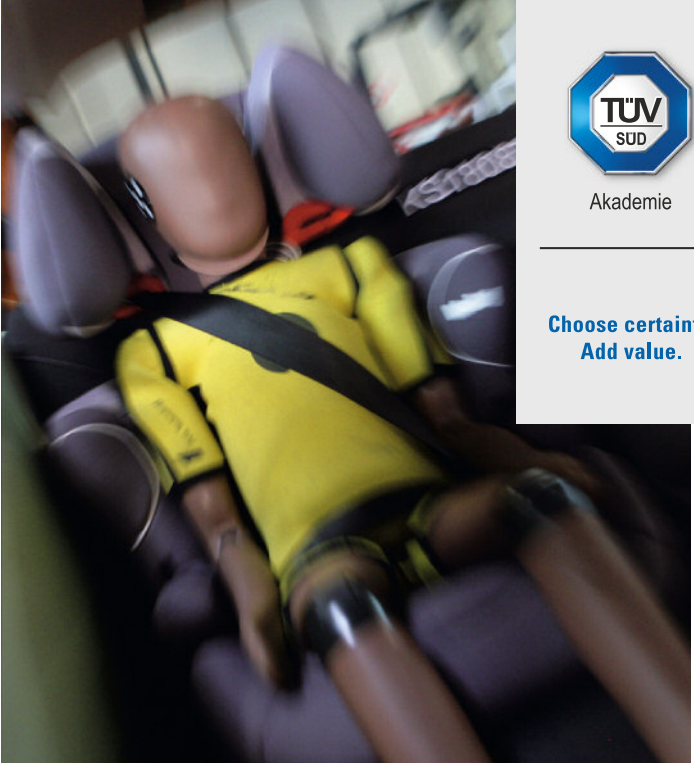




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International Conferences

# Protection of children in cars

9<sup>th</sup> International Conference

December 1 – 2, 2011, Munich, Germany

Chairman

Prof. Dr. Klaus Langwieder

TÜV SÜD Akademie GmbH

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## The conference

The program 2011 confirms the increasing role of this worldwide platform for CRS research and development, for child accident research, biomechanics, for rulemaking, safety testing, for consumer information, NCAP activities and safety campaigns. New countries submitted scientific studies and field observations and the participation of more than 25 countries from all continents is to be expected.

The progress in important key subjects of child safety will be discussed covering the new ECE regulation, new test tools/dummies and test procedures, especially side impact. Special focus is given to accident data, the continuing problem of misuse and to new developments of human models.

Preceding the conference, a workshop “Child Safety and Cultural Approach” on Wednesday, November 30 addresses the situation in road traffic and the level of child protection in different countries in order to promote concepts for improved safety behaviour, increased child safety and effective safety campaigns worldwide.

Leading international research units, CRS and car manufacturers, universities, consumer organisations take part as well as representatives of rulemaking, specialists in dummy and test development, paediatricians, experts in accident research and biomechanics – assigning this conference to be one of the most important meetings in child safety.

## Programme committee

- AUDI AG, Germany,  
**Dr. Sebastian Weber**
- BMW Group, Germany,  
**Peter Hutmann**
- Bundesanstalt für Straßenwesen (BASt), Germany,  
**Bernd Lorenz**
- Britax Group, Germany,  
**Farid Bendjellal**
- DEKRA Automobil GmbH, Germany,  
**Volker Noeske**
- FIA Brussels,  
**Dr. Wilfried Klanner**
- Insurance Institute for Highway Safety, USA,  
**Christopher Sherwood**
- Japan Automobile Research Institute,  
**Prof. Dr. Koshiro Ono**
- LAB PSA Peugeot-Citroën RENAULT, France,  
**Philippe Lesire**
- Monash University Accident Research Centre (MUARC),  
**Prof. Dr. Brian Fildes**
- National Traffic Safety and Environment Laboratory, Japan,  
**Yoshinori Tanaka**
- RECARO GmbH & Co. KG, Germany,  
**Ingolf Vogelsang**
- Stiftung Warentest, Berlin, Germany,  
**Henry Görlitz**
- Technische Universität Berlin, Germany,  
**Dr. Heiko Johannsen**
- TÜV SÜD Automotive GmbH, Germany,  
**Dr. Lothar Wech**
- University of Virginia, USA,  
**Prof. Dr. Jeff Crandall**
- Chairman  
**Prof. Dr. Klaus Langwieder**

## Agenda on Thursday, December 1, 2011

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- 9:00 **Welcome**  
Prof. Dr. Klaus Langwieder,  
International Safety Consulting (DEU)
- 9:15 **Setting the future agenda for child occupant protection**  
Kristy B. Arbogast, The Children's Hospital of Philadelphia  
Center for Injury Research and Prevention (USA)
- 9:45 **Safe transportation of children with special health care needs**  
Marilyn J. Bull, Joseph O'Neil, Judith Talty, Janell Yonkman,  
Riley Hospital for Children at Indiana University Health (USA)
- █ **Standards and Rulemaking**  
Chair: Prof. Dr. Klaus Langwieder, International Safety  
Consulting
- 10:15 **Safety benefits of the new ECE regulation for the homologation of CRS – an estimation by the CASPER consortium**  
Philippe Lesire, LAB PSA Peugeot-Citroën RENAULT (FRA);  
Dr. Heiko Johannsen, TU Berlin; Gerd Müller, Verein für  
Fahrzeugsicherheit Berlin e.V. (DEU); Alejandro Longton,  
IDIADA (ESP); Alan Kirk, Loughborough University (UK);  
Reakka Krishnakumar, CEESAR (FRA)
- 10:45 **Coffee break**
- 11:15 **Research of CRS side impact test by acceleration type sled system**  
Yoshinori Tanaka, Naruyuki Hosokawa, Yasuhiro Matsui,  
National Traffic Safety and Environment Laboratory;  
Koji Mizuno, Nagoya University; Ryoichi Yoshida, Takata  
Corp. (JPN)
- 11:45 **Child protection in far side impacts**  
Brian Fildes, Monash University Accident Research  
Centre (MUARC), Europe

- 12:15 **Effects of booster seat legislation on injury risk among children in crashes**  
Angela H. Eichelberger, Aline Chouinard, Jessica S.  
Jermakian, Insurance Institute for Highway Safety (USA)

- 12:45 **Lunch**

### █ **Accident Research and Field Observation**

Chair: Christopher Sherwood, Insurance Institute for  
Highway Safety

- 13:45 **Child car passenger fatalities – European figures and in-depth study – EC CASPER project**  
Alan Kirk, Loughborough University (UK);  
Philippe Lesire, LAB PSA Peugeot-Citroën RENAULT (FRA);  
Sylvia Schick, LMU München (DEU)

- 14:15 **A preliminary study on child occupant safety in passenger car using accident data from Changsha of China**  
Yong Peng\*, Xingmei Yang, Chunyu Kong, Hunan University  
(CHN); Jikuang Yang, Ph.D., Chalmers University of  
Technology (SWE); Philippe Lesire, LAB PSA Peugeot-  
Citroën RENAULT (FRA)

- 14:45 **Misuse – four different Perspectives**  
**First roadside survey of child restraint system use and misuse in Belgium**  
Mathieu Roynard, Belgian Road Safety Institute (BEL);  
Philippe Lesire, LAB PSA Peugeot-Citroën RENAULT (FRA)  
**Child safety in cars – an observational survey in Sweden**  
Susanne Gustafsson, Swedish National Road and Transport  
Research Institute; Rickard Cosini, National Society for  
Road Safety (SWE)  
**Misuse investigation: recent evaluations in Ireland**  
Mark Bennett, Britax Römer (UK);  
Farid Bendjellal, Britax Group  
**Child restraint use study and status of national UK  
database for restraint use studies**  
Marianne Hynd, Mark Pitcher, James Onyekwere, TRL Ltd. (UK)

- 15:45 **Coffee break**

## Consumer Information and Safety Programs

Chair: Dr. Lothar Wech, TÜV SÜD Automotive GmbH

16:15 The new child seat rating of the European Test Consortium (ETC)

Andreas Ratzek, ADAC e.V.;  
Henry Görlitz, Stiftung Warentest (DEU)

16:45 Child road safety initiatives in Turkey and traffic safety cultur

Idil Isik, İstanbul Bilgi Üniversitesi (TUR)

17:15 End of first conference day

18:30 Evening Event

## Agenda on Friday, December 2, 2011

### Test Procedures and Dummies

Chair: Dr. Heiko Johannsen, TU Berlin

8:30 Q10 dummy development: EPOCH – final project report  
Marianne Hynd on behalf of EPOCH consortium

9:00 Experiences with older children (Q6) in hardware and simulations: an OEM status report

Philipp Wernicke, Jana Olivier, BMW Group;  
Matthias Sagerer, IAT mbH (DEU)

9:25 A comparison of the Q6 and the HIII 6 years old dummy in frontal impact tests in a car environment involving different CRS and seat belt systems

Britta Schnottale, Bernd Lorenz, Bundesanstalt für Straßenwesen (BASt); Christian Verheyen, Harald Zellmer, Autoliv B.V. & Co. KG (DEU)

9:50 Coffee break

### Human Models

Chair: Farid Bendjellal, Britax Group

10:10 Development and validation of 6 year old child occupant finite element model

Amit Kumar Gupta, Girish Sharma, Parthiv Shah,  
Christophe Ageorges, Mercedes-Benz Research and Development (IND)

10:30 Development of a numerical human body model for a three year old child

Alexander Eisenach, TU Berlin (DEU)

10:50 FE model of child's neck and torso for evaluating the risk of injuries during vehicle accidents

Senad Omerović\*, Simon Krašna, Ana Stojanović,  
Ivan Přebil, University of Ljubljana (SVN)

11:10 Six years old child head-neck interaction with airbag

Frank Meyer, C. Deck, R. Willinger, Strasbourg University Biomechanic's Team (FRA)

11:30 Coffee break

### Biomechanics

Chair: Bernd Lorenz, BAST

11:50 Rear seat protection for occupant sizes from Q6 to HIII 95%

Michael Stegmeier, Hans-Peter Bausch, TRW Automotive GmbH; Raimund Kempfle, Michael Grohspietsch, Britax Römer (DEU)

12:15 The rear seat and older children

Ben Beck\*, Julie Brown, Lynne E. Bilston,  
Neuroscience Research Australia & the University of New South Wales (AUS)

12:40 Kinematic analysis of submarining in older children

Serge Cirovic, Barbara Girard, University of Surrey (UK)

13:00 Lunch

### CRS Development

Chair: Dr. Sebastian Weber, Audi AG

13:50 Child kinematics in the rear seat during driving manoeuvres

Lotta Jakobsson, Volvo Car Corporation and Chalmers University of Technology; Katarina Bohman, Autoliv Research, Karolinska Institutet; Isabelle Stockman, Chalmers University of Technology (SWE)

14:15 Benefits of using a harness pretensioner in group I CRS

Luis Martínez, Antonio García, Manuel Espantaleón, INSIA-UPM (ESP)

14:40 CRS development and simulation techniques: Experience in utilizing Stiftung Warentest side impact environment

Farid Bendjellal, Britax Group; Richard Frank, Britax Römer (DEU); Florian Feist, Wolfgang Sinz, Technical University Graz (AUT)

15:05 Assessment of CRS misuse by experts of child safety: Results of the practice test

Gerd Müller, Heiko Johannsen, Verein für Fahrzeugsicherheit Berlin e.V. (DEU); Philippe Lesire, LAB PSA Peugeot-Citroën RENAULT (FRA)

15:15 Young Researchers Award\*

Outlook and farewell

Prof. Dr. Klaus Langwieder

15:30 End of the conference

\* Participants in the Young Researchers Award. The Young Researchers Award honours the best paper on outstanding research on child safety topics. The program committee as well as the participants constitute the voting bloc, numbering each 50 percent. The Award is sponsored by Britax Group.

**Workshop on Wednesday, November 30, 2011, 14:00 – 18:00**

### **Child safety and cultural approach**

Chairmen: Philippe Lesire, LAB PSA Peugeot-Citroën RENAULT,  
Prof. Dr. Brian Fildes, Monash University Accident Research Centre

This workshop, held the day before the conference, will gather people interested in a cultural understanding of the CRS use.

Aspects of sociological approaches in child safety research will be discussed from different points of view. At the workshop experiences in safety campaigns and best-practice solutions are presented and enhanced by intensive discussion, reflecting the given facts worldwide. The workshop is free for the participants of the conference.

### **Kick-off presentations**

- **Child restraint system misuse – cause & consequences analysis**  
Arturo Dávila, Mario Nombela, Applus IDIADA Group;  
Luís Puerto, José Alejandro Tirone, Fundación RACC  
with the support of Jané SA (ESP)
- **CASPER evaluating the validity of an electronic survey for child safety purpose comparing results with the ones normally obtained in surveys**  
Reakka Krishnakumar, Annie Langlois, Centre Européen d'Etudes de Sécurité et d'Analyse des Risques (CEESAR);  
Philippe Lesire, LAB PSA Peugeot-Citroën RENAULT (FRA);  
Alan Kirk, Loughborough University (UK);  
Anita Fiorentino, Fiat (ITA)
- **Child characteristics and parent – child relationship as determinants of booster seats use**  
Sarit Shimony-Kanat\*, Henrietta Szold Hadassah, Hebrew University School of Nursing in the Faculty of Medicine and Hadassah-Hebrew University Medical Center, Jerusalem, (ISR);  
Rosa Gofin, College of Public Health, University of Nebraska Medical Center, Nebraska (USA)
- **Traffic responsibility action – the "bosom buddies action"**  
Bernhard Horak, TÜVTURK Taşıt Muayene İstasyonları Yapım ve İşletim A.Ş. (TUR)
- **Child occupant safety in Latin NCAP**  
Alejandro Furas, Latin NCAP / Global NCAP



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### **Participation fee**

€ 790,- plus current VAT (if applicable)  
(50% discount for members of universities)

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

### **Conference language**

English

### **Conference venue**

TÜV SÜD · Auditorium Chiemsee  
Westendstraße 199 · 80686 Munich, Germany

### **Registration and information**

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## Protection of children in cars

9<sup>th</sup> International Conference, December 1 – 2, 2011, Munich

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