

# EVU 2022, 30<sup>th</sup> Annual Congress

## PROGRAMM



EUROPEAN ASSOCIATION FOR  
ACCIDENT RESEARCH  
AND ANALYSIS

**October 26–28 2022**  
**Strasbourg - France**

## Wednesday, October 26th 2022

1:00pm Welcome

### 1:30PM RECONSTRUCTION I

1:30pm **Impact of vehicle electrification on fundamental accident reconstruction parameters**  
*Daniel Paula<sup>1</sup>, Thomas König<sup>1</sup>, Klaus Böhm<sup>2</sup>, Maximilian Bauder<sup>1</sup>, Hans-Georg Schweiger<sup>1</sup>*  
(1. Technische Hochschule Ingolstadt, 2. Munich University of Applied Sciences)

1:50pm **Braking experimental tests with 3 PTW in different configurations**  
*Romain Vabre<sup>1</sup>, Christophe Perrin<sup>2</sup>, Jeremy Sinnaeve<sup>1</sup>, Claire Naude<sup>2</sup>, Thierry Serre<sup>2</sup>*  
(1. IRCGN, 2. Université Gustave Eiffel)

2:10pm **Video analysis in traffic accident reconstruction**  
*Matthias Schmidt (AnalyzerPro KG)*

2:30pm Coffee break

### 3:00PM TRAFFIC BEHAVIOR I

3:00pm **Scientific Methods to Evaluate a Driver Response**  
*Jeffrey Muttart, Swaroop Dinakar, Suntacy Gernhard-Macha (Crash Safety Research Center, LLC)*

3:20pm	<b>Driver responses to intruding vehicles turning-into-same-path scenario from SHRP-2 Naturalistic Database</b> <i>Swaroop Dinakar, Jeffrey Muttart, Stephanie Appow, Suntacy Gernhard-Macha (Crash Safety Research Center, LLC)</i>
3:40pm	<b>Cognitive and behavioral approach to ITS at railway level crossings</b> <i>Virginie Taillandier (SNCF)</i>
4:00pm	<b>Accident risks of elderly drivers when turning left at crossroads: an in-depth study based on naturalistic and accident data</b> <i>Aurélie Banet, Thierry Bellet (Université Gustave Eiffel)</i>
4:20pm	Presentation of the Safety Award
5:00pm	General Assembly of the EVU
6:30pm	Cocktail reception

## Thursday, October 27th 2022

### 9:15AM TRAFFIC BEHAVIOR II

9:15am	<b>A dual-experiment based on immersive simulation to study future interactions between pedestrians and automated vehicles</b> <i>Thierry Bellet, Sébastien Laurent, Richard Bertrand (Université Gustave Eiffel)</i>
9:35am	<b>Court-sworn experts in action for HOTSPOT analyses and training courses for traffic engineering experts in Austria</b> <i>Pfleger Ernst (EVU-head of Austria)</i>
9:55am	<b>Lane change processes of cyclists</b> <i>Laura Wittkamp (Ingenieurbüro Schal und Meyer)</i>
10:15am	<b>Impact of lane departure systems on the driver's steering wish</b> <i>Michael Katzer<sup>1</sup>, Jannis Brod<sup>2</sup> (1. DEKRA, 2. De)</i>
10:35pm	Coffee break

### 11:10AM RECONSTRUCTION II

11:10am	<b>Opportunities and challenges of cooperative intelligent transportation systems on accident analysis</b> <i>Maximilian Bauder<sup>1</sup>, Daniel Paula<sup>1</sup>, Klaus Böhm<sup>2</sup>, Lothar Wech<sup>1</sup>, Hans-Georg Schweiger<sup>1</sup> (1. Technische Hochschule Ingolstadt, 2. Munich University of Applied Sciences)</i>
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11:30 am	<b>Vertical Road Profile Measurement and Validation</b> <i>Sander de Goede, Vincent van den Berge (EVU NL)</i>
11:50am	<b>Accident reconstruction 800m below earth's surface</b> <i>Michael Katzer (DEKRA Automobil GmbH)</i>
12:10pm	<b>Reconstruction of a certain sports car accident using complementary evidences – EDR, CCTV and conventional</b> <i>Wojciech Wach<sup>1</sup>, Piotr Ciępa<sup>2</sup> (1. Institute of Forensic Research, 2. Institute of Forensic Research Krakow)</i>
12:30pm	Lunch
<b>2:00PM SAFETY</b>	
2:00pm	<b>STAMP and STPA: a conceptual approach and model to analyse road safety. Application to automated vehicles</b> <i>Yves Page<sup>1</sup>, Thierry Hermitte<sup>2</sup> (1. EVU France, 2. Renault Group)</i>
2:20pm	<b>Accidents with buses – Findings from various databases</b> <i>Stefanie Ritter (DEKRA Automobil GmbH)</i>
2:40pm	<b>Reducing crash severity of errant vehicles at motorway exit ramps by using gravel-filled arrester beds</b> <i>Jovan Trajkovski, Miha Ambrož, Robert Kunc (Faculty of Mechanical Engineering, University of Ljubljana)</i>
3:00pm	<b>Factors related to motorcycle fatalities (FLAM project)</b> <i>Bérengère Varin (Cerema)</i>
3:20pm	Coffee break
<b>3:50PM RECONSTRUCTION III</b>	
3:50pm	<b>The MUSIAC multibody barrier model in PC-Crash</b> <i>Andreas Moser<sup>1</sup>, Hermann Steffan<sup>1</sup>, Vittorio Giavotto<sup>2</sup> (1. DSD - Dr. Steffan Datentechnik GmbH, Linz, 2. SPAT Srl)</i>
4:10pm	<b>Using PC-Crash to Analyze Motorcycle Slide to Stop Dynamics</b> <i>Benjamin Nguyen, Edward Jr. Fatzinger (Momentum Engineering Corp.)</i>
4:30pm	<b>Low-cost method of calculation in investigation accident by random number generation</b> <i>Gustavo A. Enciso (EVU)</i>
4:50pm	<b>GPS trackers: Assessment of the discovery rate of stolen 2-wheeled vehicles</b> <i>Vanessa Cucurullo, Laurent Santucci (Mutuelle des Motards)</i>
5:10pm	Outlook to next year
7:30pm	Gala Dinner

# Friday, October 28th 2022

## 9:15AM BIOMECHANICS

9:15am **Head injury risk during accidents involving new personal mobility devices**  
*Nicolas Bourdet, Frank Meyer, Rémy Willinger, Caroline Deck (Strasbourg University)*

9:35am **Development of a Computationally Efficient Full Biofidel-Dummy Finite Element Model**  
*Benjamin Härtel, Lars Hannawald, Johannes Menke (HTW Dresden)*

9:55am **Accident reconstructions of motorcyclists wearing airbag jacket**  
*Thierry Serre, Maxime Llari, Bastien Canu, Christophe Perrin (Université Gustave Eiffel)*

10:15am **Powered two-wheelers dynamics: determination of thresholds for the detection of emergency situations**  
*Thierry Serre<sup>1</sup>, Laura Costa<sup>2</sup>, Christophe Perrin<sup>1</sup> (1. Université Gustave Eiffel, 2. 2AM Expertise)*

10:35am Coffee break

## 11:10AM EVENT DATA RECORDERS

11:10am **An Airbag ECU Contradicts Itself: Discrepancies and Reverse Engineering of EDR Data**  
*Ingo Holtkötter (Schimmelpfennig + Becke Münster)*

11:30am **Validation of the EDR recorded data of head-on collisions**  
*Jakub Zębala<sup>1</sup>, Piotr Ciępka<sup>1</sup>, Wojciech Wach<sup>1</sup>, Michał Krzemiński<sup>2</sup> (1. Institute of Forensic Research Krakow, 2. Crash Data Poland)*

11:50am **Security analysis of an Event Data Recorder system according to the HEAVENS model**  
*Robin Langer, Marco Michl, Daniel Paula, Hans-Joachim Hof, Hans-Georg Schweiger (Technische Hochschule Ingolstadt)*

12:10am **Validation of VAG event data recordings triggered by collision warning and automatic emergency braking events.**  
*Jeroen van Essen<sup>1</sup>, Aart Spek<sup>2</sup> (1. Rotterdam Police, 2. Nederlands Forensisch Instituut)*

12:30am End of Congress