Conference Program

Hannover, Germany

June 9 - 10, 2016
Foreword

ESAR is a scientific colloquium and can be seen as a platform for exchanges of information on accident research issues. Representatives from authorities as well as from medical and technical institutions come together to discuss new research issues and exchange experiences on accident prevention and methodologies of accident reconstruction. ESAR’s goal is to give the opportunity to all kind of studies on Accident Investigation Methodologies, Accident Analysis, Active and Passive Safety, Injury mechanisms and Injury Prevention to an audience of experts from government, industry and other researchers.

There are keynote presentations on future demands on accident research for optimisation of traffic safety and towards automated driving requirements for technology and data handling.

ESAR is fulfilling a hole with its specific information on accident data and statistical issues based on in-depth-investigation methods and got it's position as a new trend-setting international conference for international attention.

ESAR brings together researchers from all parts of the world!

Professor Dietmar Otte

Your Host and Conference Manager

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Conference Program

**Organisation Committee**

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Dr.-Ing. Heiko Johannsen (MH Hannover)
Dr.-Ing. Ralf Tenzer (Volkswagen)
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Dr. Steven Ridella (NHTSA), USA

Medizinische Hochschule Hannover
Day One – Thursday 9th June 2016

09:00 - 10:15
Opening Ceremony
Chaired by the conference manager

Welcome Introduction
Professor Dietmar Otte
Conference chairman

Keynote Lecture
Importance and Goals on Accident Prevention – Prospective Report of German Government
Claus Pastor
BAST, Germany

Keynote Lecture
Opportunities for Occupant and Partner Protection by new Technologies based on Accident Research
Professor Dr. Rodolfo Schöneburg
Daimler AG, Germany

Keynote Lecture
Automated transport – improving road safety?
Professor Dr. Pete Thomas
Road and Vehicle Safety, Safe and Smart Mobility Research Cluster
Loughborough University, UK

10:15 - 10:45
break
Day One – Thursday 9th June 2016

10:45 - 11:50
Session 1: Accident research general
Chair: H. Johannsen

10:45
1  Interdisciplinary accident research and research projects of AARU
   S. Weber
   AARU, Germany

10:55
2  In-depth crash investigation in South Australia and its use in roadside
   safety research
   S. Doecke
   University of Adelaide, Australia

11:05
3  In-depth crash investigation setup in Campinas, São Paulo, Brazil
   J. Mönnich
   Bosch, Germany

11:15
4  Analysis and investigation method for all traffic scenarios (AIMATS)
   C. Erbsmehl
   Fraunhofer, Germany

11:25
5  Developing the European Road Safety Decision Support System
   P. Thomas
   Loughborough University, UK

11:35
   DISCUSSION

11:50 - 12:50
   lunch
12:50 - 13:50
Session 2: Regulation and consumer information Part 1
Chair: R. Tenzer

12:50
1  Driverless cars
   N. Greig
   IAM, UK

13:10
2  Injury patterns of Korea pedestrian accidents in KIDAS
   Y. Youn
   Korea University of Technology, South Korea

13:30
3  Crashworthiness of vehicles manufactured post Euro NCAP: Risk of occupant injury for different crash constellations
   L. Gaylor
   VW, Germany

13:50 – 14:20
break
Day One – Thursday 9\textsuperscript{th} June 2016

14:20 - 15:05
Session: Regulation and consumer information Part 2
Chair: R. Schäfer

14:20
1  Comparison of injury severity to near-side and far-side occupants in side impacts by motor vehicle crashes
H.-Y. Lee  
*Wonsei University, South Korea*

14:30
2  An evaluation of passive head-restraints with different stiffness and energy dissipation properties for whiplash mitigation
S. Himmetoglu  
*Hacettepe University, Turkey*

14:40
3  Occupant RetenTion in rear impact
S. E. Meyer  
*SAFE, USA*

14:50
DISCUSSION

15:05 - 15:35
break
**15:35 - 17:15**  
**Session:** Accident causation  
**Chair:** L. Hannawald

15:35

1  *Motorcycle crashes in Austria: analysis of causes and contributing factors based on in-depth data*  
M. Winkelbauer  
*KFV, Austria*

15:55

2  *A pilot study for the development of a system to determine Accident Moderating Conditions (AMoC) as an addition to situational accident causation factors*  
B. Pund  
*TÜV Hessen, Germany*

16:05

3  *Interest of in-depth investigation for studying the relation between speed and accident risk*  
B. Canu  
*IFSTTAR, France*

16:15

4  *Driver distraction*  
N. Greig  
*IAM, United Kingdom*

16:25  
DISCUSSION
16:35
5 The impact of cognitive impairments on accident risk
D. Pavlou
*NTUA, Greece*

16:45
6 In-depth investigation of bus accidents
J. Dias
*University Lisbon, Portugal*

16:55
7 Causation of traffic accidents with children from the perspective of all involved participants
M. Weinberger
*TUG, Austria*

17:05
DISCUSSION

End of first day 17:15

19:00
ESAR - Dinner
Zoo Hannover
(for further information see Page 18)
Please use casual clothes
09:00 - 10:20
Session: Pre-crash analysis
Chair: D. Otte

09:00
1  Innovations for standardized pre-crash-scenarios on the basis of the VUFO simulation model VAST
   A. Schubert
   VUFO, Germany

09:10
2  Influence of ADAS on driver behavior
   D. Vangi
   Unifi, Italy

09:20
3  Evaluation of a momentum based impact model and application in an effectivity study considering junction accidents
   H. Kolk
   TUG, Austria

09:30
DISCUSSION
09:40
4  ADAC accident research – accident analysis based simulation of the most dangerous scenarios
   T. Unger
   ADAC, Germany

09:50
5  Analysis of conflict situations between elderly pedestrians and vehicles
   M. Weinberger
   TUG, Austria

10:00
6  Effectiveness of a post-crash braking system in rear-end collisions in Japan
   R. Oga
   National Research Institute of Police Science, Japan

10:10
   DISCUSSION

10:20 - 10:50
   break
10:50 - 12:10
Session: Accident reconstruction and video observation
Chair: J. Bakker

10:50
1  Comparison of standardised roughness measurement methods and friction potential tests under real conditions
   G. Müller
   TUB, Germany

11:10
2  Analysis of road accident according to road surface condition
   J. Park
   Korea Institute of Civil Engineering, South Korea

11:30
3  Motorcyclist post impact trajectory analysis
   M. S. Varat
   KEVA Engineering, USA

11:50
4  Identifying conflict clusters of cyclists at a roundabout by automated traffic surveillance
   H. Saul
   DLR, Germany

12:10 - 13:10
lunch
13:10 - 15:55
Session: Injuries
Chair: C. Krettek

13:10
1 An overview of car occupant fatalities in the European countries
D. Pavlou
National Technical University of Athens, Greece

13:20
2 Injury probability functions for pedestrians and bicyclists based on real-world accident data
H. Liers
VUFO, Germany

13:30
3 Long term consequences of road accidents
H. Johannsen
Medizinische Hochschule Hannover, Germany

13:40
4 Hospitalization costs due to road traffic injuries: Results from a 1-years long-term study in 3 European countries: Germany, Greece and Italy (REHABIL-AID)
D. Otte
Medizinische Hochschule Hannover, Germany

13:50
5 A methodology to evaluate whiplash injuries from computational accident reconstruction
J. Dias
University Lisbon, Portugal

14:00 DISCUSSION

14:10 - 14:40
break
14:40 6  Severe abdominal injuries for car occupants in frontal impact
      T. Hermitte
      LAB, France

14:50 7  Biomechanical analysis of traffic accident related aortic injuries over
      the past 40 years
      S. Brand
      Medizinische Hochschule Hannover, Germany

15:00 8  Spine injuries in vulnerable road users – a technical and medical
      analysis of 14295 injured pedestrians, bicycle and motorbike users
      C.W. Müller
      Medizinische Hochschule Hannover, Germany

15:10 9  Road traffic related injury severity in truck drivers: a prospective
      medical and technical analysis of 582 truck crashes
      S. Decker
      Medizinische Hochschule Hannover, Germany

15:20 10  A study on knowledge and practices of first aid and CPR among police
       officers in Colombo and Gampaha
       K.A.R. James
       IIHS, Sri Lanka

15:30 DISCUSSION

15:45
       Closing Remarks
       Otte
       Conference Chairman

End of conference  15:55
Scientific Organisation Secretariat
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Congress opening hours/registration desk
Thursday 9th June 8:00 am – 05:30 pm
Friday 10th June 8:00 am – 04:00 pm

Speakers Desk
There is a Speakers’ desk next to the registration desk. All Speakers are asked to provide their presentations. Please follow the signs.

Language
The official language of the Congress is English. Simultaneous translation is not provided.

Proceedings
All papers are published in a special conference CD as report of the Federal Highway Research Institute BASt Journal M with ISBN, published after the conference. We express our acknowledgement of this service!
Arriving from Kassel or Hamburg leave the highway A7 at "Autobahnkreuz Hannover/Kirchhorst" and follow the highway A37 direction "Hannover". Using highway A2 leave at "Autobahnkreuz Hannover-Buchholz" and follow highway A37 direction Hannover. Leave at second exit "MHH" and follow description "Medizinische Hochschule". To find the conference hall and registration desk please look at the plan on next side.
Traveling by train
Arrival at Central Station "Hannover Hauptbahnhof".
Use Underground line 1 direction "Sarstedt" and leave the tram at station "Aegidientorplatz" (second station after entering). Use then line 4 direction "Roderbruch" from the same platform opposite side. Leave the tram at station "Medizinische Hochschule". To find the conference hall and registration desk please look at the plan at the top of this sheet.

Traveling by aeroplane
Arrival at Airport Hannover-Langenhagen. Use S-Bahn to Central Station Hannover and follow description "travelling by train" or take a taxi (approx. € 30, 20 min)
ESAR Support

ESAR Overview map

Hotel Kleefelder Hof – 30min. by foot

Hotel Kleefelder Hof – 20min. by foot

MSR Hotel
10min. by foot

Mercure Hotel
Hanover Medical Park
10min. by foot

ESAR Lunch
The evening event is at “Zoo Hannover”.

To get there by tram use the line 4 direction “Garbsen” and change at “Clausewitzstraße” to line 11 direction “Zoo”. Exit at stop called “Zoo”. This is directly in front of the Zoo. It takes about 16 min.
The Organisation Committee and the Organiser gratefully acknowledge the following institutions for their various contributions in this ESAR conference:

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DEGENER VERLAG

Seit 80 Jahren für Sie da!