

4<sup>th</sup> International VDI Conference 2017

# Automotive HMI & Connectivity

July 5–6, 2017, Berlin, Germany

- Different interfaces demanded by automotive OEMs
- Future of Vehicle Cockpit HMI System and Architecture
- In-Cabin Context Awareness in Automated Vehicles
- Designing comfortable Interactions in Automated Vehicles
- UX 2020 – 2025: “What’s next?”
- Innovation using Facial Biometric Tech
- User-centered Infotainment Evaluation in the Age of Consumer Electronics

+ International VDI Workshop

Meet experts from the following companies:



An event organized by VDI Wissensforum GmbH

<http://www.vdi-international.com/hmi>

CONCAR EXPO 2017

Includes free entrance to the ConCarExpo 2017!

## Who shall attend the 4<sup>th</sup> Automotive HMI & Connectivity Conference?

This technical conference provides a professional forum for all experts who are working in the fields of HMI Design and Development

- Engineers, technologists, designers and specialists from car makers
- Managers and staff from HMI, electronics and connectivity departments
- Experts who are working in the fields of HMI Design and Development
- Designers, developers, engineers and technical experts from car suppliers

### Explore the connected automotive Ecosystem

The **"HMI & Connectivity"** is part of the ConCarExpo – The leading International Trade Fair for Connected Car & Mobility Solutions in Europe. The ConCarExpo unites four technical conferences, a huge range of international exhibitors, innovative start-up pitches and excellent networking opportunities in the connected automotive ecosystem.



### Visit four parallel running conferences with one ticket

4<sup>th</sup> International VDI Conference  
**HMI & Connectivity**

3<sup>rd</sup> International VDI Conference  
**IT Security for Vehicles**

4<sup>th</sup> International VDI Conference  
**Automated Driving**

1<sup>st</sup> International VDI Conference  
**Digital Infrastructure  
& Automotive Mobility**

#### Your benefits:

**4 for 1**  
Four high class technical international conferences with one ticket

+ 100  
**International exhibitors**  
at ConCarExpo

+ 100 **Speeches**  
at the four conferences  
and on the exhibition floor

**Over 500 Attendees**  
at the conferences and  
**1500 Trade Fair Visitors**

**Networking Hotspots**  
Huge evening reception,  
roundtables, workshops,  
world cafés

+ 20% **International  
OEM Delegates**

**Car Pavillion and  
User Experiences**

**16 Start  
up-Pitches**

08:30 Registration & welcome coffee

**09:30 Opening Speech ConCarExpo at the ConCar Forum Stage: Autonomous Driving, Digital Infrastructure & Mobility Solutions as Key Drivers for the Automotive Industry**

Johannes Jungwirth, Chief Digital Officer, Volkswagen AG, Germany

**10:10 Chairs' welcome and opening address**

Dr. rer. physiol., Dipl. Psych. Stefan Becker, Supervisor Global Core HMI, Vehicle Engineering / Interaction & Ergonomics, Ford Werke GmbH, Germany

Prof. Dr.-Ing. Gerrit Meixner, Director, UniTyLab, Hochschule Heilbronn, Germany

**I. Control Displays and Cockpit Architecture**

**10:15 Breaking Down the Automotive E-Cockpit Design Challenge**

- Multiple displays – Sharing content between screens, theme similarity, design reuse, multiple rendering pipelines
- Performance and footprint – Maximizing use of hardware capability to reduce unneeded resource usage
- Third party content – Safe vs. open environments, safety-critical vs. connected functionality
- Leveraging embedded chip resources with Altia – Native C code, Layer manager, safety
- Embedded hardware support

Stephan Häfele, Managing Director, Altia Europe GmbH, Germany

**10:45 Future of Vehicle Cockpit HMI System and Architecture**


- Our vision for the future cockpit systems
- System structure
- Consideration on its computing architecture
- Key factors: Performance design, software and cyber security

Masashige Mizuyama, CTO Infotainment Business, Panasonic Corporation, Japan

**11:15 In-Cabin Context Awareness in Automated Vehicles**

- Context as the basis of affective computing
- Challenges of understanding human behaviors
- Opportunities for HMI differentiation
- Towards personalized learning HMIs

Dr. Ignacio Alvarez, Staff Research Scientist, Intel Labs, Intel Corporation, USA

11:45  Networking & coffee break

**12:15 The Road to Autonomous Driving**


- Application of IoT devices – Telematics/tracking
- Navi solutions for connected mobility
- Computer annotation – Image processing
- IoT trend in India

Shivalik Prasad, Executive Director, Business Department, Map My India, India

**12:45 Paradigm Shift: “Connected Car to Smart Mobility” & Panasonic Silicon Valley Center Concepts**

- Our vision for Smart Mobility
- System Structure – Smart Cars to Smart Mobility to Smart Cities
- Consideration on Information Architecture & Personalization
- Key factors: Benefits for the end users around Contextual Discovery with Actions/Transactions and Federated Security

Hakan Kostepen, Managing Director – Strategy & Innovation, Product, Strategy & Planning, Panasonic Automotive, USA

13:15  Lunch & visit of the accompanying trade fair ConCarExpo

**II. Usability, User Experience and HMI Development Processes**

**15:00 Automotive UX Design in a Silicon Valley Start Up**


- Rethinking the automotive UX design process in this new age
- How UX design is critical to building the brand
- The Lucid Motors working process and examples
- Reaping the benefits of being in Silicon Valley

Nathan Barbour, Lead UX Designer, co-author: James Felkins, Senior UX Designer, both: Lucid Motors, USA

**15:30 Take-Over Procedures for level 3 autonomous Vehicle**

- Understanding Human factor challenges in transition and HMI requirements
- HMIs in Autonomous Driving, User Experience, Testing and Results – What consumers really need and want
- Recommendations for autonomous take-overs in HMI development

Stéphane Feron, HMI Expert, Groupe PSA, France

16:00  Networking & coffee break

**16:30 Blockchain Technology – An Opportunity not to be missed in Automotive**

- Why Blockchain technology is relevant for automotive HMI & Connectivity
- How does Blockchain work?
- Blockchain case studies for Automotive
- How to get started with Blockchain

**Dipl.-Wirt.-Inform. Hardy Gröger**, Executive Architect & Client Technology Leader, IBM Deutschland GmbH, Germany, co-author: Dr. Sebastian Wedeniwski, CTO Automotive Industry, Sales & Distribution Industrial Sector, IBM, Japan

**17:00 Designing comfortable Interactions in Automated Vehicles**

- Passenger comfort experience as the key user requirement
- Challenges of enabling Non Driving Related Tasks (NDRT)
- Compatibility between NDRT and system trust
- Conceptual design framework for passenger comfort experience in AVs

**Dr. Cyriel Diels**, Senior Lecturer in Human Factors, Centre for Mobility and Transport, Coventry University, UK

17:30 Chair's remarks

**17:45 Evening Keynote on the ConCar Forum Stage:  
Volvo Cars Development of Autonomous Electrified Vehicles in  
Cooperation with Uber**

**Kent Melin**, Senior Technical Leader, Electrical System design, Volvo, Sweden

**18:30 End of conference day one****Get-together with Participants of all parallel Conferences**

At the end of the first conference day we kindly invite you to use the relaxed and informal atmosphere for in-depth conversations with other participants and speakers.

**09:15 Innovation using Facial Biometric Tech**

- Innovative HMI features based on facial biometric technologies
- How we can use facial biometric tech, in today's vehicle, level 3 vehicle and level 4 vehicle
- Facial Biometric tech, to solve problems with the focus of the driver and fatigue/drowsiness
- Results that we collected during our 300.000 km of tests

**André Azevedo, B.E.E.**, Co-Founder, Business Development, co-authors: Filipe Monteiro, M.E.E., CTO and Filipe Oliveira, Pos-Grad Economic and Business, Co-Founder, all: Healthy Road, Portugal

**09:45 Automotive branding – World Class User Experiences in connected Cars**

- Smartphone level user experience through personalized UIs
- Own automotive brand identity – User interfaces, connectivity and safety
- Automotive electronics, consumer devices and the IoT under one single interface
- Updating automotive software on the fly

**Ying Xiong, M.Sc.**, Managing Director, Marketing, Rightware, Finland

**III. Connectivity and connecting external Devices – Consumer Electronics for Automotive****10:15 Highly Automated Driving – Components for Driver Vehicle Interaction**

- User centered design process: Challenges and requirements
- Driver vehicle interaction: Concept overview and selected components
- Central input device: User centered design and technical concept
- User perspective: First user clinic findings

**Dipl.-Psych. Bettina Leuchtenberg**, Leading Technical Expert HMI, Usability & Ergonomics, co-author: Dr. Thomas Vöhringer-Kuhnt, Head of CoC HMI, both: Continental Automotive GmbH, Germany

10:45  Networking & coffee break

**11:30 Common Interface Architecture for Smartphone Connectivity**

- Smartphone connectivity mechanisms bring in the best of both
- Apple CarPlay, Google Android Auto, Baidu CarLife and MirrorLink demanded by automotive OEMs
- Common interface to the application layer enables smoother and faster integration of smartphone connectivity
- Define a plug-in based scalable software architecture to provide common easy-to-use interfaces

**Silvy Samuel, B.E. Electronics & Communications**, Senior Specialist, Transportation Business Unit, co-authors: Shehan P.R. and Vinu V.S., all: TATA Elxsi, India

#### 12:00 eRoaming: New Business Opportunities in Europe's Digital Electric Vehicle (EV) Charging Network


- Interchange – International interoperable EV charging with maximum transaction cost efficiency
- New added values that will make EV driver's life easier
- Future Trends and perspectives

**Dipl.-Wirtsch.-Ing. Thomas Daiber, MBE, CEO, Hubject GmbH, Germany**

#### 12:30 User-centered Infotainment Evaluation in the Age of Consumer Electronics

- Usability testing methods and processes
- Rapidly changing software and design requirements
- Alignment of user testing with software and hardware development processes

**Dr. Rami Zarife, Senior HMI Engineer, Infotainment & Telematics, Adam Opel AG, Germany**

13:00  Lunch & visit of the accompanying trade fair ConCarExpo

### IV. Assistant and Autonomous Driving

#### 14:45 Hands Off Detection – Safe Transition between Assisted and Automated Driving

- Capacitive sensing for reliable hands on /off detection
- Key information to determine when the driver controls the vehicle
- Supports LKAS as well as high automation levels
- Monitors transition between manual and automated driving modes

**Alexander Treis, Business Development Manager, IEE S.A., Luxembourg**

#### 15:15 Virtual Reality Driving Simulation

- Introduction and Overview
- Increasing immersion: Combining VR and a real car
- Problems, challenges and solutions
- Integration in the KoFFI research project

**Hieu Lê, M.Sc., Research Assistant, UniTyLab, Hochschule Heilbronn, Germany**

### V. Trends and Future Prospects – Advances and Visions

#### 15:45 Transforming the Future of Mobility


- Analyze the changing landscape of urban mobility requirements and the requirements for any successful new mobility service
- Examine the global trends of new mobility services and changing user needs: What are some lessons for OEMs transitioning into mobility service companies
- Learn how big data and analytics can predict user demands and enable smarter mobility services
- Learn how platforms can automate the entire market entry into mobility-as-a-service, including workflow, end to end, dispatch, scheduling, balancing supply, demand, CRM and payments

**Paul Drysch, Vice President, Business Development and GM of APAC Region, RideCell, USA**

#### 16:15 UX 2020 – 2025: "What's next?"

- UX cockpit platform from AD level 2-4
- Hybrid cloud architecture for personalized and contextualized UX
- Impact of 5G on UX

**Dipl.-Ing. Patrice Reilhac, Innovation Director, Comfort and Driving Assistance Business Group, Valeo, Germany**

16:45  Farewell coffee in the accompanying trade fair ConCarExpo

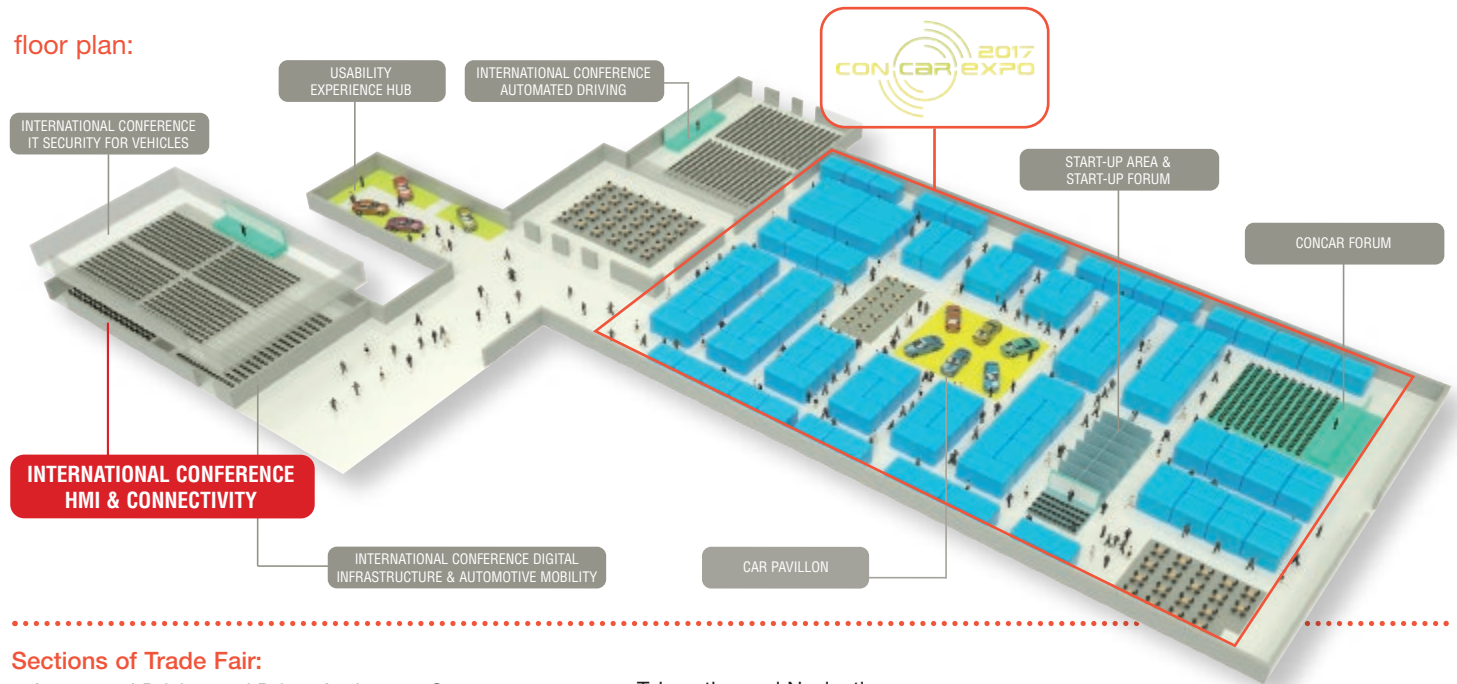
#### 17:00 End of conference



# Automotive HMI & Connectivity

## is part of the ConCarExpo 2017

floor plan:



### Sections of Trade Fair:

- Automated Driving and Driver Assistance Systems
- Electronic Components, Monitoring and Control Technology, Sensor Technology
- Software and Networked Systems, Infotainment
- Telematics and Navigation
- HMI, Operation and Display
- Diagnosis, Test, Integration, After-sales-service
- Traffic Engineering, Infrastructure, Automotive Mobility

91%

of visitors rate ConCarExpo 2016 as good to excellent

78%

rate the quality of visitors as excellent

93%

of conferences delegates rate the conference as good to excellent

82%

of exhibitors rate the marketing platform ConCarExpo as very good

If you want to meet with and reach out to the first-rate experts attending the 4 International VDI Conferences and the International trade fair ConCarExpo and to powerfully present your products, become an exhibitor at ConCarExpo! For further information please contact our ConCarExpo-Team:

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Visit our website for more information: [www.concarexpo.com](http://www.concarexpo.com)

# UI Asset Creation to Implementation Readiness in one Platform

## Workshop Chair:

Christopher P. Giordano, Cp.E.,  
Vice President – Automotive  
Division, DISTI, USA

## Date and venue:

July 7, 2017  
Berlin, Germany

## Time:

10:00–17:00

## Content

Create your own UI application and visually develop the logic in a hands on workshop. Learn about functional safety as it pertains to UI content and its associated software systems.

## Discussion: Reliable UI Development

- UI asset creation
- Application portability
- Implementation readiness

## Workshop: Rapid UI Development and Iteration

- Hands-on practical session to create your own instrument cluster and visually build your own control logic

**Note:** No programming required, bring your own laptops.

## Discussion: Understanding Functional Safety for UI

- ISO 26262 ASIL rated UI
- Appropriate architectures
- Related systems

## Fun and interactive workshop

## Terms and Conditions

**Registrations:** Registrations for conference attendance must be made in writing. Confirmation of your registration and the associated invoice will be mailed to you. Please do not pay your conference attendance fee until you have received our invoice and its invoice number to be stated for transfer. German VAT directives apply. Please state your VAT-ID with your registration.

## Conference venue

ESTREL Hotel  
Sonnenallee 225  
12057 Berlin  
Email: [reservierung@estrel.com](mailto:reservierung@estrel.com)  
Website: [www.estrel.com](http://www.estrel.com)



You will find more hotels  
close to the venue at  
[www.vdi-wissensforum.de/hrs](http://www.vdi-wissensforum.de/hrs)

**Hotel room reservation:** A limited number of rooms has been reserved for the benefit of the conference participants at the ESTREL Berlin. [reservierung@estrel.com](mailto:reservierung@estrel.com) – Please refer to “VDI Con Car Expo”  
For more hotels: [www.vdi-wissensforum.de/hrs](http://www.vdi-wissensforum.de/hrs)

**VDI Wissensforum service package:** The conference package includes the conference documents (online), beverages during breaks, lunch and the get together on July 5, 2017.

**Conference attendance conditions and terms:** By way of your registration you accept the conference attendance conditions and terms of VDI Wissensforum GmbH as binding. Any cancellation of your registration must be made in writing. We will charge you only an administrative fee of € 50.00 plus German VAT if you cancel your registration earlier than 14 days ahead of the conference date. Any cancellation that reaches us after this deadline will entail the conference attendance fee as stated in our invoice to be charged in full. The date of the post office stamp of your written cancellation will be the decisive criterion. In that case, we will gladly mail you the conference documents on request. Subject to agreement, you may name a substitute participant. Individual parts and sections of conferences and seminars cannot be booked. You will be informed without delay if an event has to be cancelled for unforeseeable reasons. In that instance, you will be entitled only to a refund of your conference attendance fee if already paid. We reserve the right to exchange speakers and/or change the program sequence in exceptional cases. In any case, the liability of VDI Wissensforum GmbH is restricted exclusively to the conference attendance fee.

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# Registration

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<http://www.vdi-international.com/hmi>



Please choose your price category

**Participation Fee + VAT**

- ☐ **VDI Conference 05.–06.07.2017**  
(01KO901017) € 1,690
- ☐ **Workshop 07.07.2017**  
((01ST160001) € 850
- ☐ **Package Price**  
(conference and workshop) € 2,280

**Personal VDI members + VAT**

- ☐ **VDI Conference 05.–06.07.2017**  
(01KO901017) € 1,590
- ☐ **Workshop 07.07.2017**  
((01ST160001) € 800
- ☐ **Package Price**  
(conference and workshop) € 2,130

☐ I am interested in sponsoring and/or exhibition

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Please state your invoice address if this differs from the address given

**Participants with an invoice address outside of Austria, Germany and Switzerland are kindly requested to pay by credit card:**

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