DSC

24-26 SEPTEMBER 2025

GUIDEBOOK

DSC 2025 EUROPE XR

Driving Simulation & eXtended Reality Conference & Exhibition

Haus der Wirtschaft, Stutgart | Germany

Organized by

DSA

With the cooperation and support of

Arts et Métiers Sciences et Technologies

Université Gustave Eiffel

Renault Group

SIA Société des Ingénieurs de l'Automobile

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FKFS RESEARCH IN MOTION.

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The Driving Simulation Conference gathers driving simulation specialists from the industrial and academic communities as well as commercial simulation providers. This 24th edition follows that of 2024, held in Strasbourg, in a hybrid version with about 300+ participants. The exhibition is coming back towards more than 40 professional exhibitors and up to 400 on site participants. With about 80 speakers in scientific and industrial product solution sessions, keynotes, tutorials and round tables, you will get the latest trends in XIL (MIL, SIL, HIL, DIL, VIL, CIL) and XR simulation for ADAS, automotive HMI and driving simulation design, motion sickness and rendering, as well as connected and autonomous vehicle verification and validation.

Themes include state of the art in driving simulation technology, research and developments, extended with progressively emerging virtual and augmented reality (XR) developments. This year's program will also host a special session on virtual validation and certification tools for autonomous and connected vehicles along with advanced driving assistance system (ADAS) applications. Human factors and motion rendering nevertheless will stay as a now traditional axes of the conference.

You are welcome to the DSC 2025 Europe Conference organized by the Driving Simulation Association, in cooperation with Arts et Métiers Institute of Technology and Gustave Eiffel University, held on September 24-26 in Stuttgart for the conference and exhibition!

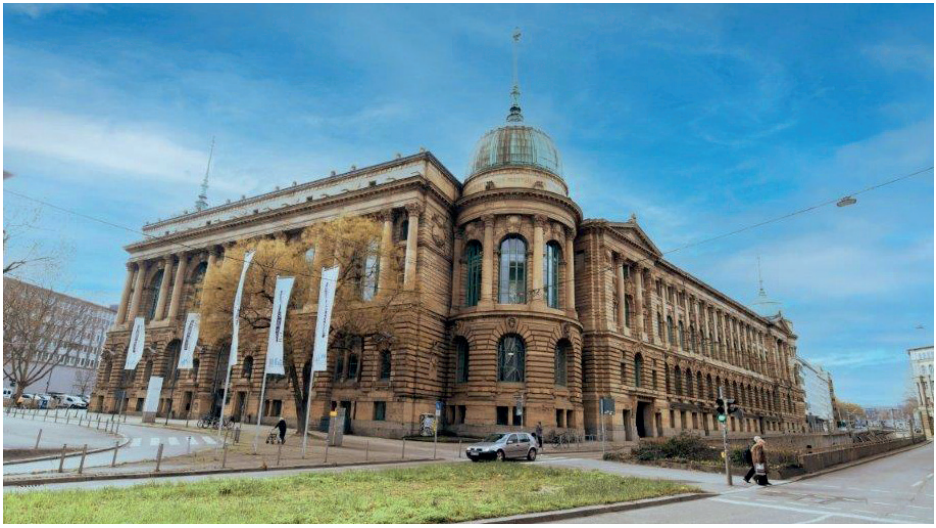
The way for tomorrow's vehicle

Table of content

We are committed to bringing you the best opportunity to meet and network with **many customers, prospects and partners** in the field of driving simulation.

Authors, keynote speakers and delegates are attending this conference with the common aim of hearing about the latest developments in the field and will be keen to learn about your technology and services. The conference is expected to attract more than **300 attendees**, which will ensure that the event has the buzz you need to generate interest in your products.

The DSC Organizing Team wishes to all participants and exhibitors a great time at the Driving Simulation Conference Exhibition 2025!



Haus der Wirtschaft
Willi-Bleicher-Straße 19, 70174 Stuttgart - Germany

Organizing Committee

Andras Kemeny | *Conference chair*

President, Driving Simulation Association
Member of Board of Directors, ASAM

Florent Colombet | *Program Co-Chair*

Treasurer of Driving Simulation Association
Innovation Project Manager, Renault

Jean-Rémy Chardonnet | *Program Co-Chair*

Driving Simulation Association
Professor, Arts et Métiers

Gerd Baumman

Head of Software Department
FKFS, University of Stuttgart

Hans-Peter Schöner

Driving Simulation Association
Senior Automobile Expert

Maryam Jafari Raviz | *Conference Assistant*

Driving Simulation Association

Lucile Frugier | *Conference Assistant*

Driving Simulation Association

The scientific committee is composed of recognized academics, OEM, Tier 1 or Standardisation body experts involved in driving simulation research activities in their organisations. Being member of the Scientific Committee involves also a commitment to avoid using his or her committee role in any individual consultancy activity, which may influence his or her objectivity in reviewing or any other undertaken committee task.

Chairman

Andras Kemeny	Driving Simulation Association (France)

Scientific Committee Members

Mohammad Bahram	BMW Group R&T (Germany)
Gerd Baumann	FKFS (Germany)
Klaus Bengler	Technical University Munich (Germany)
Jost Bernasch	The Virtual Vehicle (Austria)
Jelte Bos	TNO (The Netherlands)
Heinrich H. Bülthoff	Max Planck Institute (Germany)
Frank Cardullo	State University of NY (United States)
Viola Cavallo	University of Gustave Eiffel (France)
Jean-Rémy Chardonnet	Arts et Métiers Institut of Technology (France)
Florent Colombet	Renault (France)
George Drettakis	INRIA (France)
Magnus Eek	VTI (Sweden)
Stéphane Espié	University of Gustave Eiffel (France)
Zhou Fang	Renault (France)
Martin Fischer	DLR (Germany)
Massimiliano Gobbi	Polytechnic University of Milan (Italy)
Jens Häcker	DHBW Stuttgart (Germany)
Siddartha Khastgir	University of Warwick (UK)
Joseph K. Kearney	University of Iowa (United States)
Franck Mars	CNRS (France)
Philippe Mathieu	University of Lille (France)
Frédéric Mérienne	Arts et Métiers (France)
James Oliver	Iowa State University (United States)
Jean-Christophe Popieul	Hauts-de-France Polytechnic University (France)
Paolo Pretto	Virtual Vehicle (Austria)
Richard Romano	University of Leeds (United Kingdom)
Joost Venrooij	BMW Group (Germany)

Technical Committee

The Technical committee is composed of recognized industrial experts or managers of OEM, Tier 1 or research institutes involved in the driving simulation industrial ecosystem. Being member of the Technical Committee involves also a commitment to avoid using his or her committee role in any individual consultancy activity, which may influence his or her objectivity in reviewing or any other undertaken committee task.

Chairman

Luz Amanda Garcia Galeano	EBUSCO (Netherlands)

Technical Committee Members

Omar Amhad	NADS (United States)
Florent Colombet	Renault (France)
David Defianas	Stellantis (France)
Marius Dupuis	ASAM (Germany)
Vincent Honnet	SystemX (France)
Andras Kemeny	Driving Simulation Association (France)
Martin Peller	BMW (Germany)
Stéphane Régnier	Renault (France)
Martin Sevenich	Continental (Germany)
Georg Stettinger	Infineon (Germany)
Sebastian Wagner	BMW (Germany)

Keynotes are historically inspiring talks given by eminent scientists in the field of driving simulation, completed now by important industrial executives.

Ms. Yue Li | *CTO and co-founder, IAE Group*

"Practice for scenario based simulation accelerating the safe application of autonomous driving"

Car manufactures are exploring commercial implementation scenarios for autonomous driving, hoping to enhance product strength through this technology; Practical and feasible solutions are needed in regulation to form positive guidance and access. In the process of landing for autonomous driving, simulation testing based on a large-scale and systematic scenario library will play a key role in productization and market access. This keynote will focus on sharing the practical experience in China of scenario based L4 autonomous driving simulation testing.

Dr. Behrang Keshavarz | *Senior Scientist, KITE Research Institute, UHN*
Adjunct Professor, Toronto Metropolitan University

"Motion sickness: A challenge in real and simulated driving situations"

Motion sickness affects one in three people, with vomiting, nausea, dizziness, or headache being just few of the many symptoms. Two global mega-trends make motion sickness a major challenge to healthcare and industry in the upcoming decades: fully automated vehicles and Virtual Reality (VR) applications. Motion sickness is a serious concern for both technologies, jeopardizing their success and overall acceptance. In this presentation, Dr. Keshavarz will provide an overview of the phenomenon of motion sickness, with a specific focus on theoretical considerations, factors influencing individual susceptibility, measurement techniques, and potential solutions.

Pr. George Drettakis | *Research Director, Inria*

"The 3D Gaussian Splatting Adventure: Past, Present and Future"

Neural rendering has advanced at outstanding speed in recent years, with the advent of Neural Radiance Fields (NeRFs), typically based on volumetric ray-marching. Last year, Pr. Drettakis's group developed an alternative approach, 3D Gaussian Splatting, that has better performance for training, display speed, and visual quality and has seen widespread adoption both academically and industrially. In this talk, the 20+ year process leading to the development of this method will be described, including a short historical perspective on image-based and neural rendering over the years, that culminated with 3D Gaussian Splatting. Prof. Drettakis will then discuss 3D Gaussian Splatting, which provides high-quality real-time rendering for novel view synthesis using a novel 3D scene representation based on 3D Gaussians and fast GPU rasterization.

Industrial Keynote Speakers

Dr. Craig *Brown | Director, BrownSim Ltd*

"ProCue: Outcue the Competition"

Would you like to maximize the value of your simulator activities without additional R&D spend. Rejuvenate an old simulator instead of buying a new one? Would you like your sim drivers to have absolute confidence?
The majority of simulators in industry are underutilized. This is because the tuning or development of cueing algorithms is a time consuming process, one that cannot always be commercially justified. In the extreme case, bad cueing may render a multi-million dollar simulator worthless! Given these challenges, ProCue was conceived. With ProCue, one can fully realize the theorized and advertised potential of motion simulators, freeing your team to focus more on value generation and less on cueing research. In this keynote, Dr. Brown will show you how to "outcue" the competition.

Prof. Bernhard Schick | *CEO, MdynamiX; Head of Institute for Driving Assistance and Connected Mobility (IFM), University of Applied Sciences Kempten*

"Hardware-in-the-Loop for Enhancing Steering Experience in Driving Simulators"

Test drives are expensive, time-consuming, and often difficult to implement, yet they provide essential insights. The goal is to shift more development into simulations and reduce the number of prototypes, but virtual approaches reach their limits when subjective evaluations are crucial. Driving simulators can help bridge this gap — provided they realistically replicate the driving feel. In particular, authentic steering feel is key to high-quality assessments for almost all relevant use-cases, but is difficult to simulate purely virtually. This presentation introduces MdynamiX's Hardware-in-the-Loop (HiL) solutions, which integrate e.g. real steering systems into simulators, enabling a new level of driving realism and evaluation quality, including high-frequency dynamics and road surface contact. It is complemented by insights from participant and expert studies, concrete development use cases, and highlights further potential for new applications.

Mr. Henrik Gommel | *General Manager, GOTECH*

"Bridging the Virtual–Real Continuum: Driving Simulation as an Enabler for HMI Development"

Modern HMI systems demand both engineering precision and customer-centric validation. GOTECH GmbH's VR-based driving simulator meets this need by seamlessly merging real hardware mockups – whether purely haptic or fully functional – with virtual representations and conceptual functions.

This flexible continuum allows engineers and end users alike to configure, test, and refine display and control elements with agility. By incorporating simulated traffic and real critical scenarios in a safe environment, the simulator becomes the enabler of fast, efficient, and highly realistic development and evaluation.

Dr. Richard Romano | *Staff Researcher, General Motors, Visiting Professor, University of Leeds*

"Human Centered Vehicle Design in the Age of Agile Software Development: The role of driving simulatorsmassive simulation"

Driving simulation has been used for over thirty years by a range of automotive companies as part of the vehicle design process. Recently, as part of the Software Defined Vehicle (SDV) development process, agile software development has been integrated into the vehicle development process to leverage the wide set of benefits of the agile method. Typically driving simulators are developed by dedicated technical experts along side human factors specialists with experience with driving simulator-based experiments. This presentation will outline the history of driving simulation in the context of supporting the vehicle design process, typically as part of a waterfall development process as well as the typical agile software development method.

Ms. Tille Karoline Rupp | *Head of Simulation, Porsche Engineering*

"Driving Innovation: The Power of Simulation, AI, and Big Data in Accelerating Development & Validation"

As automated driving systems become more complex, efficient and robust validation methods are essential. By leveraging simulation, AI, and Big Data, we aim to shorten development and validation cycles, following the left shift principle to detect and resolve issues early.

This keynote highlights the role of automation throughout the entire V-model, ensuring seamless toolchains from development to validation. Standardized, reusable, and consistent data enable Software-in-the-Loop (SiL) and Hardware-in-the-Loop (HiL) testing, as well as driving simulators (Driver-in-the-Loop – DiL), on a shared foundation. In combination with an intelligent test concept, they form the key to efficient validation.

Dr. Joost Venrooij | *Project Lead Real-time Multibody Simulation, BMW AG*

"Utilizing BMW's driving simulation center: virtual development, real challenges"

In 2021, BMW inaugurated the world's largest driving simulation center, a pivotal element of the company's virtualization strategy aimed at achieving significant cost reductions in the vehicle development process. Realizing this goal necessitates not only the development of innovative virtualization methodologies and simulation techniques, but also their effective operationalization and utilization. This presentation will provide an exclusive behind-the-scenes perspective on the challenges we faced—and the solutions we implemented—in bringing BMW's driving simulation center to life. It will outline how advancements in vehicle modeling methods, motion cueing techniques, validation approaches, and some practical lessons learned, were brought together to make virtual vehicle development a reality.

FKFS Simulators Visits

During DSC 2025 you will have the opportunity to visit the Stuttgart Driving Simulator Test Center at FKFS and experience its latest developments. This visit is scheduled for September 24th, the first day of the event.

Since the start of operation in 2012, the large 8-axes simulator is continually improved in order to match new standards and requirements from industrial customers. It is being used for testing passenger cars as well as commercial vehicles and nowadays even features a full-scale truck cabin.

FKFS will show the simulator "in action" and give a brief overview on applications, such as chassis, powertrain and ADAS/AD development and human factors research.

FKFS
RESEARCH IN MOTION.

The visits are organized in five groups:

Visit group A – 10h00 Visit group B – 11h00 Visit group C – 14h00 Visit group D – 16h00 Visit group E – 15h00

FKFS, Stuttgart, Pfaffenwaldring 12, 70569 Stuttgart

The meeting point is at the main FKFS entrance.
S2/S1/S3 > Pedestrian – 25 min from Stuttgart Hauptbahnhof, Arnulf-Klett-Platz 2, 70173 Stuttgart.

Ph.: +49 711 685-65888
Fax: +49 711 685-65710
info@fkfs.de

ENVITED Community Meeting

The ENVITED Community Meeting invites ASCS and ENVITED members as well as guests to engage in strategic updates and outlooks on the ENVITED Research Cluster activities. The agenda features technology impulses on data- and service-driven simulation for **ADAS, automated driving**, and **driving dynamics**, along with discussions on **AI research questions** and **industry challenges**.

The meeting offers a platform for **knowledge exchange**, **collaborative foresight**, and **strategic alignment** in the future of simulation-based mobility development, free of charges for registered DSC Europe 2025 XR conference and exhibition attendees.

RDV at FKFS, Stuttgart, Pfaffenwaldring 12, 70569 Stuttgart

The meeting point is at the main FKFS entrance.
S2/S1/S3 > Pedestrian – 25 min from Stuttgart Hauptbahnhof, Arnulf-Klett-Platz 2, 70173 Stuttgart.

Ph.: +49 711 685-65888
Fax: +49 711 685-65710
info@fkfs.de

Program

3:30 PM
Arrival of Members and Guests
Registration and Networking

4:00 PM
Welcome
Prof. Dr. Wolfram Remlinger | Chairman of the board ASCS e.V.

4:05 PM
Update and Outlook of the ENVITED Research Cluster
Alexander F. Walser | ASCS e.V.

4:25 PM
Update and Outlook on the ENVITED-X Data Space
Carlo van Driesten | BMW AG

4:45 PM
Impulse Talks on Data and Service Offerings within the ENVITED ecosystem
ENVITED members tba

5:15 PM
Refreshment Break - Networking

5:45 PM
Impulse Talks on AI-driven ADAS / AD Simulation
ASCS members and partners tba

6:30 PM
Workshop: Industrial Challenges and Research Questions for AI-driven Simulation within the ENVITED ecosystem
Alexander F. Walser | ASCS e.V.

7:30 PM
Get-together
Networking & Visit to the Stuttgart Driving Simulator at FKFS

9:00 PM
End

asc(s

envited
RESEARCH CLUSTER

Thursday, September 25th 2025

8 am — REGISTRATION & COFFEE

8:45 am — CONFERENCE OPENING
König Karl Halle

"Augmented Reality and Autonomous Vehicles"

Andras Kemeny, Conference Chair
President, Driving Simulation Association
Member of the Board of Directors, ASAM

9:05 am — KEYNOTE
König Karl Halle

"The 3D Gaussian Splatting Adventure: Past, Present and Future"

Pr. Georges Drettakis
Research director, INRIA Sophia-Antipolis

9:30 am — SCIENTIFIC PAPER SESSION
XR
König Karl Halle
Chairman : Jonas Jansson

Validation of the usability of Head-Mounted Displays in a highly dynamic driving simulator

Heiderich, Martin (Honda R&D Europe); Sasaki, Naoya; Yamada, Masaya; Zantner, Frank

PRODUCT SOLUTION SESSION
AI, Machine Learning & Database Generation
Reutlingen Konferenz Salle
Chairman : Massimiliano Gobbi

Safekit-learn: Machine Learning Safety Library

FERREIRA, Raul Sena (Continental Automotive France, France); Guerin, Joris

9:55 am

XR

Experience from using Mixed and Virtual Reality Headsets for Driving, Pedestrian, and Bicycle Simulators (Short)

ARAMRATTANA, Maytheewat (VTI, Sweden); ANDERSSON, Anders

9:55 am

Design and Validation of a VR-Based E-Scooter Simulator using a 3DoF Motion Platform (Short)

ORAVI AN, Ana-Maria (Technical University of Munich, Germany); PECHINGER, Mathias; LINDNER, Johannes; KOLB, Maximilian; ZHENG, Tian; BOGENBERGER, Klaus

AI, Machine Learning & Database Generation

AI-based simulation scenario generation from the ADScene scenario platform

MOHELLEBI, Hakim (Renault, France); Martyr, Louis; Vaillant, Eric; Arnoux, Emmanuel; Régnier, Stéphane; Moirot, Franck; Dipiazza, Stanislas; Theel, Florian

From Maps to Urban Simulation: automating high-fidelity content creation for ADAS and AV development (Short)

TETA, Paolo; Gasbarro, Luca; Ragni, Matteo

10:30 am

BREAK

11:00 am

SCIENTIFIC PAPER SESSION

Perception & Human Factors

König Karl Halle

Chairman : Jelte Bos

PRODUCT SOLUTION SESSION

Simulation Design and Motion Control

Reutlingen Konferenz Salle

Chairman : Martin Peller

11:00 am

Perception & Human Factors

A Real-time Unconstrained EEG-Classifier for Mental Workload Monitoring

Osia, Seyed Ali (InnoBrain AB); Tahamtan, Zeynab; Zhao, Lin; Davari, Mahdi; Nybacka, Mikael

11:25 am

Effects of Steering Feedback via Noise, Vibration, and Harshness on Lateral Driver Performance in Dynamic Driving Simulators

BÖHLE, Maximilian (Kempten University of Applied Sciences, Germany; Technical University of Berlin, Germany); SCHICK, Bernhard; MÜLLER, Steffen

11:50 am

Impact of lighting conditions and motion blur on speed perception in driving simulation

COLOMBET, Florent (RENAULT, France); MERIEL, Camille; DESCHAMPS, Benoît; MIGNOTTE, Nicolas; REGNIER, Stéphane

Simulation Design and Motion Control

Workspace Constraints in Classical Cueing

BROWN, Craig Robert (BrownSim, United Kingdom)

DDS: An immersive simulation tool

Stanglmayr, Maximilian (AMST-Systemtechnik GmbH, Austria); Prokop, Günther

Advancing Full Spectrum Simulation: VI-grade's Roadmap from Latency Compensation to Immersive, Zero-Prototype Virtual Development

Michael Hoffmann (VI-grade, Germany); Dave Bogema

12:15 am

Perception & Human Factors

How We Roll – Realistic Bicycle Simulator for Cycling Behaviour Research (Short)

Ochel, Lennart (VTI, Sweden); Saparia, Smit; Weidel, My; Kircher, Katja

Simulation Design and Motion Control

Straight-forward Design of Driving Simulators Based on Use Cases (Short)

BAUMANN, Gerd (FKFS, Germany); SCHLÜTER, Marco; KEHRER, Martin

12:30 am

LUNCH

2:00 pm

INDUSTRIAL KEYNOTE SESSION

König Karl Halle

Chairman : Andras Kemeny

"ProCue: Outcue the Competition"

Dr. Craig Brown
Director, BrownSim Ltd

"Hardware-in-the-Loop for Enhancing Steering Experience in Driving Simulators"

Prof. Bernhard Schick
CEO, MdynamiX; Head of Institute for Driving Assistance and Connected Mobility (IFM), University of Applied Sciences Kempten

"Bridging the Virtual–Real Continuum: Driving Simulation as an Enabler for HMI Development"

Dr. Henrik Gommel
General Manager GOTECH

3:00 pm

INDUSTRIAL PITCHES

König Karl Halle

Chairman : Florent Colombet

"Integrated collision testing for automobile mobility"

Dr Alexis Mifsud - CEO Mobpti

"Transforming the realism and usability of driving simulation"

Sharan Ramachandran - Business Development Manager, rFpro

"State-of-the-art Ansible motion driving simulator to increase testing efficiency"

Stefan Vorderobermeier - Business Development Engineer, Ansible Motion

"Feels Like a Real Car": Creating Fully Immersive Driving Simulators"

Michael Hoffmann - Zero Prototypes Evangelist, VI-grade

"From Redundancy to Reusability: Driving Down VOMS Integration Costs"

Ábel Gábor, Head of Standardization | Co-founder, roboGaze

"Race to Road: Leveraging F1-Grade Motion Correlation for Automotive Innovation"

Will Snyder, Commercial Manager, Dynisma

"True Simulation and Collaboration with Multiview LED-Display-Systems"

Dr. Steffen Hergert, CEO, xCave Technology

"Scaling HD-Map & 3D World Generation for More Efficient Simulation"

Florian Albert, CEO | Co-founder, AVES Reality

"Accelerating ADAS Compliance with Physics-Based Virtual Testing"

Dr. Lionel Bennes, Lead Product Manager, AVxcelerate, Synopsys

4:00 pm

BREAK

4:30 pm

KEYNOTE

König Karl Halle

"Motion sickness: A challenge in real and simulated driving situations"

Dr. Behrang Keshavarz
Senior Scientist, KITE Research Institute, UHN
Adjunct Professor, Toronto Metropolitan University

4:55 pm

SCIENTIFIC PAPER SESSION

Motion Sickness

König Karl Halle

Chairman : J-R Chardonnet

Personal visual-vestibular coherence and simulator sickness

BOS, Jelte E. (TNO, Integrated Vehicle Safety, Netherlands; Vrije Universiteit, Behavioural and Movement Sciences, Netherlands); REUTEN, Anna Johanna Carola; CHEN, Colleen P.; WOLBERS, Jelle J.H.; van Emmerik, Martijn, L.

PRODUCT SOLUTION SESSION

ADAS

Reutlingen Konferenz Salle

Chairman : Martin Sevenich

Physical Radar Sensor Modeling with AVxcelerate: An Evaluation

SUHRE, Alexander (Valeo, Germany); MESICEK, Jakub; KILLEDAR, Vinayak; FOMIN, Petr; MANDLIK, Michal; RAPP, Richard

A Study on Generation of Randomized Parking Scene in Synthetic Environment

LEE, Younghoon (Hyundai Mobis Company, Korea); CHOI, Hyuckjun

5:20 pm

Motion Sickness

Comparing Simulator Sickness across Different Physical Motion Conditions in Younger and Older Adults

Nowosielski, Robert J. (KITE -Toronto Rehabilitation Institute, University Health Network; Department of Psychology, University of Toronto, T); Keshavarz, Behrang; Haycock, Bruce C.; CAMPOS, Jennifer L.

5:45 pm

Contextual Influences on Simulator Sickness: A Comprehensive Analysis of Demographics, Gaming Experience and Simulation Context Complexity

BERGEN, Melina (German Aerospace Center (DLR), Germany); Fischer, Martin

6:10 pm

Introducing Surrogate Measures for Objective Simulator Sickness Evaluation (Short)

LINDNER, Johannes (Technical University of Munich, Germany); BÖCKLE, Markus; PECHINGER, Mathias; BOGENBERGER, Klaus

ADAS

Development of Advanced Rider Assistance Systems using Rider-in-the-Loop Simulators

Amelunxen, Hendrik (dSPACE GmbH, Germany); de Vries, Edwin

A CCAM testing environment based on mixed-reality approach

GALI, Amit Shivanappa (Siemens Industry Software Netherlands B.V, The Netherlands); FORRAI, Alexandru

ASAM Open Source Standards: Driving Innovation in Autonomous Driving Simulation (Short)

SADEK, Ahmed (ASAM e.V., Germany)

6:30 pm

SESSION CLOSURE

8:00 pm

COCKTAIL PARTY

Let's meet at 8 pm
for our cocktail party!

Haus der Wirtschaft
Willi-Bleicher-Straße 19, 70174 Stuttgart - Germany

Don't forget your badge and enjoy your evening!

Friday, September 26th 2025

8:00 am — REGISTRATION & COFFEE

9:00 am — KEYNOTE

König Karl Halle

"Practice for scenario based simulation accelerating the safe application of autonomous driving"

Yue Li, CTO and co-founder, IAE Group

9:25 am — SCIENTIFIC PAPER SESSION

ADAS

König Karl Halle

Chairman : Omar Ahmad

Investigating the Role of Simulation in the Approval Process of Automated Vehicles for Defined Operational Domains

Hartmann, Katharina (German Aerospace Center (DLR), Germany); Bahn, Björn; Fischer, Martin; Asbach, Lennart

9:50 am

Credibility of simulations for the validation and homologation of ADAS systems

ATTOU, Otmane (Valeo, France); SOUALMI, Boussad; GAUTHEREAU, Didier; MOHELLEBI, Hakim

SCIENTIFIC PAPER SESSION

Deep Learning for Prediction in Driving Simulation

Reutlingen Konferenz Salle

Chairman : Gerd Baumann

Scooter Trajectory Prediction at Signalized Intersection: Case Study in Shanghai, China

CAUSEVIC, Azur (BMW, Germany; Technical University Munich, Germany); Brauer, Jens; Pfeuffer, Fabian; Bogenberger, Klaus

Subjective evaluation of motion cueing algorithms: A comparative study on real-world expectations in a Robot-based Driving Simulator

NICOLAI Tim (ITWM Fraunhofer, Germany); EMMERICH, Sebastian; REINHARD, René; SCHNEIDER, Jonathan; BURGER, Michael

10:15 am

ADAS

Streamlining ADAS Subjective Testing: Simulator Requirements and Effective Test Methods (Short)

Wei, Sijie (Munich University of Applied Sciences, Germany); Becker, Matthias; Schick, Bernhard

Deep Learning for Prediction in Driving Simulation

A Frequency-Aware Model Predictive Control Motion Cueing Algorithm (Short)

Kolff, Maurice (Delft University of Technology, Netherlands); Jacumet, Robert; Wagner, Sebastian ; Wollherr, Dirk; Leibold, Marion

10:30 am

BREAK

11:00 am

SCIENTIFIC PAPER SESSION

Motion

König Karl Halle

Chairman : Martin Fischer

Development of longitudinal motion cueing algorithm with MPC and pre-positioning strategy

FANG, Zhou (Renault, France); NIDIOT, Jean-Michel; COLOMBET, Florent; WAUTIER, Didier; REGNIER, Stéphane

SCIENTIFIC PAPER SESSION

Driving Simulation Applications and Validation

Reutlingen Konferenz Salle

Chairwoman : Luz Amanda Garcia Galeano

Validating Bicycle Simulators Active Steering in a CAVE Virtual-Reality environment

Zheng, Tian (Technical University of Munich, Germany); Pechinger, Mathias; Lindner, Johannes; Bogenberger, Klaus

11:25 am

Motion

Autoscaling: Minimizing Immersion Disruption in Motion Cueing via Model Predictive Control

Jain, Vishrut (Technical University of Delft, Netherlands); Lazcano, Andrea; Happee, Riender; Shyrokau, Barys

11:50 am

Development of a Motion Cueing Evaluation Metric Combining Objective Parameters and Subjective Assessment

RUSS, Fabian (RWTH Aachen University, Institute for Automotive Engineering, Germany); Steines, Malte; Pelzer, Julia; Legran, Philipp; Eckstein, LutzHappee, Riender; Shyrokau, Barys

12:15 am

Optimization-based Motion Cueing Algorithm for Worst Case Maneuvers in Driving Simulation

JACUMET, Robert (BMW Group, Germany; Technical University of Munich, Germany); WETZEL, Janik; WAGNER, Sebastian; SCHWIENBACHER, Markus; WOLLHERR, Dirk; LEIBOLD, Marion

Driving Simulation Applications and Validation

Force-based ABS Validation through Driving Simulator

Amadini, Matteo (Politecnico di Milano, Milan, Italy); Cantoni, Carlo; Gobbi, Massimiliano; Mastinu, Gianpiero; Milivinti, Massimiliano

PRODUCT SOLUTION SESSION

Driving Simulation Applications and Validation

Reutlingen Konferenz Salle

Chairman : Martin Sevenich

Driver-in-the-Loop Testing of Genetic Algorithm-Tuned Active Anti-Roll Bar for Vehicle Lateral Stability

Sonnino, Samuel (Politecnico di Milano, Italy); Melzi, Stefano; Pirchio, Francesco; Verde, Raffaele; Caresia, Pietro; Manzoni, Alessandro; Vaini, Gianluca

Accelerate Engineering for Mobility (Short)

MELNIKOVSKY, Izhar (Foretellix); HÄMMERLE, Simone (Mathworks)

12:30 am

LUNCH

2:00 pm

AUTOMOBILE OEM KEYNOTE SESSION

König Karl Halle

Chairman : Andras Kemeny

"Driving Innovation: The Power of Simulation, AI, and Big Data in Accelerating Development & Validation"

Tille Karoline Rupp
Head of Simulation, Porsche Engineering

"Utilizing BMW's driving simulation center: virtual development, real challenges"

Dr. Joost Venrooij
Project Lead Real-time Multibody Simulation, BMW AG

"Human Centered Vehicle Design in the Age of Agile Software Development: The role of driving simulators"

Dr. Richard Romano
Staff Researcher, General Motors
Visiting Professor, University of Leeds

3:00 pm

SCIENTIFIC PAPER SESSION

Simulation Design

König Karl Halle

Chairman : Zhou Fang

PRODUCT SOLUTION SESSION

XR

Reutlingen Konferenz Salle

Chairman : Stéphane Régnier

3:00 pm

Simulation Design

Implementation and Validation of an optimized Hybrid Steering Modeling Method in a fully Immersive Driving Simulator

Dieing, Andreas (FKFS, Germany); Baumann, Gerd; Holzapfel, Christian; Kehrer, Martin; Reuss, Hans-Christian

3:25 pm

The upgrade of an advanced driving simulator: vehicle, visuals, sound and software stack.

Solernou, Albert (University of Leeds, United Kingdom); Horrobin, Anthony J; Woodthorpe, Peter T; Garcia de Pedro, Jorge; Chao, Hsuan; Daly, Michael R; Merat, Natasha

XR

MixedReality@Development – Merging the best of two worlds

LIU, Kai (BMW AG, Germany); Lenz, Dennis; Höpfinger, Martin; Himmels, Chantal; Köning, Lukas Leonard

Perpendicular Distance Measurement & Localization on Arbitrary Road Curves via VR Raycasting in Unity3D (Short)

VAN DER STELT, Machiel (University of Western Australia, Australia); Braunl, Thomas; Roberts, Paul

3:50 pm

CLOSING

König Karl Halle

4:00 pm

END

A teleoperation control center simulator for fleet operation of automated vehicles

GRABBE, Niklas (Technical University of Munich, TUM School of Engineering and Design, Chair of Ergonomics, Germany); HÜBNER, Maximilian; BENGLER, Klaus

Requirement Identification for Traffic Simulations in Driving Simulators

TARLOWSKI, Sven (Institute for automotive Engineering ika – RWTH Aachen, Germany); ECKSTEIN, Lutz

Driving Simulator Assessment of Speed-Adaptive Steering Ratios for Front and Rear Axles

Sonnino, Samuel (Politecnico di Milano, Italy); Melzi, Stefano; Mirra, Giacomo; Caresia, Pietro; Manzoni, Alessandro; Vaini, Gianluca

Driver state monitoring employing the Human Performance Envelope model

GOBBI, Massimiliano (Politecnico di Milano, Milano, Italy); Mastinu, Gianpiero; Previati, Giorgio; Uccello, Lorenzo; Ceriani, Riccardo; Lantieri, Claudio; Landini, Elisa; Castellano, Andrea

Advancing Vehicle Platooning Systems

HALIM, Carol Emad (BeamNG, Egypt); Ghantous, Milad Michel; Soubra, Hassan; Papamichail, Chrysanthi

Effects of Arousal on Takeover Performance in Highly Automated Driving

CAI, Yuan (Université de technologie de Belfort Montbéliard (UTBM), France); BERT, Nicolas; SASANGOHAR, Farzan; ZARE, Mohsen

Effect of Tactilely Perceivable Vibrations on Driver Behavior in Driving Simulators

HOLZAPFEL, Christian (FKFS, Germany); Reuss, Hans-Christian

Incorporating A Priori Statistical Situational Knowledge into Model Predictive Control Algorithms

LEGRAN, Philipp (RWTH Aachen, Germany); RUSS, Fabian; BECKMANN, Jobst; TARLOWSKI, Sven; ECKSTEIN, Lutz

Development of a Questionnaire for Assessing Subjective Fidelity in Dynamic Driving Simulators

Pelzer, Julia (RWTH Aachen University, Germany); Altmann, Stella Marie; Russ, Fabian; Günther, Thomas

Analyzing driving speed using Mixed Regression Models with Random Effects based on driver profile

RIBEIRO, Ruy Santos (Sao Carlos School of Engineering – University of Sao Paulo, Brazil); ALBARRACIN, Orlando Yesid Esparza; LAROCCA, Ana Paula C.; BERNUCCI, Liedi Legi B.

Influence of visual output devices on speed perception in car simulators

Rehm, Michaela Jaqueline (German Aerospace Center (DLR), Germany); Gröne, Kilian; Bergen, Melina; Fischer, Martin

Use Case Specific Selection of Motion Cueing Algorithms and Tuning for Lateral Dynamics on Multi-Axes Motion Systems

SCHLUETER, Marco (FKFS, Germany); Holzapfel, Christian; Gerd, Baumann

Quantifying the Driving Performance of Reference Driver Models for AD Evaluation in Highway Scenarios

BECKMANN, Jobst Nikolaus Bertram (RWTH Aachen University, Germany); ECKSTEIN, Lutz

Comparison and Experience from using Mixed and Virtual Reality Headsets for Driving, Pedestrian, and Bicycle Simulators

ANDERSSON, Anders (Swedish National Road and Transport Research Institute (VTI), Sweden); ARAMRATTANA, Maytheewat

Experience first, then build

GRÖTZINGER, Jonas (EDAG Engineering GmbH)

A smart assistive crosswalk to alert distracted pedestrians at a signalized intersection

Kudurupaka, Vamshi Krishna (Indian Institute of Technology Roorkee (IIT R)); Choudhary, Pushpa

A Tool to perform Scenario-based Evaluation of Non-Driving Related Activities using Mixed Reality

SUBRAMANIAN, Thirumanikandan (Institute for Engineering Design and Industrial Design, University Stuttgart, Germany); SCHAEFFER, Miriam; REMLINGER, Wolfram

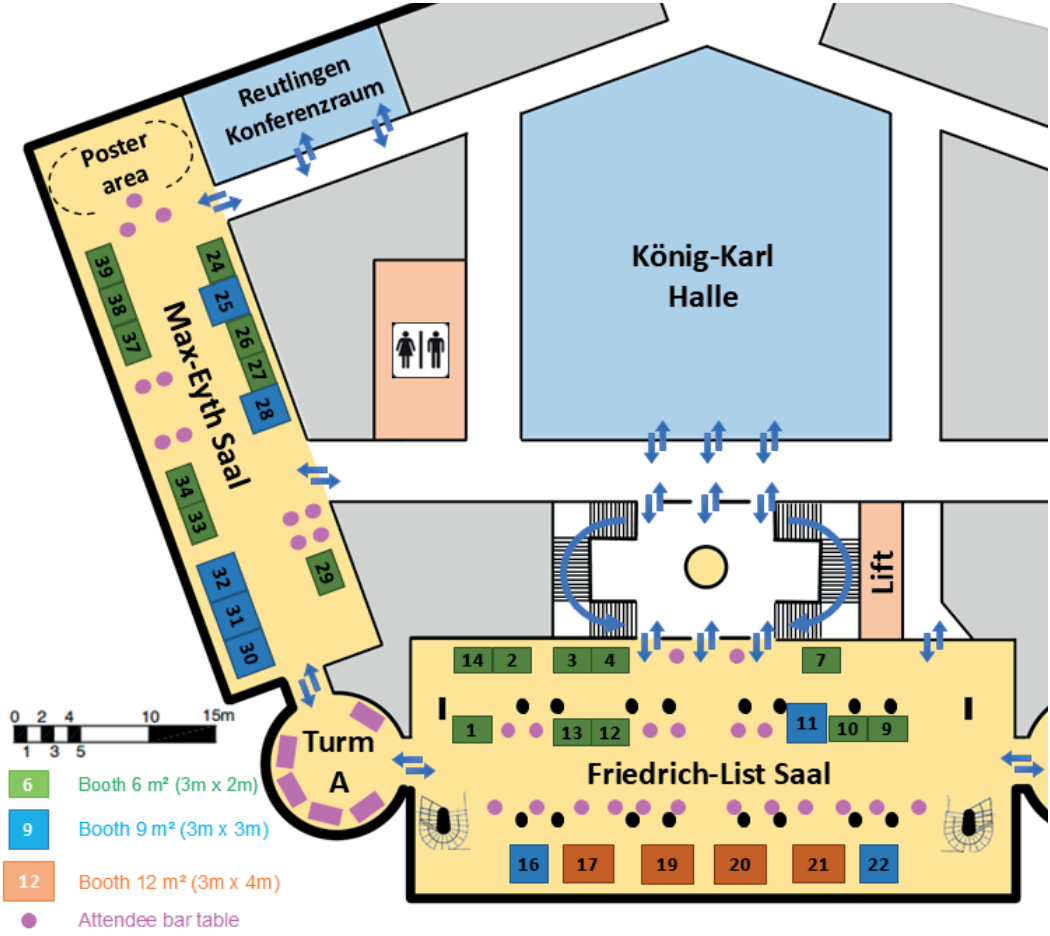
A Study on the Evaluation Method of Image Recognition Performance Using Simulation

PARK, Kyunwoo (Hyundai Mobis, Korea)

Unlocking Potential: Integrating XiL Models in Driving Simulators for Enhanced Brake, Steering, and ADAS Systems

Trunzer, Stefanie (University of Applied Sciences Kempten, Germany); Tworek, Anton; Schick, Prof. Bernhard

DSC Europe 2025 XR Exhibition Floorplan



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www.brownsim.io

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MdynamiX AG provides testing solutions for all stages of the development process. Founded by four professors of the University of applied Science Munich and Kempten, Mdynamix AG offers various engineering services. With a deep focus on vehicle dynamics, acoustics and ADAS, the products are tailored to the customer needs. The integration of the Pfeffer steering model within a force feedback actuator as well as HiL testbenches for steering and braking into driving simulators are one of the hot topics at the moment.

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At the core of its offering are patented Dynisma Motion Generators (DMGs) – high-fidelity motion platforms delivering sub-5ms latency and over 100Hz bandwidth from primary motion. Dynisma was the first motion platform manufacturer to offer a system with unlimited yaw. These breakthroughs enable OEMs to replicate real-world vehicle behaviour in a virtual environment, accelerating development decisions and reducing reliance on physical prototypes.
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With simulation now central to modern vehicle development, Dynisma is redefining what's possible – helping the world's most forward-thinking automotive brands deliver better vehicles, faster.

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As a non-profit association, the Automotive Solution Center for Simulation – ASCS e.V. has been driving research, technology transfer, and innovation through collaboration and networking since 2008. Our more than 60 members – including industry leaders, research institutions, technology providers, and start-ups – trust ASCS as a compliant, neutral platform that enables coopetition.
In this responsible role, ASCS acts as a multiplier, accelerator, and catalyst in the key technology fields of simulation, artificial intelligence, and high-performance computing for mobility development. Together with our members, we address emerging trends and challenges with a solution-focused approach, providing strategic guidance and collaboration opportunities in a rapidly evolving landscape.
The ENVITED Research Cluster, initiated by ASCS, is a long-term, member-driven initiative focused on data-driven virtual development, validation, and certification of ADAS and automated driving systems. ENVITED fosters strategic collaboration and delivers value through four pillars:
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• DATA SPACE: The ENVITED-X Data Space offers quality-assured, ontology-structured simulation and test assets—including those aligned with ASAM OpenX standards—enabling modular simulation, faster development, and new data services.
• INNOVATION HUB: Collaborative R&D projects and expert groups advancing cutting-edge simulation methods and processes.
• CAREER CHANNEL: Hands-on training, career development, and networking to empower the next generation of simulation experts.
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ASAM continues to strengthen its focus on simulation-based testing and validation for ADAS and automated driving systems. The well-established ASAM OpenDRIVE and ASAM OpenSCENARIO standards, complemented by ASAM OpenCRG, ASAM OSI and ASAM OpenLABEL, provide the foundation for virtual testing. In 2025, two new standards were added to enhance the ecosystem:

• ASAM OpenMATERIAL 3D 1.0.0, the first open standard for defining and exchanging 3D material and geometry data. It enables consistent definitions of physical material properties and standardized 3D model structures for more accurate simulations.

• ASAM OpenODD 1.0.0 specifies a standardized data model to describe the operational domain (OD), current operational domain (COD), and the operational design domain (ODD) for ADAS, DCAS and ADS. It provides a technology-independent data model in UML, defining how taxonomies and related concepts are structured and interconnected, and details how these elements are represented and exchanged.

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In the fields of Driving Simulation testing, we provide full hardwares of driving simulator, including various types of cockpits, motion cueing platforms, autonomous driving robots, and vehicle in loop testing systems, autonomous driving test vehicles.

In the field of driving behavior research, we provide a multi-modals data recording and analysis software platform"Human Research Tool HRT ", synchronizing the data of Vehicle-Driver-Environment. Driver Behavior Data includes Eyetracking, EEG , fNIRS, Physiological data (ECG\EDA\EMG\Rep\), Motion capture; Vehicle Data includes all of dynamic data of vehicle and HMI data Environment Data includes road and traffic information,etc.

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FKFS is an independent foundation of civil right in Stuttgart/Germany. With 180 highlyqualified employees, specialized test benches and self-developed measurement, testing and simulation methods, FKFS offers cutting-edge research and development services for industrial customers in all major fields of automotive technology.
Since 2013, FKFS operates the Stuttgart Driving Simulator, an 8-axes dome system with outstanding motion, vision and sound/NVH capabilities. We design and perform complete user studies with subjects representing the general population. Typical applications are user experience, HMI interaction, e.g. with vehicle control and ADAS/ AD systems, driving comfort and functional safety/ controllability. The simulator is also used by customer's experts for chassis and vehicle dynamics development, powertrain drivability, vehicle control systems and autonomous driving.
Furthermore, FKFS offers comprehensive driving simulator-related consulting services. We specify your future driving simulators, fully independently from any product suppliers, based on a deep analysis of your requirements and use-cases. Since 2020, we have supported two OEMs in designing and purchasing complete simulation centers, including various driving simulators and custom-tailored software suites as well as the buildings with infrastructure, safety/security, proband and mock-up logistics.
With long-term expertise in motion cueing we offer customer and application-specific offline and real-time MCAs for all types and brands of driving simulators, with a focus on fidelity and motion sickness avoidance in multi-axes systems.

www.fkfs.de

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Powered by: deepen & WMG

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The Safety Pool™ Scenario Database is the world's largest public repository of test scenarios for automated driving systems (ADS). The database has been developed by WMG, The University of Warwick (UK) and Deepen AI to support the development, verification, and validation of ADS's.
A founding principal of Safety Pool™ is the belief that the safety of ADS's should be pre-competitive. In addition to its founders, Safety Pool™ is supported by the World Economic Forum's Safe Drive Initiative, the UK's Centre for Connected & Autonomous Vehicles (CCAV), and the WMG Centre for High Value Manufacturing Catapult.
Safety Pool™ strives to accelerate the pace of ADS technology development by providing an extensive database of test scenarios which can be used for testing Automated Driving Technology via simulation and in the real-world.

www.safetypool.ai

With the cooperation and support of:

Arts et Métiers Institute of Technology is a French « Grande Ecole d'Ingénieur » founded in 1780 specializing in mechanical, industrial and energy engineering. The Laboratory of Engineering in Cyberphysical Systems (LISPEN) has an education and research team specialized in XR for 25 years with extensive work on individualized interaction in immersive environments, cybersickness reduction and perception issues. The team has large immersive facilities including a 5-sided CAVE, head-mounted displays, multi-sensory interaction devices, physiological and behavioral measurement devices. LISPEN has also an activity in driving simulation, with facilities including dynamic and static simulators, coupled with immersive technologies, and addressing scientific issues related to HMI, simulator sickness, perception and motion cueing.

www.institutimage.ensam.eu

The Driving Simulation Association (DSA) aims to promote and encourage driving simulation and XR within all aspects: research, development, applications, and products, facilitating communication between individuals and academic as well as industrial organizations and contributing to the organization of scientific conferences. DSA is also proposing dedicated services in the use of driving simulation and XR.

driving-simulation.org

Since 1927, the "Société des Ingénieurs de l'Automobile" (Automotive Engineers Society) brings together all the specialists and enthusiasts of the automotive industry and its technologies. It has more than 1,800 individual or group and relies on a database of more than 18,000 car experts and our aim is to promote the development and knowledge sharing of engineers, managers and technicians in the automotive field.
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SIA is renowned in the world of automotive engineering for its conferences, workshops and congresses of international level through more than thirty annual scientific meetings.
SIA participates actively in the French automotive industry in connection with the main professional organizations and on an international level as a member of the FISITA.

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The Gustave EIFFEL University was born out of the merger of Université Paris-Est Marne-la-Vallée and IFSTTAR, the Institute for European Research on Cities and Regions, Transport and Civil Engineering. It includes a school of architecture, EAV&T, and three engineering schools, EIVP, ENSG Géomatique and ESIEE Paris. By creating for the first time in France a three-way partnership between a university, research organisations and schools of architecture and engineering , it will have the specific purpose of fostering national and international partnerships to meet the major societal challenges generated by the profound changes in urban areas, which are already home to 55% of mankind.

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AVES Reality automates HD-map and 3D virtual world creation to make simulation-based testing in ADAS/ AD more efficient and scalable. Their AI-enabled solution turns satellite imagery into semantic digital twin worlds which follows the vision to deliver any place on earth as simulation-grade 3D environment including an own HD-roadmap.

www.avesreality.com

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BrainSigns is a company founded in 2011 as a spin-off of Sapienza University of Rome, which develops innovation from scientific knowledge in the recording and analysis of signals produced by brain activity and other human physiological processes. The applications are of interest in all cases in which the monitoring, instant by instant, of a person's instinctive reactions can generate value, in terms of understanding human behaviour and its causes in relation to the work it is doing, the interface it is managing and/or the product it is interacting with.
Alongside scientific research, BrainSigns has recently entered the field of technology development, through the production of the Mindtooth system (https://mindtootheeg.com/). Mindtooth is an Electroencephalographic system with special features of wearability, reliability and user-friendliness, developed by BrainSigns itself thanks to the European H2020 Fast-Track-to-Innovation funding programme.

Mindtooth aims to bring electroencephalography-based applications within everyone's reach, and thus enable new frontier applications based on the intelligible measurement of the user's brain activity.
Assessing the driver's experience and performance from a cognitive and emotional point of view is one of the main research topics in BrainSigns. Simulators are a key tool in this research area.
Driver data, vehicle data and context data combined – ITCL and BrainSigns have a long history of collaboration and jointly present collection of this complete triangle of data. Both entities currently collaborate in the FitDrive.eu project, researching fitness-to-drive monitoring of professional drivers (EC Funded under Horizon 2020).

www.brainsigns.com

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www.brownsim.io

cosin
scientific software

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cosin scientific software AG offers simulation software for advanced tire and road surface modeling for vehicle dynamics simulation. The key product, FTire, is the leading high-frequency and multi-purpose tire model.

Development of the physical model started in the late 1980s and FTire subsequently established its position as the reliable and trusted tire simulation software for vehicle comfort, road loads and NVH analysis. Since 2009, FTire development, support, and engineering services are provided by cosin scientific software, headquartered in Munich, Germany.

Virtual testing is key and driving simulators and other hardware-in-the-loop systems are increasingly replacing real tests. The consistent availability of FTire throughout the development cycle for all application cases where tire dynamics have an important effect on the vehicle dynamics is unique and represents an enormous benefit that saves time and money.

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www.cosin.eu

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SIMULIA Simpack enables engineers to create high-fidelity multi-body vehicle models in under a minute, automate analyses, and run the same model in real time. Test drivers can instantly adjust parameters and experience the effects. With the new SCANeR–Simpack Realtime interface, these models integrate seamlessly into AVSimulation's high-performance simulators and ADAS applications, bringing together the expertise of Dassault Systèmes and AVSimulation.

www.3ds.com

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www.deepscenario.com

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RESEARCH IN MOTION.

30

FKFS is an independent foundation of civil right in Stuttgart/Germany. With 180 highlyqualified employees, specialized test benches and self-developed measurement, testing and simulation methods, FKFS offers cutting-edge research and development services for industrial customers in all major fields of automotive technology.
Since 2013, FKFS operates the Stuttgart Driving Simulator, an 8-axes dome system with outstanding motion, vision and sound/NVH capabilities. We design and perform complete user studies with subjects representing the general population. Typical applications are user experience, HMI interaction, e.g. with vehicle control and ADAS/AD systems, driving comfort and functional safety/ controllability. The simulator is also used by customer's experts for chassis and vehicle dynamics development, powertrain drivability, vehicle control systems and autonomous driving.
Furthermore, FKFS offers comprehensive driving simulator-related consulting services. We specify your future driving simulators, fully independently from any product suppliers, based on a deep analysis of your requirements and use-cases. Since 2020, we have supported two OEMs in designing and purchasing complete simulation centers, including various driving simulators and custom-tailored software suites as well as the buildings with infrastructure, safety/security, proband and mock-up logistics.
With long-term expertise in motion cueing we offer customer and application-specific offline and real-time MCAs for all types and brands of driving simulators, with a focus on fidelity and motion sickness avoidance in multi-axes systems.

www.fkfs.de

GOTECH
Fahrzeugentwicklung

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We are a development partner for automotive manufacturers and suppliers – from initial concept to series production launch. Our highly specialized team transforms ideas into viable concepts, providing support in design, functionality, and production-ready product development. Using state-of-the-art software and hardware, we analyze and optimize product developments, bring them to life in our prototype manufacturing, and test them in our driving simulation environment.

We accompany projects through to series production, ensuring high-quality and on-time development and manufacturing. Additionally, we take on key organizational roles in the development process, such as supplier and data management.

Our location in Weissach, at the heart of one of the world's most important automotive regions, is no coincidence. For years, we have been working with the most renowned and respected companies in the industry.

www.gotech-cad.de

ICT

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ICT AG is a full-service solution provider specializing in Pro-AV technology, offering services such as rental, integration, and operation of multi-media installations for trade fairs events, TV & film productions, as well as virtual reality and simulation application. They design and implement immersive visual concepts that blend physical spaces with digital technologies to create the best visual experience for the users.

www.ict.de

INFO instruments 赢富仪器

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INFO instruments was founded in 2009 our vision is "Innovation for Human Research", we are committed to providing advanced technology and products to our users for human behavior research.
In the fields of Driving Simulation testing, we provide full hardwares of driving simulator, including various types of cockpits, motion cueing platforms, autonomous driving robots, and vehicle in loop testing systems, autonomous driving test vehicles.

In the field of driving behavior research, we provide a multi-modals data recording and analysis software platform“Human Research Tool HRT ", synchronizing the data of Vehicle-Driver-Environment. Driver Behavior Data includes Eyetracking, EEG , fNIRS, Physiological data (ECG\EDA\EMG\Rep\), Motion capture; Vehicle Data includes all of dynamic data of vehicle and HMI data Environment Data includes road and traffic information,etc.

www.inforinstrumentstech.com

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InnoBrain is a deep-tech startup providing foundational AI models and algorithms to enable Human Cognitive Monitoring at scale, with a primary focus on enhancing safety and human-centric experiences and quality of life.

www.innobraintechnologies.in

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The Fraunhofer Institute for Industrial Mathematics ITWM is one of the world's largest mathematical research institutes. We see our task in further developing mathematics as a key technology, in giving innovative impulses, and in implementing them practically together with industrial partners. The close cooperation with partners from industry guarantees the high practical relevance of our work. Our area "Mathematics for Vehicle Development" (MF) is divided into the two departments "Dynamics, Loads and Environmental Data" (DLU) and "Mathematics for the Digital Factory" (MDF) as well as the tire simulation project group and the cross-sectional unit MF Technical Center, which takes care of testing and measurement technology. In particular, we develop methods and tools for system simulation involving environmental data and usage variability.

www.itwm.fraunhofer.de

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MdynamiX AG provides testing solutions for all stages of the development process. Founded by four professors of the University of applied Science Munich and Kempten, Mdynamix AG offers various engineering servuces. With a deep focus on vehicle dynamics, acoustics and ADAS, the products are tailored to the customer needs. The integration of the Pfeffer steering model within a force feedback actuator as well as HiL testbenches for steering and braking into driving simulators are one of the hot topics at the moment.

www.mdynamix.de

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Mobpti's ambition is to facilitate the safety demonstration and validation phases of automated vehicles by developing software tools that perform a detailed, configurable, offline but rapid analysis of collision risks, which is automatically adapted to each driving situation. Our services can address vehicle certifiers, manufacturers, and equipment suppliers. We can also extend our offering to include other analysis criteria, such as ecological and comfort factors, and any type of ground vehicle, including agricultural and warehouse robots.

www.mobpti.com

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Pertech Solutions is the only company in France that designs, develops, manufactures, and markets both hardware and software Eye Tracking solutions.

Our Eye Tracking solutions allow for the analysis of user behavior through eye movements on various 2D and 3D platforms, whether in real or simulated environments.

Pertech Solutions has established a strong presence across diverse sectors, including automotive (Renault, PSA, Samsung Motors), aerospace (ISAE, BEA, Airbus, ASL Airlines), industry (Fives Pillard, Newtec Bag Palletizing, Clemessy SA), and the web. We are known for delivering innovative solutions that offer significant technological advantages.

www.pertech-solutions.fr

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rFpro, a member of the AB Dynamics Group plc, provides a simulation environment for the automotive and motorsport industries. It is used for the development and testing of autonomous vehicles, ADAS, vehicle dynamics and human factor studies. rFpro's automotive customers are the world's largest car manufacturers, tier one suppliers and sensor developers. We enable them to simulate, test and validate new sensors, control systems and vehicle hardware systems. The top ten OEMs that were early adopters of rFpro technology have already launched road cars which started their development, not on a test track, but in a rFpro's virtual environment.

www.rfpro.com

roboGaze

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www.robogaze.com

Safety Pool™
Powered by: deepen & WMG

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The Safety Pool™ Scenario Database is the world's largest public repository of test scenarios for automated driving systems (ADS). The database has been developed by WMG, The University of Warwick (UK) and Deepen AI to support the development, verification, and validation of ADS's.
A founding principal of Safety Pool™ is the belief that the safety of ADS's should be pre-competitive. In addition to its founders, Safety Pool™ is supported by the World Economic Forum's Safe Drive Initiative, the UK's Centre for Connected & Autonomous Vehicles (CCAV), and the WMG Centre for High Value Manufacturing Catapult.
Safety Pool™ strives to accelerate the pace of ADS technology development by providing an extensive database of test scenarios which can be used for testing Automated Driving Technology via simulation and in the real-world.

www.safetypool.ai

science + computing

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science + computing enables engineers in R&D and digital product creation to accelerate their innovation pace. With 300+ experts and in-depth industry expertise for complex compute environments, we create and manage bespoke IT environments for CAE/HPC Simulation, CAT Testing & Validation and AI/ML. Our expert simulation and XR IT teams assure, that CAx engineers, ADAS developers and R&D scientists have seamless integrated high-end IT platforms available at their fingertips to focus on what they master – drive and realize innovation. science + computing, founded in 1989, is located in Tübingen, Germany and cooperates as a global player with expert teams in near- and offshore locations.

www.science-computing.com

sensodrive

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Sensodrive Simulators. Perfect Simulations – Perfect Results. Sensodrive is a spin-off from the German Aerospace Center (DLR). The company was founded in 2003 by researchers from the DLR. Sensodrive is specialized in torque technology as well as in high-performance simulators. Sensodrive develops and produces tens of thousands of torque sensors and torque-controlled actuators every year for renowned companies worldwide. It was first company to launch specialized torque sensors for robotic drives. In addition to its leading role in drive technology, Sensodrive is known for its state-of-the-art force feedback products. The sophisticated simulators stand out due to sensitive force feedback and impressive realism. From the steering wheel to pedals, to rotary and push buttons, or an entire simulator cockpit – the Sensodrive simulators enable highend simulations in research and development. You´re not just anybody. And our products aren´t just any products. Welcome to Sensodrive.

www.sensodrive.de

smart eye

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Smart Eye is the global leader in Human Insight AI, technology that understands, supports and predicts human behavior in complex environments. Bridging the gap between humans and machines for a safe and sustainable future. Smart Eye was founded in 1999, is publicly traded and headquartered in Sweden with offices in the US, UK, Germany, Denmark, Egypt, Japan, Singapore and China.
Smart Eye offers the world's most advanced eye tracking systems for analyzing human behavior. Offering unparalleled performance in complex environments, our carefully crafted instruments enable unparalleled insights into human behavior and human-machine interaction in automotive, aviation, assistive technology, media & marketing, behavioral science and many more fields.

www.smarteye.se

3

Thierry CLEMOT's company creates highly precise 3D environments for car simulators. These real environments are created from high-accuracy 3D laser scans that we perform ourselves. Available quickly, our 100 km urban models "CITY" allow us to create every exercise needed in fictive environments.
Today, our models are used by car manufacturers in the US, Asia, and Europe. What about you?
Don't hesitate to consult the database catalog on thierryclemot.com.

www.thierryclemot.com

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VI-grade is the global provider of disruptive vehicle development solutions that are paving the way to developing vehicles with Zero Prototypes. Its human-centric solutions comprise industry-leading real-time simulation software, professional driving simulators and Hardware-in-the-Loop solutions that accelerate product development across the transportation industry.
The company's suite of scalable driving simulators covers a wide performance range to assess the multi-disciplinary driving experience. These proven solutions enable OEMs, suppliers, research centers, motorsport teams and universities to reduce physical prototypes while accelerating innovation in their quest to get ever nearer to achieving the ultimate development goal of Zero Prototypes.
VI-grade is part of HBK's Virtual Test Division, which focuses on providing real-time software, simulator, and hardware-in-the-loop solutions to virtually test products throughout the development cycle, helping companies accelerate innovation and reduce time-to-market, and improve their competitive advantage.
Since September 2018, VI-grade has been part of Spectris plc. The firm conducts business in four major segments – materials analysis, testing & measurement, in-line instrumentation and industrial controls – and serves a broad range of industries ranging from automotive and aerospace to electronics, energy, mining and pharmaceuticals.

www.vi-grade.com

WMG
THE UNIVERSITY OF WARWICK

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Safety Pool™ strives to accelerate the pace of ADS technology development by providing an extensive database of test scenarios which can be used for testing Automated Driving Technology via simulation and in the real-world.

www.safetypool.ai

XCAVE

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We realize multiview 3D display systems based on LED for complete integration.

For this purpose, we work with the latest technology and components to equip our LED displays powerful for simultaneous use of multiple users on one display surface. This way, impressive colors and deep blacks can be realized for each user. This has established a new quality of true VR with our identSystem.

In continuous exchange with world-leading chip suppliers in the LED industry, we are helping to take the technology to new horizons. Welcome to the future!

Compatible with most leading SW manufactures for VR and simulation, any 3d model can be rendered on single computers as well as on clusters for all display sizes.

www.xcave-technology.de

Driving Simulation Association

The *Driving Simulation Association* aims to:

- **promote and encourage driving simulation in all its aspects:** research, studies, developments, applications and products;
- **facilitate communication between people** involved or interested in driving simulation;
- **contribute to the organization of scientific conferences in the area of driving simulation,** Driving Simulation Conference (DSC) Europe, DSA seminars
- **organize special interest groups** (SIG) Driving Simulation Experience (SIGDSEP)
- **inform** about recent events new and trends

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Join the association, register now!

driving-simulation.org

DSC 2025 EUROPE XR

Driving Simulation & eXtended Reality Conference & Exhibition

Renault Group

Arts et Métiers Sciences et Technologies

Université Gustave Eiffel

SIA Société des Ingénieurs de l'Automobile

Driving Simulation Association

driving-simulation.org