



Akademie

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Protection of Children in Cars

15th International Conference
Achievements in the Past and
Targets in Future

December 7 – 8, 2017,
Munich, Germany

**WORKSHOP
ON DECEMBER 6**

Join the 15th anniversary

The Conference 2017 is dedicated to review the past and the future of CRS development. What has been achieved in the past and is now international state of the art and which are the concrete tasks of the future in regulation, product innovation and consumer acceptance. Are different strategies needed in countries with high CRS awareness and countries with emerging CRS use? Which benefits are still to be expected by technical innovation and which permanent safety campaigns are necessary to promote consumer behaviour. This will also be in the focus of the panel discussion on the first conference day.

Besides these substantial questions of child safety, the standing topics of the conference in the past will be updated and recent developments worldwide will be reported.

This 15th International Conference will act as worldwide forum for safety engineers, accident researchers, experts in biomechanics and pediatricians, representatives of rulemaking, consumer organizations, promoters of safety campaigns and specialists in car/CRS rating procedures.

The conference language will be English.

Workshop

On December 6, 2017 a workshop on child safety in traffic in general will bring together people interested in specific needs, field data collection and educational programs.

The access to the workshop is free for registered participants of the conference.

Workshop on December 6, 2017

Child Safety in Traffic

Chair: Philippe Lesire, LAB PSA Peugeot-Citroën Renault (FR);
Jana Olivier, BMW Group (DE)

14:00 – 15:00: Session 1: Specific needs

- Child heatstroke in cars: research and prevention
Sharon Levi, Avital Epel, Niri Harel, Shlomi Tal, Beterem – Safe Kids Israel
- A child seat for children with brittle bone disease
Jesús Monclús, Fernando Camarero Rodriguez, Fundación MAPFRE; Sergi Ferris, Albert Garcia, SafeDsign (ES)
- Injury criteria for children affected by Osteogenesis Imperfecta
Luis Martínez, Marta de Loma-Ossorio, Rafael Pérez, Manuel Espantaleón, INSIA-UPM (ES); Viridiana Ramirez, Christopher René Torres, ESIME-IPN (MX)
(short presentation and written paper)

15:00 – 15:30: Session 2: field data collection

- Sharing the experience on methodology of field surveys: improvements, and harmonisations that could lead to comparable samples
Quentin Lequeux, Annelies Schoeters, Vias institute (BE);
Philippe Lesire, LAB Peugeot Citroën Renault (FR)

15:30 Coffee break

16:00 – 17:30: Session 3: Educational programs

- MOBILEKIDS – a Daimler CSR initiative
Sylvia Hirsch, Daimler AG (DE)
- Safety Program „AUVA-CoPilotenTraining“
Peter Jahn, Child Safety Consultant, Austrian Federal Ministry for Transport, Innovation and Technology (AT)
- Effectiveness study of an educational program on road safety for children in fourth grade
Anna Kern, BMW AG (DE)

Program Committee

ADAC e.V. (DE)

Dr. Reinhard Kolke

AUDI AG (DE)

Stephan Schwald

BMW Group (DE)

Jana Olivier

Federal Highway Research Institute BAST (DE)

Bernd Lorenz

Britax Childcare (DE)

Farid Bendjellal

Children's Hospital of Philadelphia (USA)

Kristy Arbogast, PhD

Daimler AG (DE)

Joachim Fausel

DEKRA Automobil GmbH (DE)

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Insurance Institute for Highway Safety (IIHS) (US)

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Monash University (AU)

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National Traffic Safety and Environment Laboratory (JP)

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Dr. Reiner Nett

Technische Hochschule Ingolstadt (DE)

Prof. Dr. Lothar Wech

Chairman

■ **Prof. Dr. Klaus Langwieder**

International Safety Consulting (DE)

■ **Philippe Lesire**

LAB Peugeot Citroën Renault (FR)

Agenda on December 7, 2017

09:15 Welcome

TÜV SÜD and Prof. Dr. Klaus Langwieder

09:30 Keynote

I-Size regulation – The process of establishing criteria for ECE R129 Phase 3 – different steps and challenges
Pierre Castaing, UTAC CERAM/President and Chairman of the Board of Directors Euro NCAP

■ Achievements in the Past and Targets in Future

Chair: Bernd Lorenz, Federal Highway Research Institute BAST (DE)

10:00 Protecting children and youth in cars: highlighting non-nominal cases and the user experience

Kristy B. Arbogast, Children's Hospital of Philadelphia (USA); Katarina Bohman, Lotta Jakobsson, Volvo Cars (SE) representing all SAFER workshop 2017 attendees

10:25 A descriptive study of booster seat characteristics in the US market

Jessica Jermakian, Insurance Institute for Highway Safety (USA)

10:50 Rearward facing child seats – past, present and future

Lotta Jakobsson, Volvo Cars (SE)

11:15 Coffee break

Panel Discussion:

11:45 Achievements in the Past and Targets in Future

Participants: CRS manufacturers, car makers, regulatory institutions, research institutes and consumer organizations

Moderators: Klaus Langwieder, International Safety Consulting (DE), Philippe Lesire, LAB Peugeot Citroën Renault (FR)

13:00 Lunch

■ Standards and Rulemaking

Chair: Kristy Arbogast, Children's Hospital of Philadelphia

14:00 Development of R129-Phase III: Potential effects of draft requirements on the product range of future Enhanced Child Restraint Systems

David Braun, Farid Bendjellal, Britax Childcare Group (DE)

14:25 Evaluating Regulation 129 child restraints with higher mass percentile occupants

Mark Pitcher, Jolyon A. Carroll, T. Robinson, TRL Ltd. (UK)

14:50 Towards a future regulation for extended rearward facing child seats

Okke van Mourik, HTS BeSafe (NO/NL)

■ Test Procedures and Dummies

Chair: Stephan Schwald, Audi AG (DE)

15:10 Crash pulse influence on performance of forward facing child restraint systems in side oblique loading conditions

Hans Hauschild, John Humm, Narayan Yoganandan, Frank Pintar, Bruce Kaufman, Medical College of Wisconsin; Kristy Arbogast, Matthew Maltese, Children's Hospital of Philadelphia (USA)

15:35 Coffee break

16:05 ATD measurements to help better describe the kinematics of the 6 year-old restrained with a seat belt

Suzanne Tylko, Transport Canada; Alain Bussièrre, Karim El Hallaoui, Amanda Starr, PMG Technologies (CA)

16:30 Kinematics comparison between the Hybrid III 6 year old with standard pelvis and modified pelvis with gel abdomen in booster sled tests

Jessica Jermakian, Marcy Edwards, IIHS (USA)

- 16:55 **Q10 Update Prototype validation test results**
Kees Waagmeester, Paul Lemmen, Apoorva Lakshminarayana, Mark Burleigh, Humanetics Europe GmbH (NL/DE/UK)
- 17:15 **Comparison of current vs prototype EURO NCAP 2020 Q10 dummy in vehicle environment**
Ritesh K. Jain, Elena Schneider, Opel Automobile (DE)
- 17:35 **Comparative study regarding the effect of the Q10 update in simulation**
Bernd Lorenz, Julian Ott, Britta Schnottale, Andre Eggers, Federal Highway Research Institute BAST (DE)
- 17:55 **End of first conference day**
- Evening Event

Agenda on December 8, 2017

■ **Field Data**

- Chair: Sjaan Koppel, Monash University (AU)
- 08:30 **Frontal crash tests of III6y child ATD using child occupant positions quantified from a naturalistic driving study**
Katarina Bohman, Volvo Cars, SAFER (SE); Kristy B. Arbogast, Helen Loeb, Children's Hospital of Philadelphia (USA); Judith L. Charlton, Sjaan Koppel, Suzanne L. Cross, Jonny Kuo, Monash University (AU)
- 08:55 **How do child occupants really behave during motor vehicle travel?**
Suzanne L. Cross, Judith L. Charlton, Sjaan Koppel, Monash University (AU)

- 09:20 **User-centred child restraint product information reduces misuse: Results from a randomised and controlled laboratory trial**
Alexandra Hall, Julie Brown, J. Bilston, C. Ho, B. Albanese, Neuroscience Research; L. Keay, K. Hunter, The George Institute for Global Health; J. L. Charlton, Monash University; A. Hayen, The University of Technology Sydney (AU)
- 09:45 **Evolutions in the use and misuse of child restraint systems in Belgium and a perspective towards the future**
Annelies Schoeters, Quentin Lequeux, Vias institute (BE); Philippe Lesire, LAB Peugeot Citroën Renault (FR)

- 10:10 **Coffee break**

■ **Child Human Body Models**

- Chair: Lothar Wech, Technische Hochschule Ingolstadt (DE)
- 10:40 **Side impact applications of the PIPER scalable child human body models**
Philippe Beillas, Anicet Le-Ruyet, Marie-Christine Chevalier, University of Lyon-Isttar (FR)
- 11:05 **Human body simulation in misuse cases for booster seated children**
Johannes Holtz, Gerd Müller, Steffen Müller, Technische Universität Berlin (DE)
- **Accident Research and Biomechanics**
Chair: Heiko Johannsen, Hannover Medical School MHH (DE)
- 11:30 **Trends in the use and performance of child restraint systems: Analysis of the United Kingdom's Road Accident In-Depth Studies (RAIDS)**
Costandinos Visvikis, CYBEX GmbH (DE), R. Khatry, TRL Ltd. (UK)

- 11:55 **Efficacy of booster seat design on the response of the Q6 ATD in simulated frontal sled impacts**
Aditya Belwadi, Nhat Duong, Seth Fein, Jalaj Maheshwari, Children's Hospital of Philadelphia, Center for Injury Research and Prevention (USA)
- 12:15 **Hight-less, folding booster seats: advanced, compact and portable – but how safe?**
Jon Sumroy, Carfoldio Ltd. mifold (IL)
- 12:35 **Lunch**
- **Development of Safety Products by CRS and Car Manufacturers**
Chair: Joachim Fausel, Daimler AG (DE)
- 13:35 **Safety performance of belts in frontal tests of ISOFIX booster seats**
Yoshinori Tanaka, Naruyuki Hosokawa, Yasuhiro Matsui, National Traffic Safety and Environment Laboratory (JP)
- 14:00 **Child dummy behaviors depending on vehicle and CRS types and CRS development to ensure dummy behavior stability**
Taesu Park, Seungkyu Kang, Hyundai Motor Company (KR)
- 14:25 **Front passenger airbag interaction with restrained forward-facing children**
Frederik Heurlin, Lotta Jakobsson, Volvo Cars (SE)
- 14:50 **Resumé, outlook and farewell**
Prof. Dr. Klaus Langwieder (DE)
- 15:00 **End of the conference**



Registration at any time at

www.tuev-sued.de/protection-of-children-in-cars
congress@tuev-sued.de

Conference Price

840,00 € plus VAT (50 % discount for members of universities)

The registration fee includes conference documentation, lunch and beverages during breaks as well as the evening event.

Conference Venue

TÜV SÜD · Auditorium Chiemsee

Westendstraße 199, 80686 Munich, Germany

You will receive travel and hotel information with the confirmation of your registration.

Registration and Information

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