigation of integral outdoor fibre-reinforced aluminim-polycarbonate hybrid joints
A. Quijano Serrano, et al., Fraunhofer IWM, T. Eiklen, et al., Brandenburg University of Technology Cottbus, M. Buse, University of Bremen

**14:10**
Life Cycle Engineering and Management methods for designing hybrid structures: Cases, potentials and challenges
Prof. G. Šilhan, C. Symerman, Dr. A. Schmidt, CUT

**Session 4.1**
**Smart Systems Integration**
Chairman: 
Dr. Philipp Schröder (NTU)

**13:00**
Development of activated carbon web for effective EMI shielding applications
Dr. A. Böhm, Prof. J. Wölfel, S. Nenert, et al., Technische Universität Dresden (B)

**13:25**
Integrated platforms for advanced smart textile applications
Dr. H. Eitzen, T. Wiegand, et al., Saxen Textile Research Foundation, D. Hofreiter, CUT

**13:45**
Enhanced lightweight design by composites: Results of the EU project ONLINE
Dr. A. Busse, Prof. T. Ben, Fraunhofer IFF

**14:10**
Hybrid hierarchical composite material based on carbon nanotubes
P. K. Mohanty, J. M. Rosendo, University of São Paulo (BR)

**Session 3.1**
**Modelling and Simulation of Hybrid Structures and their Production Processes**
Chairman: 
Dr. Jörn Ihlemann

**13:00**
Methodological approach to investigate the behavior of the structure under dynamic loading using multiple criteria decision making method
Dr. A. Spickenheuer, et al., Leibniz Institute of Polymer Research Dresden; E. Peretzki, N. Schramm, Prof. J. Ihlemann, et al., CUT

**13:25**
Lightweight car door made out of a net shape and load adapted hybrid structure
J. Oleksik, S. Natarajan, Prof. T. Vietor, Technical University of Braunschweig; M. Busse, University of Bremen

**13:45**
Residual stress analysis of fibre-reinforced structures with fibre BNAGS grading material
Dr. A. Stoll, M. Schecken, Prof. J. Ihlemann, et al., CUT

**Session 3.2**
**Modelling and Simulation of Hybrid Structures and their Production Processes**
Chairman: 
Prof. U. Götze

**13:00**
Optimisation of fibre reinforced plastics by using the life cycle engineering method
Dr. R. Luterbacher, Dr. L. Molter, Center of Maritime Technologies e.V.

**13:25**
Investigation of bio-based polyurethane with short fibers for lightweight structures
Dr. R. Ritzmann, T. Hartsine, et al., CUT, A. Nolßen, et al., European National Research Technologies University (RUS)

**13:45**
Natural fibre reinforced biocomposites: Innovative and optimized processes for serial production
Dr. A. Busse, Prof. T. Ben, Fraunhofer IFF

**17:40 Conference dinner at pheasantry sites**

**Dinner speeches**
Thomas Schmidt, Saxon State Minister of Environment and Agriculture
Frank Henrich, Member of the German Bundestag

Subject to alternation.
**Programme**
Friday, 22nd September

**Parallel Sessions/Tour MERGE Technology Centre/"MERGE Unternehmerforum"**

**Parallel Sessions 09:30 - 11:00**

**Session 1.3 Interface design, Adhesives and Joining Technologies**

**09:30**
**Adhesive bonding of CFRP-Dowel lightweight constructions for car body mass production**  
Dr. Siebert, BMW Group; Dr. H. Holter, Prof. K. Diederich, Technical University of Hohenheim

**09:45**
**Cell surface treatments on fiber-reinforced plastics by pulsed laser**  
D. Feller, Dr. U. Kistbach, et al., Fraunhofer IWS

**10:15**
**Professional metal polymer hybrid parts**  
D. Seifert, Dr. M. Siedel, Studi, et al., Leibnitz Institute of Polymer Research Dresden (IP). Schütz, et al., Fraunhofer IWM

**10:45**
**Microstructuring of joining areas in aluminium alloy sheets by jet electrochemical machining**  
Dr. H. Preiss, Dr. A. Blank, et al., Fraunhofer IWU

**11:00 - 11:30 Guided tour MERGE Technology Centre, Lunch**

**Parallel Sessions 13:00 - 14:30**

**Session 3.2 Modelling and Simulation of Hybrid Structures and their Production Processes**

**13:00**
**Modelling the deformation of continuous fibre-reinforced thermoplastics subjected to hyperbolic loading**  
S. Gedde, M. Hille, BMW Group; M. Schurmann, et al., CUM

**13:25**
**Integrating modules for fiber reinforced materials into finite element simulations**  
D. Knippschild, R. Detten, N. Golding, et al., CUM

**13:45**
**Simulation of solid tire curing process for quality improvement**  
Asst. Prof. A. Chaitrabhaja, et al., King Mongkut’s University of Technology North Bangkok (TH)

**14:10**
**Modelling damage and failure in composite materials with probabilistic approach**  
Prof. P. S. K. G. Dhami, National Aviation University Kyiv (UA)

**Parallel Sessions 15:00 - 16:30**

**Session 4.3 Smart Systems Integration**

**15:00**
**Investigation on inkjet printing for electromagnetic compatibility application**  
M. Kutscher, M. Palmadrony, et al., CUM; Dr. R. Zöhrer, et al., Fraunhofer IWS

**15:20**
**Realisation of sensor functionality by integration of electromagnetic sensors in composite materials**  
D. Gudewicz, et al., CUM; M. Heinrichs, et al., Fraunhofer IWS; Dr. S. Kirche, et al., Fraunhofer ENAS

**15:45**
**Technologies for the integration of miniaturized silicon sensor systems in fiber reinforced composites**  
A. Arnold, R. Dieder, et al., CUM; F. Postl, et al., Fraunhofer ENAS

**16:10**
**Mass production enabled manufacturing and measurement technologies for hybrid laminates with sensory function**  
A. Rösch, M. Graf, et al., CUM; M. Heinrichs, et al., Fraunhofer IWS

**Session 1.4 Prototyping Materials, Semi-Finished Products and Composite Structures**

**16:00**
**Nanocarbon/Lightweight for the automotive interior**  
C. Merzenich, Daimler AG

**16:20**
**Incorporability and performance of COP-nanocomposites with epoxy resin**  
Prof. K. Clauser, Prof. M. Huber, University of Applied Sciences Kufsteins

**16:45**
**Manufacturing of lightweight parts by sandwich injection molding of metal-replacement plastics combined with light foams**  
A. Hilt, H. Pinto, Dr. P. Rink, Kunststoff Zentrum Leipzig gGmbH

**17:10**
**Laser beam melting of complexly curved honeycomb structures**  
G. Schröd, M. Brender, M. Hons, Fraunhofer BCY

Discussion/Closing remarks