Book of Abstracts: Workshop on Virtual Development in Passive Safety and Human Models for Future Mobility 2022

University of West Bohemia

Technische Hochschule Ingolstadt

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BOOK OF ABSTRACTS:
WORKSHOP ON VIRTUAL DEVELOPMENT IN PASSIVE SAFETY AND HUMAN MODELS FOR FUTURE MOBILITY 2022

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Learn and Get Inspired

The event addresses topics from virtual development in passive vehicle safety for the mobility of the future. It contains research work, reaching from biomechanics and human body modelling to crash and occupant simulations, as well as crash accident reconstruction. The main objective is to connect young Bavarian and Czech researchers in this field.

The workshop is planned as a one-day hybrid event. It includes two keynote lectures from Czech and German recognised experts. Ing. Petr Pavlata from Vision Consulting Automotive, s.r.o. and Prof. Dr. Klaus Böhm from University of Applied Sciences Munich. There will be two sessions of young researchers' presentations following with a discussion forum on the presented topics.

This workshop, which was attended by many participants from the Czech Republic, Germany and from abroad, was organised by the Department of Biomechanical Human Body Models New Technologies - Research Centre University of West Bohemia and CARISSMA - Center of Automotive Research on Integrated Safety Systems and Measurement Area, Technische Hochschule Ingolstadt under the auspices of

- The Bavarian-Czech Academic Agency,

Bayerisch-Tschechische Hochschulagentur
Česko-bavorská vysokoškolská agentura
EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání

Workshop Agenda

- 09:00 Registration and Technical Check - G 105,
- 09:30 Welcome by Local Host,
- 09:35 “Extraction and utilization of (system-) camera- and sensor (fusions)-data for the accident-reconstruction” PROF. DR. KLAUS BÖHM,
- 10:00 “Virtual approach for evaluation vehicles and their components according to international standards” ING. PETR PAVLATA,
- 10:40 Block I of Scientific Presentations:
- “Biomechanical model of pregnant female for impact purposes” Magdalena Jansová (UWB),
- “Virtual tool for reconstruction of low-velocity pedestrian accidents” Jan Vychytil (UWB),
- “Occupants’ safety with different seatbelts in an autonomous vehicle and non-standard seating configurations” Abbas Talimian (UWB),
- “Menger sponge as an energy absorbing component of PPE” Sandra Kaňáková (UWB)
- 12:00 Panel Discussion on Block I,
- 13:30 Block II of Scientific Presentations:
- “Fast injury assessment in non-standard seating configurations using artificial intelligence” Luděk Hynčík (UWB),
- “Insights into the Crash Severity and Restraint Strategy Prediction using Machine Learning Methods” Gerald Joy Sequeira (THI),
- “Crash test program optimization for validation of crash detection algorithm using big data” Shahabaz Afraj (THI),
- “Concepts for Fast Assessment of Occupant Safety Based on Effectively Generated Data” Franz Plaschkies (THI),
- 14:50 Panel Discussion on Block II,
- 15:30 Visit to CARISSMA Facility,

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