



EUROPEAN ASSOCIATION FOR  
**ACCIDENT RESEARCH**  
AND ANALYSIS

# 32<sup>nd</sup> Annual **EVU** Congress **2024**

PROGRAM

■ **September 12<sup>th</sup> – 14<sup>th</sup>, 2024**

Kufstein - Austria

■ Venue: Stadtsaal Kufstein

## Main Topics:

- **From real roads to virtual roads**
- **Reconstruction**
- **EDRs, Sensors and Data**
- **Biomechanics of impact**
- **ADAS and safety systems**
- **Open Forum**

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## THURSDAY 12.09.2024

10:00-12:00	Distribution of conference documents
12:30	Opening Ceremony

### Session 1: From real-roads to virtual roads

*Chaired by: Maximilian Bauder*

13:10	Road2Sim - Transformation of Road Sections into a Virtual Environment Based on GroundTruth Measurement <i>Krishnakumar Mayannavar, Jonas Nesensohn, Peter Pfeffer, Bernhard Schick</i>
13:30	Comparative study of data collection techniques at road accident sites using photogrammetry: Drone, Leica BLK 3D, RedCatch (GNSS), Ground photogrammetry <i>Philippe Somja, Yves Page</i>
13:50	Video analysis and photogrammetry in accident analysis – uncommon case studies <i>Michal Křížák, Dr. Albert Bradáč, Dr. Marek Semela, Dr. Pavel Maxera, Dr. Martin Bilík, Dr. Robert Kledus</i>
14:10	Evaluation of the accuracy of 3D photogrammetry methods <i>Prof. Dr. Klaus-Dieter Brösdorf, Dr. Andreas Moser</i>

14:30 Coffee break (30 min)

### Session 2: Reconstruction

*Chaired by: Ulrike Molinari*

15:00	Kinematics measurements on light single-track vehicles during acceleration and braking <i>Miha Ambrož, Jernej Korinšek, Jovan Trajkovski, Robert Kunc</i>
15:20	Investigating Yaw Marks on Grass Surfaces for Vehicle Speed Reconstruction <i>Jeroen Peters, Sander de Goede</i>
15:40	Pole/Tree Impact Analysis <i>Mark Paquette, Nicholas Young, Greg Prentice, Mark Fabbroni</i>
16:00	3D accident reconstruction for traffic incident documentation using advanced Deep Learning approaches <i>Matteo Fusconi, Enrico Pittini, Davide Castellucci, Salvatore Pisciotta, Filippo Begani</i>
16:20	Increasing road safety by transforming the reconstruction of real accidents into simulation scenarios to design innovative ADAS and AD systems. <i>Hon.-Prof. Dr.-Ing. Werner Möhler, Univ.-Prof. Dr.-Ing. Lutz Eckstein</i>
19:00	Tyrolean evening (Hotel Andreas Hofer)

**FRIDAY 13.09.2024****Session 3: EDRs, Sensors and Data (Part 1)***Chaired by: Robin Langer*

09:00	Recording vehicle dynamics during driving maneuvers using modern smartphones and GoPro cameras and evaluation in PC-Crash <i>Dr. Andreas Moser, Dipl.-Ing. (FH) Christian Hittinger, Dipl.-Ing. Julian Simader, Dr. Hermann Steffan</i>
09:20	Reconstruction of a high-speed accident with three vehicles involved using data from EDR (Event Data Recorder) and GoPro camera <i>Dipl.-Ing. (FH) Christian Hittinger, Dr. Andreas Moser</i>
09:40	Selected results of the project "Modern Methods of Documentation and Analysis of Vehicle Damage" <i>Kateřina Bucsuházy, Marek Semela, Roman Mikulec, Martin Rak, Albert Bradáč, Martin Bilík, Pavlína Moravcová, Michal Křížák, Michal Belák, Jakub Motl, Robert Zůvala, Robert Kledus</i>
10:00	Investigation of an accident at a traffic light-controlled intersection using eCall data <i>SV Dipl.-Ing. Hannes Glaser</i>

10:20 Coffee break (30 min)

**Session 4: EDRs, Sensors and Data (Part 2)***Chaired by: Andreas Loizou*

10:50	Bias and Uncertainty of Brake Onset Times Estimated from Onboard Video During Emergency Braking Events <i>Thomas I. Flynn, Cole R. Young, Matthew D. Ahrens, Gunter P. Siegmund</i>
11:10	The Airbag Control Unit: Master of Protection vs. Data Recorder <i>Reinhart J. Weber, Andreas Forster</i>
11:30	Pre-Collision Motion Reconstruction and Collision Offset Correction Methods of EDR Data <i>Dr. Ingo Holtkötter, Florian Pirkner, Matthias Schmidt</i>
11:50	Rolling shutter effect in a video recording of a lightboard <i>Wojciech Wach</i>

12:10 Lunch (1h 10 min)

**Session 5: Open Forum***Chaired by: Andreas Moser*

13:20	A novel test method for rapid evaluation of the mechanical integrity of battery modules in the field <i>Michael Salamon, Sven Kilian, Alexander Ennen, Klaus Böhm</i>
13:40	Challenges in Technical Inspection of Automated Vehicles Environmental Sensors <i>Robin Langer, Tibor Kubjatko, Hans-Georg Schweiger</i>
14:00	Advancing Car Insurance Fraud Detection: An Automated Deep-Learning Approach <i>Guglielmo Biagini, Davide Castellucci, Simone Orlando, Enrico Pittini, Filippo Begani</i>
14:20	In-depth Investigation of E-Scooter Performance (a Summarised Update) <i>Victoria Eyers, Iwan Parry, Mohammed Zaid</i>

14:40 Coffee break (30 min)

**Session 6: Biomechanics of impact***Chaired by: Victoria Eyers*

15:10	HBM application in the analysis of road traffic accidents <i>Robert Kunc, Jovan Trajkovski, Miha Ambrož</i>
15:30	Accident reconstruction via analysis and reproduction of head injury patterns <i>Ivan Colamartino, Pierangelo Adinolfi, Gabriele Canzi, Giorgio Novelli, Marco Anghileri</i>

16:00 General Assembly

18:00 Welcome reception at the Kufstein fortress  
*250m walk from the venue to the panoramic railway to the fortress. Path contains cobblestones.*

19:00 Gala dinner at the Kufstein fortress



**SATURDAY 14.09.2024**

	<b>Session 7: ADAS and safety systems</b> <i>Chaired by: Wojciech Wach</i>
09:00	Brake Response Times of Advanced Emergency Braking Systems <i>Robert J G Taylor</i>
09:20	Basic data on the behavior of partially automated driving functions when cornering for accident reconstruction <i>Jessica Künzler, Luigi Ancona, Pavlos Triantafyllidis, Daniel Paula</i>
09:40	Partially automated driving functions in accident reconstruction <i>Daniel Paula, Tibor Kubjatko, Hans-Georg Schweiger</i>
10:00	Simulation model for analysing the avoidability of turning accidents involving VRUs with the integration of available active safety systems <i>Stefanie Ritter, Andreas Baur, Frank Müller</i>
10:20	Coffee break (30 min)
	<b>Session 8: EDRs, Sensors and Data (Part 3)</b> <i>Chaired by: Yves Page</i>
10:50	Navigating Pitfalls in Camera Calibration for Accident Reconstruction: A Focus on Luminance Measurement <i>Beril Dogruöz, Max Gäde, Ganesh Kubina, Eduard Gerwald</i>
11:10	Influence of pre-crash and in-crash joint motion of a pedestrian on results of numerical simulation using V-SIM 6.0. pedestrian model <i>Daniel Wdowicz, Dariusz Bułka</i>
11:30	Development of an Accident Reconstruction Method Using Cooperative Awareness Message Data <i>Maximilian Bauder, Tibor Kubjatko, Hans-Georg Schweiger</i>
11:50	On the Assessment of Visibility by Means of Digital Cameras <i>Wolfgang Hugemann, Henrik Zöller</i>
12:10	Award winning & closing ceremony
12:45	Lunch
	<b>Subsequent additional program</b> (free of charge)
	Virtual Vehicle excursion to the neighboring town of Wörgl, where the company uses self-driving vehicles in city traffic <ul style="list-style-type: none"> <li>• Shuttle Transport to Wörgl</li> <li>• Opportunity to watch or ride as a passenger in the self-driving vehicle</li> <li>• Shuttle service back to Kufstein. Arrival around 5:00 p.m.</li> </ul>