GRAZ SYMPOSIUM
VIRTUAL VEHICLE
SEP 1-2, 2020
Seifenfabrik/ Graz, Austria

System Integration and Virtual Validation
Processes, Methods, Tools and Applications - A Disruptive Change in Vehicle Development

BENEFIT = VALUE - COSTS
- Reduced Real Tests
- Reusability
- Improved Designs
- Speed
- Licences, IT Infrastructure
- Expert/Training
- Modelling & Sim. Efforts
- Management Efforts

Organized by:
#gsvf20
www.gsvf.at

Partners 2020:
WELCOME TO THE 13th GSVF!

Vehicle development in the era of digitalization is driven by significant changes – just consider e.g. new complex systems and highly interacting vehicle functions. The big challenge: The value of new approaches needs to be higher than the costs – only this will create real benefit.

GSVF 2020 addresses recent advances in system integration and virtual validation and its optimal combination with physical testing. Industry currently moves away from strictly vertical to broadly horizontal vehicle development approaches. How to cope with related complexity, uncertainties, quality, costs and timely delivery to achieve the main goal: to ultimately accelerate system delivery ensuring global competitiveness and market shares.

The 13th GSVF focuses on new trends, methods, and tools for:
- Model-based Systems Engineering
- Continuous Integration and Deployment
- Engineering Automation and Agile Processes
- Cloud and Edge Integration and related Architectures
- Challenges of Virtual Validation
- Data Availability / Traceability / Analytics
- Machine Learning in Development and Operation
- Considering Emerging Standards
  (Scenarios, simulator interfaces, architectures, functional safety, security etc.)

We are happy to welcoming you in Graz!

PROGRAM COMMITTEE

Dr. Phil Barber | Jaguar Land Rover Limited
Jan Becker | Stanford University
Dr. Michael Paulweber | AVL List GmbH
Simon Fürst | BMW AG
Christoph Gümbel | future matters
Dr. Michael Holzner | iCONDU
Severin Stadler | Magna Steyr
Ulrich Schulmeister | Robert Bosch GmbH
Dr. Martin Schuster | Audi AG
Prof. Dr.-Ing. Rainer Stark | Fraunhofer IPK
Prof. Dr. Hermann Steffan | VSI TU Graz
Prof. Dr. Martin Törngren | KTH, Stockholm
Dr. Gerd Rapin | VW AG

Many thanks to:

Dr. Jost Bernasch
VIRTUAL VEHICLE
General Chair

Prof. Dr. Daniel Watzenig
VIRTUAL VEHICLE
Program Chair

Dr. Martin Benedikt
VIRTUAL VEHICLE
Program Chair

Dr. Filip Kitanoski
VIRTUAL VEHICLE
Industrial Chair
**KEYNOTES**

**KEYNOTE**  Sep 1, 09:15

Christian Jung

**KEYNOTE**  Sep 1, 10:35  

**ONLINE**

Jan Becker  
President, CEO  
and Co-Founder  
Apex.AI, Inc.

**KEYNOTE**  Sep 1, 11:30  

**ONLINE**

Ulrich Schulmeister  
VP Engineering,  
Head of Systems Engineering  
Robert Bosch GmbH

**KEYNOTE**  Sep 2, 13:30

Hans Adlkofer  
Vice President  
Automotive System Group  
Infineon Technologies AG

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**Program**

**Sept 1, 2020**

08:00  
REGISTRATION  
Welcome Coffee & Breakfast

09:00  
OPENING  
Jost Bernasch | VIRTUAL VEHICLE

09:15  
KEYNOTE  
Christian Jung  
SIMULATION BASED DEVELOPMENT OF ELECTRIC VEHICLE PROJECTS:  
- How New Entrants to the Market Execute and Integrate  
- Challenges and Solutions from a Vehicle Level Perspective

09:55  
Talk  
Jost Bernasch | VIRTUAL VEHICLE  
Future of Vehicle Development

10:35  
KEYNOTE ONLINE  
Jan Becker, Apex.AI, Inc.  
Enabling Efficient Development of Safe and Certified Software for Automated Driving Applications

11:05  
Networking Break

11:30  
KEYNOTE ONLINE  
Ana Gallet, Ulrich Schulmeister | Robert Bosch GmbH  
Transformation from Component to System Supplier

12:10  
Lunch Break
Room 1: Continuous Development
Session Chair: Benedikt Martin

14:10 Puntigam Wolfgang | AVL
The Augmented Development Ecosystem

14:35 Steindl Michael | AVL
Agile Embedded Software Development and Verification Approach for ADAS/AD Systems

15:00 Reiterer Stefan | VIRTUAL VEHICLE
Continuous Deployment of ADAS Functions over the Air

15:25 Coffee Break

Room 1: Virtual Prototypes
Session Chair: Zoier Markus

16:45 Zehetner Josef | AVL - canceled
Digitalization of Prototypes in the Vehicle Development Process

17:10 Tiemann Maik | TU Berlin
User Centered in-the-Loop Test Methodology for Future ADAS Development

17:35 Vanhuyse Johan | Siemens ONLINE
Generative Engineering: a Methodology for Automatically Generating and Evaluating Mechatronic System Concepts

18:00 Networking & Beer & Shuttle

19:30 EVENING EVENT at FREIBLICK
hosted by VIRTUAL VEHICLE

Room 2: Scenarios Generation
Session Chair: Stettinger Georg

14:10 Ruppert Timm | TU Darmstadt
Macroscopic Safety Requirements for Highly Automated Driving in Urban Environments

14:35 Bagschik Tim | dSpace GmbH ONLINE
Release of Automated Driving Functions - The Necessity of Data-Driven V&V Strategies

15:00 Wimmer Peter | VIRTUAL VEHICLE
Towards Harmonizing Prospective Effectiveness Assessment for Road Safety: Comparing Tools in Standard Scenario Simulation

Room 2: Mixed/Coop. Traffic
Session Chair: Wimmer Peter

16:45 Solmaz Selim | VIRTUAL VEHICLE

17:10 Balci Sinan | Volkswagen AG
Radmilovic Zoran | VIRTUAL VEHICLE
MUlti-vehicle Simulation Environment

17:35 Sjöberg Katrin | Scania ONLINE
State of Play – V2X Communication
**Wed September 2, 2020**

08:00 *Welcome Coffee*

**Room 1: State of the Art Tooling** (15 min each)  
Session Chair: Krammer Martin

08:30 **Wrasse Kevin** | **Contact Software**  
Natural Language Processing Approaches for an Accelerated Search for Similar Requirements

08:45 **Daniel Siegl** | **LieberLieber**  
Development of a Domain-specific Language for Modeling Component Versions and their Dependencies

09:00 **Dörr Sebastian** | **Conweaver**  
Digital Engineering with Traceability Graphs

09:15 **Becker Martin** | **Mathworks ONLINE**  
Modeling Best Practice for ISO 26262 Compliance

09:30 **Günther Hasna** | **Ansys GmbH**  
Drive simulation for ADAS sensor verification

09:45 **Roggero Marco** | **Mathworks ONLINE**  
Creation and Variation of Traffic Scenarios for Virtual Validation of Automated Driving Systems

10:00 **Networking Break**
10:15  
ROUND TABLE "X-Architecture"  
Automotive Abstract Platform Description (VFB++)  
Michael Niklas | Continental Automotive GmbH

ROUND TABLE "Cloud Calibration"  
A Cloud-based Development Environment for Quantification of Realworld Emissions  
Fuchs Christian | Etas GmbH

ROUND TABLE "Safety"  
Enabling Verification and Certification of Autonomous System – A Formal Verification Approach  
Jinwei Zhou | Kontrol Tech

ROUND TABLE "Sensor Constellations"  
Methodology to Determine Test Scenarios to Evaluate Sensor Constellations  
Gogri Monish | University of Applied Sciences, Kempten

11:30  
Lunch Break

13:30  
KEYNOTE  
Hans Adlkofer | Infineon Technologies

DEMO INTERACTIVE ZONE:  
Spider Mobile AD Testing Platform

VIRTUAL VEHICLE Booth:  
Automated Drive Demonstrator  
EU-projects: Autodrive, Inframix, AEGIS, EVOLVE, InSecTT  
DATABEAM – Synchronized Wireless Information Platform  
First Insights: Next Generation Simulation Technology & Software Defined Vehicles

10
Room 1: Maturity
Session Chair: Kitanoski Filip

14:15 Urspruch Oliver | Knorr Bremse, Germany
Virtual Validation for Certification of Railway Vehicles focusing on Brake Systems

14:40 Moshammer Thomas | Siemens Mobility Austria GmbH, Austria
Development of a Bogie-Diagnostics-System in the Age of the Internet of Trains (IoT) and Artificial Intelligence (AI)

15:05 Short Break

15:15 Summary

15:30 Farewell with drinks & snacks

16:00 End of GSVF 2020

Room 2: Sensors & Integration
Session Chair: Solmaz Selim

14:15 Grassmann Cyprian | Infineon Technologies AG, Germany
Radar Scenario Simulation and Radar Model Integration

14:40 Marko Nadja, Priller Peter | VIRTUAL VEHICLE, AVL
Challenges of engineering safe and secure highly automated vehicles
GSVF MAIN VENUE
Sep 1-2, 2020
SEIFENFABRIK
Angergasse 41-31
8010 Graz

EVENING EVENT
Sep 1, 19:30
FREIBLICK
Kastner & Öhler, Sackstraße
Entrance: Badgasse
Welcome to Graz!

Graz, the 2003 European Cultural Capital, a UNESCO World Heritage Site and an insider tip for connoisseurs – visitors to Graz can enjoy the Mediterranean flair, the world heritage of the picturesque historic quarter, spacious parks and architectural highlights.

Graz is a vibrant regional capital and home to a wide variety of regional Styrian specialties (with world-famous wines and dark pumpkin seed oil leading the way). The Mediterranean flair is omnipresent, from charming pub gardens and quaint farmers’ markets to narrow alleys, lively squares and dreamy courtyards.

For further information, please visit:

www.graztourismus.at

COVID Safety Measures

In the last 13 years, GSVF has been held annually as a meeting place for the vehicle industry. That’s how it will be in 2020, too, and we keep distance and preserve what’s popular.

Please note that there are assigned seats in the plenary, you will get your number after registration at the reception desk.

Please use your mouth-nose-protection for the entrance & exit.

- Safe check-in
- Disinfection stations
- Electronic documents
- 1-meter distance
- Mouth/Nose Protection
- Online Proceedings
- Covid-19-Manager

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For further information, please visit:

www.graztourismus.at
Organization: Virtual Vehicle Research GmbH, Inffeldgasse 21A, 8010 Graz - in cooperation with Graz University of Technology

Venue: Seifenfabrik - Angergasse 41-43, 8010 Graz, Austria

Contact and Information: Please direct your questions regarding organisation, sponsoring and exhibition of this event to the attention of:

Julia D'Orazio, MA      Tel.: +43 316 873 9094      Mail: gsvf@v2c2.at

GET CONNECTED:

Download Abstracts & Contributions:
Link: www.v2c2.at/download
Login: 13gsvf20

IMPORTANT DATES:

Sep 1, 09:00       Opening, 1st Day GSVF
                  Seifenfabrik, Angergasse 41, 8010 Graz

Sep 1, 19:30       Evening Event at „Freiblick”
                  Kastner & Öhler, Sackstraße. Entrance: Badgasse

Sep 2, 08:30       2nd Day GSVF
                  Seifenfabrik, Angergasse 41, 8010 Graz

Many thanks to: