

We welcome you to the joint conferences of

Future Automotive Production Conference & Werkstoffsymposium

- May 17th to 18th 2022 -



Hosted by:



CONGRESS BACKGROUND

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Further informations

Follow us on LinkedIn for informations about our keynotespeakers and possible program changes.



[Future-automotive-production-conference.de](https://www.future-automotive-production-conference.de)



[Werkstoff-symposium.de](https://www.werkstoff-symposium.de)

„One for two“

The normally annually alternating events will be held together this year at the Mobile Life Campus and in the adjacent building, the Open Hybrid LabFactory research campus, in Wolfsburg. This close cooperation results in a high diversity of presentations from research and industry, which are scheduled continuously and in a varied manner.



CONGRESS INFORMATIONS

Venue



MobileLifeCampus
Herrmann-Münch-Str.1
38440 Wolfsburg
Germany



Open Hybrid LabFactory
Herrmann-Münch-Str.2
38440 Wolfsburg
Germany

Directions



By Public Transport

The buses 203 and 204 will take you from the central station at Wolfsburg railway station almost directly to the entrance of MobileLifeCampus. It is only a few metres from the bus stop (Brücke Sandkamp) to MobileLifeCampus



By Car

Coming from A39 take exit Wolfsburg West at junction no. 3.

Parking



You can park your car directly in the parking space at MobileLifeCampus an Open Hybrid LabFactory.

PROGRAMM COMMITTEE



Prof. Dr.-Ing. K. Dröder (Chair)	IWF – TU Braunschweig
Prof. Dr.-Ing. C. Herrmann (Chair)	IWF – TU Braunschweig
Prof. Dr.-Ing. T. Vietor (Chair)	IK – TU Braunschweig
Prof. Dr. rer. pol. Reza Ashgari	Entrepreneurship Hub – TU Braunschweig
Prof. Dr. Thomas Speck	Cluster of Excellence livMatS – University of Freiburg
Prof. Dr.-Ing. Anke Müller	University of Applied Science Hof
Prof. Dr.-Ing. Jürgen Fleischer	WBK - KIT
Prof. Dr. Ir. Joost Duflou	MaPS – KU Leuven
Dr.-Ing. Marko Gernuks	Volkswagen AG
Dr.-Ing. Thomas Wolff	Kunststoff-Zentrum in Leipzig GmbH
Dr.-Ing. Lutz-Eike Elend	Mubea Group
Dipl.-Ing. Stefan Schmitt	Open Hybrid LabFactory e.V.

Dr.-Ing. Andreas Gebauer Teichmann (Chair)	Volkswagen AG group components
Dr. rer. nat. Joachim Kroos (Chair)	Salzgitter Flachstahl GmbH
Prof. Dr.-Ing. K. Dilger	Ifs – TU Braunschweig
Prof. Dr.-Ing. K. Dröder	IWF – TU Braunschweig
Dr.-Ing. Georgios Georgiadis	Excelix
Prof. Dr. Wolfram Herrmann	ContiTech AG
Prof. Dr. rer. nat. Nicole C. Karafyllis	Inst. Für Philosophie - TU Braunschweig
Frank Preller	Bertrandt AG
Dr. rer. nat. Thorsten Reier	Salzgitter Mannesmann Forschung GmbH
Dr. Lothar Schäfer	Fraunhofer IST
Prof. Dr.-Ing. Peter Wierach	DLR
Dr.-Ing. Astrid Wollenberg	Volkswagen AG

DIALOG BETWEEN ECONOMY & SCIENCE

17 MAY 2022



Listen to presentations on current developments and technologies.



Meet leading experts from economy and science.



Make new contacts and find potential project partners.

Opening

Location: *MobileLifeCampus – Lecture Room 1*



7:30 Registration

8:45 Welcome

Prof. Dr.-Ing. Klaus Dröder,
IWF TU Braunschweig
Dr.-Ing. Andreas Gebauer-Teichmann,
Volkswagen AG group components
Dr. Joachim Kroos,
Salzgitter Flachstahl GmbH

Prof. Dr. Angela Ittel
President of TU Braunschweig

Dennis Weilmann,
Mayor Wolfsburg

9:30 Keynote

Dr. Christian Vollmer,
Markenvorstand Volkswagen
Geschäftsbereich „Produktion und Logistik“

10:00 Coffee Break



PARALLEL SESSIONS

17 MAY 2022



Innovative And Smart Production

Chair: Prof. Dr.-Ing. Klaus Dröder
Location: MobileLifeCampus – Lecture Room 1

CO2-neutrale Antriebskonzepte

Chair: Frank Preller
Location: Open Hybrid LabFactory – Room 007

10:20 Wertstromkinematik – The All Kinematic Production System
J. Fleischer, WBK KIT

Sensoren zur Herstellungs- und Strukturüberwachung von Wasserstoffdruckspeichern
N. Lieber, DLR

10:40 Why Cargobikes Need To Integrate Automotive DNA
L.-E. Elend, Mubea

Holistisches Eigenschaftsprofil nichtrostender Edeltähle für alternative Mobilitätskonzepte
S. Lindner, Outokumpu Nirosta

11:00 Quantitative Method For The Investigation Of Digitized Surfaces After Fine Milling Machining
M. Mackiewicz, Volkswagen AG

Wasserstoffinfrastruktur: Sicheres Transportieren und Speichern von Wasserstoffgas in Stahlrohren
J. Mentz, Salzgitter Mannesmann Forschung GmbH

11:20 Keynote – „The Value Chain Of Alternative Raw Materials In The Mobility Sector“
Dr. Achim Ilzhöfer, Global Circular Economy Manager Covestro AG

Keynote - Nachhaltige Produktion und Life Cycle Engineering
Prof. Dr.-Ing. C. Herrmann, IWF TU Braunschweig

11:50 Lunch / Exhibition

PARALLEL SESSIONS

17 MAY 2022



Technologies for Circularity

Chair: Dr.-Ing. Marko Gernuks
Location: MobileLifeCampus – Lecture Room 1

Functional Structures

Chair: Prof. Dr.-Ing. Jürgen Fleischer
Location: MobileLifeCampus – Lecture Room 2

Bezahlbarer Automobilbau

Chair: Dr. rer. nat. Thorsten Reier
Location: Open Hybrid LabFactory – Room 007

12:50 Fatigue Life Of Refurbished Fiber Reinforced Thermoplastics

D. Weintraut, Fraunhofer IWU

Innovative Design Concepts For Battery Housings

C. Drebenstedt, Fraunhofer IWU

Leichtbau in der Automobilindustrie – Quo vadis?

A. Geffert, Salzgitter Mannesmann Forschung GmbH

13:10 FiberEUse – Reusable CFRP Structures For Automotive Applications

O. Huxdorf, Invent GmbH

Strong Mechanical Interlock Of Plastic And Hollow Metal Profiles

Dr.-Ing. M. Theunissen, Lanxess

Rührreischweißen von Aluminium-Kupfer-Mischverbindungen für die Elektromobilität

N. Eslami, Volkswagen AG

13:30 Manufacturing Of Lightweight Parts By Sandwich Foam Injection Moulding Using Recycled Thermoplastics

M. Kliem, Kunststoff-Zentrum Leipzig GmbH

Injection Molded Energy Absorber In The Front End Of A Passenger Car

A. Wüst, BASF AG

Energieeffiziente vakuumbasierte Handhabung

F. Gabriel, thyssenkrupp Nucera

13:50 TU Ecomotive: Shaping The Future Of Sustainable Mobility

L. de Laat, TU Ecomotive Eindhoven

Thermocouple Fabrication By Cold Plasma Spray

N. Mainusch, Fraunhofer IST

ScaleBat – Skalierbarer Batteriekasten für größere Stückzahlen

M. Hillebrecht, EDAG Engineering GmbH

14:10 Coffee Break / Exhibition

PARALLEL SESSIONS

17 MAY 2022



Life-Cycle Engineering

Chair: Prof. Dr.-Ing. Christoph Herrmann
Location: MobileLifeCampus – Lecture Room 1

Bio-Based Innovations

Chair: Prof. Dr. Thomas Speck
Location: MobileLifeCampus – Lecture Room 2

Nachhaltigkeit

Chair: Prof. Dr.-Ing. Peter Wierach
Location: Open Hybrid LabFactory – Room 007

14:40 A Variability Model And Software Tool For Life Cycle Engineering

L. Block, IAT Uni Stuttgart

Approaching A Smart, Modular Sustainable Interior For Future Mobility Solution

T. Seemann, Fraunhofer IST

Entwicklung nachhaltiger polymerer Oberflächenmaterialien

C. Züribg, Continental Surface Solutions

15:00 Life Cycle Evaluation Of Composite Leaf Spring

S. ter Heide, Westlake Epoxy

Sustainable Lightweight Body As A Component Of Climate-Neutral Mobility

S. Friebe, Fraunhofer WKI

Dekarbonisierung von Fabrikssystemen mit grünem Wasserstoff

C. Imdahl, Fraunhofer IST

15:20 Resource Efficiency Increase Using An Innovative Approach Within The Design And Manufacturing Phase

O. Maiß, Ecoroll AG

Investigation On The Bonding Strength Of Plywood And Plastic As Hybrid Component

W. Berlin, IWF TU Braunschweig

Latest insights into the devulcanization possibilities

H. van Hoek, University of Twente

15:40 Life Cycle Assessment At thyssenkrupp Steel

T. Uhlmann, thyssenkrupp

Biomimetic Optimization Of Household Appliance

T. Masselter, University of Freiburg

16:00 Closing / Transfer Period

16:30 VW-Tour (presence or virtual) / OHLF-Tour

EVENING EVENT at **Phaeno Wolfsburg**

17 MAY 2022 – 19:30

Location



Phaeno Wolfsburg
Willy-Brandt-Platz 1
38440 Wolfsburg
Germany

Program



19:30 Arrival
19:50 Dinner Speech
Dr. Stephan Fuchs, Toralf Hagenbruch (McKinsey & Company, Inc.) "CO2 - the new currency to pay for lightweight design"
20:15 Buffet / Networking
23:00 End

Hotels



INNSIDE Wolfsburg
Hotel Global Inn
Leonardo Hotel Wolfsburg City Center

Parking



You can park your car directly in the parking space at Phaeno Wolfsburg.



PROGRAMME

18 MAY 2022



Opening

Location: MobileLifeCampus – Lecture Room 1

8:00 Registration

9:00 Welcome

Prof. Dr.-Ing. T. Vietor, TU Braunschweig

9:10 Keynote - „Challenges And Solution Strategies For Bio-inspired Factories Of The Future“

Prof. Dr.-Ing. S. Ihlenfeldt, TU Dresden

9:40 Coffee Break / Exhibition

Opening

Location: MobileLifeCampus – Lecture Room 2

Registration

Stream - Welcome

Prof. Dr.-Ing. T. Vietor, TU Braunschweig

Stream - Keynote - „Challenges And Solution Strategies For Bio-inspired Factories Of The Future“

Prof. Dr.-Ing. S. Ihlenfeldt, TU Dresden

Opening

Location: Open Hybrid LabFactory – Room 007

Registration

Welcome

Dr.-Ing. Andreas Gebauer-Teichmann, Volkswagen AG group components

Keynote – „Die Initiative Leichtbau & das Technologie-Transfer-Programm Leichtbau“

Werner Loscheider, BMWK Referat IVB4



PARALLEL SESSIONS

18 MAY 2022



Generative Manufacturing

Chair: Prof. Dr.-Ing. Anke Müller
Location: MobileLifeCampus – Lecture Room 1

10:00 Atmospheric Pressure Plasma Sources For Additive Manufacturing
T. Neubert, Fraunhofer IST

10:20 Design Freedoms Of Lattice Structures For Interlock Bonding
R. Freund, IK TU Braunschweig

10:40 Compact Extruder
T. Jacob, Kunststoff-Zentrum Leipzig

11:00 Additive Manufacturing In The Early Production Life Cycle: Practical Insights Into Limits And Opportunities
M. Wiese, adddam

11:20 Coffee Break / Exhibition

Factories of the Future

Chair: Prof. Dr. Ir. Joost Duflou
Location: MobileLifeCampus – Lecture Room 2

Use Of A Digital Planning Table To Plan A Matrix Disassembly Of Li-Ion Batteries
Prof. Dr.-Ing. H. Brüggemann, Ostfalia Hochschule

Virtual Thin Film Deposition Processes – From Plasma Simulation To Digital Twins
A. Pflug, Fraunhofer IST

Mathematical Formulations For Generative Layout Planning In Manufacturing
M. Süße, Fraunhofer IWU

Assembly And Through Life Services In The Context Of Cloud Manufacturing And Urban Manufacturing
A. Oguz, TU Berlin

Elektrisches Fahren

Chair: Dr.-Ing. Astrid Wollenberg
Location: Open Hybrid LabFactory – Room 007

Simulative Untersuchung von Temperierungskonzepten batterieelektrischer Fahrzeuge im Gesamtfahrzeug-kontext - Einfluss der lokalen Temperaturverteilung innerhalb des Batteriesystems auf die Lebensdauer
J. F. Hellmuth, TU Braunschweig

Leichtbau-Rotor mit höherer Leistungsdichte und Systemkostenvorteil für Elektroantriebe der neuesten Generation
C. Struwe, Mubea

Fügetechnik für zukünftige Mobilitätskonzepte

Einfluss des Werkzeugverschleißes auf die Schweißqualität beim Reibpunktschweißen
D. Lauterbach, Volkswagen AG

Chancen und Möglichkeiten durch den Einsatz ultrahochfester Verbindungselemente
M. Braun, KAMAX

PARALLEL SESSIONS

18 MAY 2022



Design and Simulation

Chair: Prof. Dr.-Ing. Thomas Vietor
Location: MobileLifeCampus – Lecture Room 1

11:40 AI-Based Performance Prediction And Its Application On The Design And Simulation Of Cooling Plates For Battery Electric Vehicles
N. Klinke, Mubea

12:00 Innovative Module Design With Active And Passive Cooling Of Traction Batteries
D. Löffler, Fraunhofer IWU

12:20 Optimization Of Metal-Composite Lightweight Structures In Context Of Digital Linked Development, Manufacturing And Quality Assurance Processes
F. Folprecht, ILK TU Dresden

12:40 Materials For The Design Of Sustainable Electromobility
T. Schrader, Audi AG

13:00 Lunch / Exhibition

Reports from the Research Clusters

Chair: Stefan Schmitt
Location: MobileLifeCampus – Lecture Room 2

Cluster Of Excellence Living, Adaptive And Energy-Autonomous Materials Systems (livMatS)
T. Speck, Cluster of Excellence livMatS - University Freiburg

Potentials And Design Of A Virtual Production System For Intelligent Battery Cell Manufacturing
K. Hussein, WBK KIT

Brennstoffzellencluster
J. Beuscher, Fraunhofer IST

Internet of Production
M. Buchsbaum, WZL RWTH Aachen

Sicherheit moderner Mobilität

Chair: Dr. Lothar Schäfer
Location: Open Hybrid LabFactory – Room 007

Spannungsrisikokorrosion
H. Schneider, ifs TU Braunschweig

Ein neuer, unbeschichteter, ultrahochfester Warmformstahl für Sicherheitsbauteile
T. Böddeker, Benteler

Structural Health Monitoring unter Realbedingungen – Ergebnisse eines Feldversuchs
L. Tampe, DLR

Kundenerlebnis

Funktionelle Oberflächen und Sensoren für ein smartes Interieur
S. Stegmüller, Fraunhofer IAO

STARTUP SESSIONS

18 MAY 2022

Location: MobileLifeCampus

- 14:00 Presenting the Entrepreneurship Hub**
R. Ashgari, Entrepreneurship Hub TU Braunschweig

- 14:20 Keynote**
J. Sutor, Ideation Hub Volkswagen

- 14:50 Pitch – Probility**
M. Demes & S. Bienia

- 15:00 Pitch – eco-softfibre**
B. Wacker

- 15:10 Pitch – threedly**
S. Domdey & J. Behr

- 15:20 Pitch – LB.systems**
C. Heidermann

- 15:30 Pitch - EnerKite**

- 15:40 Panel Discussion**

- 16:00 Awards and Closing**



CONTACT

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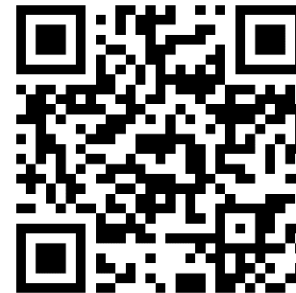
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