

# 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

#### 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)

#### 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)

#### Video analysis in traffic accident reconstruction

*Matthias Schmidt (AnalyzerPro KG)*

2:30pm Coffee break

## 3:00PM TRAFFIC BEHAVIOR I

### Scientific Methods to Evaluate a Driver Response

Jeffrey Muttart, Swaroop Dinakar, Sontacy Gernhard-Macha (Crash Safety Research Center, LLC)

### Driver responses to intruding vehicles turning-into-same-path scenario from SHRP-2 Naturalistic Database

Swaroop Dinakar, Jeffrey Muttart, Stephanie Appow, Sontacy Gernhard-Macha (Crash Safety Research Center, LLC)

### Cognitive and behavioral approach to ITS at railway level crossings

Virginie Taillandier (SNCF)

### Accident risks of elderly drivers when turning left at crossroads: an in-depth study based on naturalistic and accident data

Aurélie Banet, Thierry Bellet (Université Gustave Eiffel)

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

### A dual-experiment based on immersive simulation to study future interactions between pedestrians and automated vehicles

Thierry Bellet, Sébastien Laurent, Richard Bertrand (Université Gustave Eiffel)

### Court-sworn experts in action for HOTSPOT analyses and training courses for traffic engineering experts in Austria

Pfleger Ernst (EVU-head of Austria)

### Lane change processes of cyclists

Laura Wittkamp (Ingenieurbüro Schal und Meyer)

### Impact of lane departure systems on the driver's steering wish

Michael Katzer<sup>1</sup>, Jannis Brod<sup>2</sup> (1. DEKRA, 2. De)

10:35pm Coffee break

## 11:10AM RECONSTRUCTION II

### Opportunities and challenges of cooperative intelligent transportation systems on accident analysis

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)

### Vertical Road Profile Measurement and Validation

Sander de Goede, Vincent van den Berge (EVU NL)

### Accident reconstruction 800m below earth's surface

Michael Katzer (DEKRA Automobil GmbH)

### Reconstruction of a certain sports car accident using complementary evidences – EDR, CCTV and conventional

Wojciech Wach<sup>1</sup>, Piotr Ciępk<sup>2</sup> (1. Institute of Forensic Research, 2. Institute of Forensic Research Krakow)

12:30pm Lunch

## 2:00PM SAFETY

### STAMP and STPA: a conceptual approach and model to analyse road safety. Application to automated vehicles

Yves Page<sup>1</sup>, Thierry Hermitte<sup>2</sup> (1. EVU France, 2. Renault Group)

### Accidents with buses – Findings from various databases

Stefanie Ritter (DEKRA Automobil GmbH)

### Reducing crash severity of errant vehicles at motorway exit ramps by using gravel-filled arrester beds

Jovan Trajkovski, Miha Ambrož, Robert Kunc (Faculty of Mechanical Engineering, University of Ljubljana)

### Factors related to motorcycle fatalities (FLAM project)

Bérengère Varin (Cerema)

3:20pm Coffee break

## 3:50PM RECONSTRUCTION III

### The MUSIAC multibody barrier model in PC-Crash

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)

### Low-cost method of calculation in investigation accident by random number generation

Gustavo A. Enciso (EVU)

### Systematic investigation of the impact of a bicycle against the side of a crossing vehicle,

Johannes Mueller (Unfallanalyse Berlin GbR)

5:10pm Outlook to next year

7:30pm Gala Dinner

## Friday, October 28th 2022

### 9:15AM BIOMECHANICS

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

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

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

**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

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

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

**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)*

**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

12:45am Snack before departure