



International Summit

INTUITIVE VEHICLES 2021

HUMAN FACTORS-HMI-UX
CO-LOCATED WITH
AUTOMOTIVE INTERIOR

27-28 September 2021 | DAS LIEBIG | Aachen, Germany

Hosted by: **ika** Institute for
Automotive
Engineering

RWTHAACHEN
UNIVERSITY

in partnership with: **fka**

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As the transport industry evolves, the importance of collaboration and open, honest discussions between all stakeholders grows. As a **leading summit provider in the aircraft and railway interior market**, RedCabin is excited to expand its portfolio in Automotive Interior and Intuitive Vehicles-Human Factors-HMI-UX. After successfully hosted the Intuitive Vehicles Summit 2020 last year in partnership with Visteon and Borgward Group AG, **we received tremendous feedback from our delegates** that intuitive vehicles cannot be separated from automotive interior applications.

This year we are honored to **welcome ika Aachen University in partnership with fka as the host** of our two special summits, Automotive Interior co-located with Intuitive Vehicles-Human Factors-HMI-UX. Major OEMs, designers, and suppliers have already confirmed. Our delegates and partners will have a chance to **understand future trends of Automotive Interior and Intuitive Vehicles-Human Factors-HMI-UX, meet with decision makers, and enjoy our special evening networking reception at the ika RWTH Aachen University**. With limited space available, contact andreas.wibowo@redcabin.de for Automotive Interior and erutode.rume@redcabin.de for Intuitive Vehicles-Human Factors-HMI-UX.

CONFIRMED SPEAKERS

STEPHANE FERON
Human Machine Interaction Expert
PSA Groupe



ANDREAS WLASAK
Vice President Industrial Design
Faurecia



DR. MILDA PARK
Supervisor Customer Interaction
Experience Development
Ford Motor Company



AMKO LEENARTS
Design Director
Ford of Europe



HAN HENDRIKS
CTO Yanfeng Technology
Tech Center
Yanfeng International



UNIV.-PROF. DR.-ING. LUTZ ECKSTEIN
ika, RWTH Aachen University



CHRISTOPHER BROCKMEIER M. SC.
Manager Research Area Vehicle
Concepts & HMI

YANNICK OSTAD M. SC.
Group Leader HMI

DR. PHIL. STEFAN LADWIG
Manager Research Area Traffic
Psychology & Acceptance

THOMAS LENNARTZ
Vehicle Concepts & HMI

JAN BAVENDIEK M. SC.
HMI Expert



DR. NICO DEPNER
Head of Vehicle Concepts,
Body & Interior
fka GmbH

PATRICE REILHAC
R&I Director
Valeo



ALEXANDER WODRICH
Managing Director
why do birds



ANDREI TURCAN
Senior Manager Engineering
Interior-Mover
e.GO MOOVE GmbH



DR. JAN-PETER KRÄMER
Lead UX/UI Prototyping
Toolchain
Mercedes-Benz AG



CIRO PIERMATTEO
Global Technical Marketing
Automotive Interior
Covestro



CONFIRMED SPEAKERS

PROF. DR. STEFAN BECKER

Director Science/UX,
Allround Team GmbH &
Honorary Professor
Hochschule Ruhr-West (HRW)
University of Applied Science Bottrop



JONAS HOHENDAHL

Manager Prototyping
Allround Team GmbH



PIA IMMOOR M. SC.

Manager Research
Allround Team GmbH

JIM NICHOLAS

CEO
Uniphy Ltd



MICHAEL STELLMACHER

Automotive Business Development

DR. STEPHAN HARKEMA

Program Manager
Structural Electronics
TNO at Holst Centre



LOTTE WILLEMS

Business Development Manager

DR.-ING. CLAUS DORRER

Senior Manager Products,
Concepts, Implementation
User Interaction
BMW Group



ARMIN KOELKER

Sales Director EMEA
Altia Europe GmbH



DR. SUSANNE FROHRIEP

R&D Senior Manager Global
Ergonomics, Usability & Design
GRAMMER AG





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SPONSORS



Altia provides cutting-edge HMI development software and engineering services for state-of-the-art automotive user interfaces. Our mission is to help our customers get amazing GUIs on any hardware. Automotive companies around the world use Altia's model-based HMI development tools to develop and deploy visionary instrument clusters, HUDs, driver information displays and IVI systems for production vehicles. With key features like advanced 3D, support of globalized fonts and quality initiatives related to ASPICE, MISRA and ISO 26262, Altia offers the best-in-class HMI software for safety and innovation.



SEKISUI EUROPE B.V.

SEKISUI CHEMICAL Selected as One of the 100 Most Sustainable Corporations in the World for the Fifth Time. All European SEKISUI companies are part of the SEKISUI CHEMICAL Group, headquartered in Tokyo and Osaka. Located in Roermond, the European regional headquarters of the SEKISUI CHEMICAL Group, SEKISUI EUROPE B.V., acts as the connection point between Japan and Europe.

SEKISUI in Europe is able to look back on more than 50 years of experience. Customers benefit from efficient and sustainable solutions – solutions that are based on a partnership-oriented approach and reliable services. As a group of 9 companies employing around 1000 people, SEKISUI in Europe combines internal strengths to look beyond: The ultimate aim is to develop outstanding solutions that will help improve people's lives – in Europe and all over the world.

The automotive industry achieves improved comfort, safety, durability and fuel efficiencies with products from SEKISUI in Europe: The product range includes components for automotive interiors, exteriors and electronics.



At Holst Centre we develop, innovate and connect. We are an independent research and innovation centre, jointly operated by imec and TNO. We develop technology that responds to the global societal challenges of tomorrow and contributes to a healthier and more sustainable world. Our innovations are aimed at improving the vitality and wellbeing of people, and ensuring sustainable environments. We strengthen the economic power of our industry partners by developing world class, breakthrough technology solutions that they can bring to their markets. To help solve global challenges, we connect the Dutch Brainport region with a global ecosystem of industry partners and academia, enabling them to take advantage of each other's profound expertise.



Uniphy Ltd is a user experience (UX) company, offering the means to change the face of smart technology and Human-Machine Interfaces (HMI) forever. Smart technology has evolved well beyond the world of smart devices like phones and tablets. Through machine learning, IoT technology, and connectivity, we are watching the dawn of a connected world, where we can interact in a more meaningful way with a rapidly growing range of previously inanimate objects. Uniphy Ltd is at the forefront of transforming how that interaction happens. The company's intuitive, freeform-conforming touch interfaces allow brands to deliver an entirely new kind of user experience. Their patented technology removes traditional limitations on design and creativity in smart technology, and makes it easy for product designers to create beautiful freeform-conforming smart surfaces. Uniphy Ltd's technology delivers new opportunities for ground-breaking applications, and paves the way for its forward-thinking partners to drive an entirely new concept in UX.



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PARTNER



As part of **RWTH Aachen University**, the **Institute for Automotive Engineering (ika)** researches the complete vehicle including its systems and their interactions. From the initial idea to innovative component and system concepts to vehicle prototypes, the Institute's staff actively design solutions for tomorrow's mobility. To this end, we work together in public and bilateral projects with and for manufacturers and suppliers with an automotive focus to ensure that future mobility will continue to be safe, efficient and attractive.

Our team is divided into six research areas: Vehicle Concepts & HMI, Vehicle Structures, Vehicle Dynamics & Acoustics, Energy Management & Drivetrains, Vehicle Intelligence & Automated Driving and Traffic Psychology & Acceptance. With this broad spectrum of competences, we cover all areas of the motor vehicle with more than 300 employees.



For 40 years, **fka** provides customized engineering solutions for the complete vehicle. Our creative and interdisciplinary 160-strong team is inspired by a passion for safe, sustainable and user-centric mobility. Through **close cooperation with RWTH Aachen University**, **fka** ensures the rapid transfer of the latest research results into innovative products. We provide agile concept development, design, prototyping and evaluation from a single source.

MEDIA PARTNER



From the latest developments in smart surfaces and cutting edge materials, through to the best user experiences and innovations, **Automotive Interiors World** is one of the industry's leading digital publications exclusively focused on current and future technologies relevant to the **automotive interiors sector and Intuitive Vehicles – Human Factors – HMI – UX**.

Discover the new approaches, innovations, products and solutions set to shape next-generation vehicles, as well as the opportunities and challenges offered by increased vehicle autonomy and ever more sophisticated consumers, via exclusive features, the latest news, opinion and indepth analysis of key industry trends.



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WHAT YOU WILL EXPERIENCE ON SITE

KEYNOTE SPEECH

Get to know in-depth knowledge, listen and learn from car manufacturers, seat suppliers, interior suppliers and HMI experts.

INTERACTIVE PANEL DISCUSSION AND AUDIENCE Q&A

Interact with our panelists, and ensure that all of your questions are answered during these sessions.

INTERACTIVE WORKING GROUP

Get an in-depth approach to these hands-on themes. Discuss, brainstorm, elaborate and work together in this interactive session. Tutorials and workshops are also an excellent chance to interact at this perceived as the 'go-to' place for knowledge, best practice and credible solutions.

EVENING NETWORKING RECEPTION

RedCabin invites our delegates to an exclusive evening networking reception at Aachen University test drive facility.

Please contact: Erutode Rume, erutode.rume@redcabin.de | Office: +49 30 99 40 489 16 | Mobile: +49 173 187 99 36



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WHAT OUR PAST DELEGATES EXPERIENCED

„Great topics and very valuable delegates.“

Deutsche Bahn

„The organization and the location was very good.“

Daimler

„Excellent cross-industry discussion.
Relevant presentations. Engaging Workshops.“

General Motors

„Great mix of experts & companies.
Great Balance between theory and action.“

Borgward Group AG

„Great audience, very focused presentations & workshops.“

Altia

„All participants discussed openly and were interested to learn from each others experiences. The atmosphere was very pleasant and (conference) – user friendly.“

Geely Auto Technical Deutschland GmbH

„Perfect opportunity to get a better understanding and further learning about the future of the technology.“

Jaguar Land Rover Ltd.

„I liked the presentation variety. Also the initial Meet and Greet 3 minutes speed date was a very good network strategy.“

Hyundai Mobis North America

„Well mixture of presentations & working groups.“

Visteon

„Many interesting conversations and interactive design.“

IKA RWTH Aachen University

„Versatile program with speeches and interactive modules.
International/interdisciplinary audience.“

Designworks A BMW Group Company



INTUITIVE VEHICLES 2021 HUMAN FACTORS-HMI-UX CO-LOCATED WITH AUTOMOTIVE INTERIOR

27-28 September 2021 | DAS LIEBIG | Aachen, Germany

CONFERENCE DAY 1 | MONDAY 27 SEPTEMBER 2021

08:15 REGISTRATION

08:45 RedCabin and chairperson's welcome

Simone Lange – Program Director Automotive, *RedCabin*

Chairperson AUTOMOTIVE INTERIOR:

Dr. Susanne Frohriep – R&D Senior Manager Global Ergonomics, Usability & Design, *GRAMMER AG*

Chairperson INTUITIVE VEHICLES:

Prof. Dr. Stefan Becker – Director Science/UX, Allround Team GmbH & Honorary Professor, *Hochschule Ruhr-West (HRW) University of Applied Science Bottrop*

PASSENGER AND DRIVER EXPERIENCE

Joint session with Automotive Interior

09:00 KEYNOTE PRESENTATION: Next level of driving experience

Univ.-Prof. Dr.-Ing. Lutz Eckstein – *ika, RWTH Aachen University*

09:30 The new BMW iDrive – Highlights & benefits

- Modern interior with a new generation of UI/UX
- Personal relationship and natural dialogue between user and vehicle
- Optimum support for the driver and intelligent functions

Dr.-Ing. Claus Dorrer – Senior Manager Products, Concepts, Implementation User Interaction, *BMW Group*

10:00 Seamless mobility – Meeting future interior needs on slim design, dynamic lighting & functional integration

Ciro Piermatteo – Global Technical Marketing Automotive Interior, *Covestro*

Florian Dorin – Industrial Marketing Composites Automotive, *Covestro*

10:30 Announcement by SEKISUI

10:35 NETWORKING COFFEE BREAK

SOFTWARE TECHNOLOGY AND HMI

11:00 Prototype integration setups for immersive user studies

- High Fidelity Validation: Testing new HMI within existing functional environment
- Live demonstration of car area network manipulation inside factory state vehicle
- Presentation of 2D/3D HMI prototyping
- Holistic working approach to deliver complete concept for immersive testing with test customers

Jonas Hohendahl – Manager Prototyping, *Allround Team GmbH*

Prof. Dr. Stefan Becker – Director Science/UX, *Allround Team GmbH* & Honorary Professor Hochschule Ruhr-West (HRW), *University of Applied Science, Bottrop*



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CONFERENCE DAY 1 | MONDAY 27 SEPTEMBER 2021

11:30 HMI & Cloud computing

Patrice Reilhac – R&I Director, *Valeo*

12:00 UX/UI Prototyping tools for automotive HMIs

- Adaption of rapid UX prototyping tools to the automotive context
- A case study on the benefits of in-house tool development
- Integrated tooling across the complete UX development process

Dr. Jan-Peter Krämer – Lead UX/UI Prototyping Toolchain, *Mercedes-Benz AG*

12:30 Rethinking vehicle guidance

Dr. Nico Depner – Head of Vehicle Concept, Body & Interior, *fka GmbH*

13:00 NETWORKING LUNCH BREAK

INTERACTIVE SESSION: WORKING GROUPS

The audience will be divided into three groups. Each group will attend all three interactive working groups.

WORKING GROUP – 1

14:15 Multimodal HMIs onto single, freeform touch sensitive smart surface

- New design language with controls integrated on sculpted forms

- Intuitive touch interaction that reduces driver distraction
- Easy navigation and flow of menu systems
- Commodity materials and mainstream manufacturing process

HOSTED BY: **Jim Nicholas** – CEO, *Uniphy Ltd*

Michael Stellmacher – Automotive Business Development, *Uniphy Ltd*

WORKING GROUP – 2

14:15 HMI innovations enabled by printed electronics

- Smart thermoformed surfaces
 - Roadmap: Are haptics, force sensing, digital signage need-to-have or nice-to-have?
 - Adoption: What bottlenecks to solve? Discuss ideas to reduce cosmetic defects
 - Sustainability: Following regulations or business driven?
- Flexible lighting & display with mini-LEDs:
 - Use cases: Will this become mainstream?
 - Specifications: What is needed in terms of transparency/flexibility/resolution/cost?
- Large area printed sensors:
 - What is roadmap for sensors in car seats and steering wheels? Vital signs? Drowsiness?
 - Which technology: SMD or printed?

HOSTED BY: **Dr. Stephan Harkema** – Program Manager Structural Electronics, *TNO at Holst Centre*

CONFERENCE DAY 1 | MONDAY 27 SEPTEMBER 2021

Lotte Willems – Business Development Manager,
TNO at Holst Centre

WORKING GROUP – 3

14:15 Usability testing of HMI systems

HOSTED BY: **Dr. Milda Park** – Supervisor Customer Interaction
Experience Development, *Ford Motor Company*

16:15 NETWORKING COFFEE BREAK

16:45 CONTINUING WITH WORKING GROUPS 1, 2 AND 3

17:45 RESULTS

*Each moderator of the interactive working group is presenting
the outcome of their session.*

18:15 CLOSING REMARKS BY THE CONFERENCE CHAIRPERSON

END OF CONFERENCE DAY 1





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CONFERENCE DAY 2 | TUESDAY 28 SEPTEMBER 2021

08:30 REGISTRATION

09:00 Chairperson's welcome

Chairperson AUTOMOTIVE INTERIOR:

Dr. Susanne Frohriep – R&D Senior Manager Global Ergonomics, Usability & Design, GRAMMER AG

Chairperson INTUITIVE VEHICLES:

Prof. Dr. Stefan Becker – Director Science/UX, Allround Team GmbH & Honorary Professor, Hochschule Ruhr-West (HRW) University of Applied Science Bottrop

PASSENGER AND DRIVER EXPERIENCE

Joint session with Automotive Interior

09:15 How do we combine digital & physical features to create intuitive meaningful unique user experiences in the vehicle

Han Hendriks – CTO Yanfeng Technology, Tech Center, Yanfeng International

09:45 Humanized technology

- Human centered design and architecture
- The car as the final retreat to disconnect
- Full integration of HMI and interior design

Andreas Wlasak – Vice President Industrial Design, Faurecia

INTERACTIVE SESSION: PANEL DISCUSSION

10:15 How will future mobility shape interior design and HMI?

MODERATOR: **Christopher Brockmeier M. Sc.** – Manager Research Area Vehicle Concepts & HMI, *ika, RWTH Aachen University*

PANELISTS: **Amko Leenarts** – Design Director, *Ford of Europe*

Andreas Wlasak – Senior Vice President Industrial Design, *Faurecia*

Han Hendriks – CTO Yanfeng Technology, Tech Center, *Yanfeng International*

Andrei Turcan – Senior Manager Engineering Interior-Mover, *e.GO MOOVE GmbH*

10:45 NETWORKING COFFEE BREAK

HMI CONCEPTS FOR FUTURE VEHICLES

11:15 HMI-Aspects of cockpit architecture: Importance of user research

- Displays: Size and location
- Integration of controls and dedicated switches
- HMI and automation
- Research approaches for covering the open questions

Prof. Dr. Stefan Becker – Director Science/UX, Allround Team GmbH & Honorary Professor Hochschule Ruhr-West (HRW), University of Applied Science, Bottrop



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CONFERENCE DAY 2 | TUESDAY 28 SEPTEMBER 2021

CO-AUTHORS: **M. SC. Pia Immoor** – Manager Research,
Allround Team GmbH

Dipl. Des. Thomas Sulzbach – *Allround Team GmbH*

11:45 New generation of ADAS HMI in PSA car

- UX challenge of the former solution
- Design methodology to design the new generation
- User test during design phases
- Presentation of the serial solutions

Stephane Feron – Human Machine Interaction Expert,
PSA Groupe

12:15 Sounds in and around the vehicle

Alexander Wodrich – Managing Director, *Why do birds*

12:45 NETWORKING LUNCH BREAK

INTERACTIVE SESSIONS: WORKING GROUPS

The audience will be divided into three groups. Each group will attend each interactive working group.

WORKING GROUP – 1

14:00 Chances and Challenges for emotional intelligent HMI systems in the vehicle

HOSTED BY: **Yannick Ostad M. Sc.** – Group Leader HMI,
ika, RWTH Aachen University

Dr. phil. Stefan Ladwig – Manager Research Area Traffic Psychology & Acceptance, *ika, RWTH Aachen University*

WORKING GROUP – 2

14:00 The future of HMI for electric vehicles

- What are the likely upcoming trends for electric vehicle (EV) HMI?
- What are the biggest areas of concern when it comes to getting EV HMI right?
- What is “state of the art” for HMI in electric vehicles?
- What are strategies for OEMs to effectively balance low power requirements and demand for features in EVs?

HOSTED BY: **Armin Koelker** – Sales Director EMEA,
Altia Europe GmbH

WORKING GROUP – 3

14:00 Adaptivity vs. consistency in future HMI systems

HOSTED BY: **Thomas Lennartz** – Vehicle Concepts & HMI,
ika, RWTH Aachen University

Jan Bavendiek M.Sc. – HMI Expert, *fka GmbH*

16:00 NETWORKING COFFEE BREAK



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CONFERENCE DAY 2 | TUESDAY 28 SEPTEMBER 2021



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16:30 CONTINUING WITH WORKING GROUPS 1, 2 AND 3

17:45 RESULTS

Each moderator of the interactive working group is presenting the outcome of their session.

18:15 CLOSING REMARKS OF PROF. DR. STEFAN BECKER

END OF CONFERENCE



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DATE	2 DAY CONFERENCE INVESTMENT
ORIGINAL INVESTMENT	2.995 € + VAT

SUMMIT VENUE

DAS LIEBIG
Liebigstraße 19
52070 Aachen
Germany



DAS LIEBIG

EVENING NETWORKING RECEPTION

ika | RWTH AACHEN UNIVERSITY
Steinbachstraße 7
52074 Aachen
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FOR FURTHER INFORMATION, SPONSORSHIP OPPORTUNITIES OR REGISTRATION PLEASE CONTACT:

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