

GRAZER

# Safety UpDate

2007 I



September 25<sup>th</sup> & 26<sup>th</sup>, 2007

in Graz, Austria

Right after  
IRCOBI Conference

## Automotive Safety is the Future

The event language is German. For the international guests, we will provide simultaneous translation of the lectures into English.

sponsored by



hosted by



[www.carhs.de/gsu](http://www.carhs.de/gsu)

in cooperation with  
Prof. Dr. Steffan



Member of the Frank Stronach Institute

# The Event

The aim of the SafetyUpDate in Graz is a continuous yearly **“Knowledge-UpDate for experts”** in the field of automotive safety.

## Date:

Tuesday	25 <sup>th</sup> of September 2007	9:00 a.m. - 5:30 p.m.
Mittwoch	26 <sup>th</sup> of September 2007	9:00 a.m. - 5:15 p.m.

## DAY 1

### Requirements

- **Injury Biomechanics and Accident Research**  
Prof. Dr. Hermann Steffan, VSI, TU Graz
- **Crash-laws and Regulations**  
Dipl.-Ing. Eberhard Faerber, BAST
- **NCAP / Consumer Information**  
Dipl.-Ing. Andre Seeck, BAST

- **Pedestrian Protection**  
Dipl.-Ing. Thomas Kinsky, Opel

### Methods and Tools

- **Testing**  
Prof. Dipl.-Ing. Norbert Schaub, DaimlerChrysler

## DAY 2

- **Simulation**  
Prof. Dr.-Ing. Erich Schelkle, Porsche

### Development Strategies

- **Front Impact**  
Dipl.-Ing. André Schönekas, MAGNA Electronics Europe
- **Side Impact**  
Dipl.-Ing. Christian Amann, BMW

### Active Safety and Short Presentations

- **Active Safety**  
Prof. Dr. Hermann Winner, TU Darmstadt
- **3-dimensional Simulation of the Gas Flow in Airbags**
- **Development Strategies for the Pedestrian Leg Impact**
- **Whiplash – Development Tools for the Rear Impact**  
Various Speakers

# AGENDA TUESDAY - September 25<sup>th</sup>

*Morning session*

## REQUIREMENTS

9:00 Welcome

**Dr. Peter Egger**

*Director Innovation and Technologies Magna Int. Europe*

9:10 Introduction Grazer SafetyUpDate

**Rainer Hoffmann**

*Managing director, carhs.training gmbh*

9:15 Accident Research and Injury-Biomechanics

**Prof. Dr. Hermann Steffan**

*VSI - Vehicle Safety Institute, TU Graz*

In-depth accident databases

Processing of accident data by means of simulation  
Conclusions for integrated vehicle safety

10:15 Discussion / Meeting Points / Coffee Break

10:45 Crash Laws & Regulations

**Dipl.-Ing. Eberhard Faerber**

*Germany's Federal Highway Research Institute, BAST*

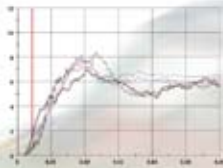
Transfer of the legislation to UN/ECE/WP.29

Global Technical Regulations (Pedestrian protection (Flex-Leg), Whiplash/ Head Restraints)

EEVC working groups (new dummies, side impact, compatibility, testing methods, whiplash/head restraints)

11:45 Discussion / Meeting Points

12:00 Lunch Break



**REQUIREMENTS**

13:15 Euro NCAP and other Tests for Consumer Information

**Dipl.-Ing. Andre Seeck**

*Germany's Federal Highway Research Institute, BAST*

Europe (Euro NCAP, Australian NCAP)

- New frontal crash & knee mapping
- Revised side impact / pole impact
- Extended injury rating (Whiplash test)

P-NCAP

- Evaluation of active safety (ESP, Speed Limiter)

USA

- New tests by NHTSA and IIHS

World NCAP and other current topics

14:15 Discussion / Meeting Points

14:45 Pedestrian Protection

**Dipl.-Ing. Thomas Kinsky**

*Adam Opel AG*

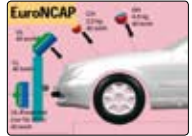
Status of the EU-Directive on pedestrian protection (Level 2 with BAS)

Status of global regulations

Euro NCAP protocol for active hoods

Sensors for pedestrian protection

Development strategies and examples



15:45 Discussion / Meeting Points

**METHODS & TOOLS**

16:15 Testing

**Prof. Dipl.-Ing. Norbert Schaub**

*DaimlerChrysler AG, Mercedes Car Group*

Testing technology and methodology in vehicle safety

Dummy Technology

Metrology and video technology

Information and data management

*Other currents topics*

17:15 Discussion / Meeting Points

afterwards Visit of the VSI testing facilities

19:30 Evening Reception on invitation by



# AGENDA WEDNESDAY - September 26<sup>th</sup>

*Morning session*

## METHODS & TOOLS

9:00 Simulation

**Prof. Dr.-Ing. Erich Schelkle**

*Porsche AG*

Strategic aspects of the application of CAE methods

Integration of CAE methods into the virtual vehicle development

Currents trends in CAE safety

New CAE Features

CAE Roadmap, Megatrends and outlook

with focus on:

Upfront CAE, Digital Prototypes

ALE Simulation (Airbag, fuel tank)

Optimization(parametric models, topology and shape optimization)

10:00 Discussion / Meeting Points

## DEVELOPMENT STRATEGIES

10:30 Frontal Impact

**Dipl.-Ing. André Schönekas**

*Magna Electronics Europe GmbH*

Analysis of the requirements (recent changes in the U.S.)

Effects on the design of restraint systems

Solutions that fulfil the new requirements (adaptive restraint systems, alternative solutions)

Effects on the components of restraint systems (adaptivity)Integration of active and passive safety

11:30 Discussion / Meeting Points

12:00 Side Impact

**Dipl.-Ing. Christian Amann**

*BMW AG*

Recent findings

New requirements

Risks

Effects on components

Changes in the development process

Other current topics

13:00 Discussion

13:15 Lunch Break



## ACTIVE SAFETY

14:30 Active Safety – Current Developments in Frontal Crash Avoidance and Mitigation

**Prof. Dr. Hermann Winner**

*Darmstadt University of Technology*

Collision warning systems

Pedestrian detection

Adaptive brake assistance

Automatic emergency brake

15:30 Discussion / Meeting Points

## SHORT PRESENTATIONS

16:00 3-dimensional Simulation of the Gas Flow in Airbags

**Dr. Wolfgang Sinz**

*Vehicle Safety Institute Graz, A member of the Frank Stronach Institutes*

16:20 Development Strategies for the Pedestrian Leg Impact

**Dipl.-Ing. Heribert Kassegger**

*Magna Steyr Fahrzeugtechnik Graz*

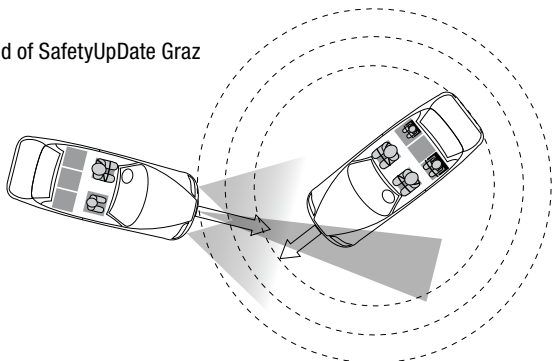
16:40 Whiplash – Development Tools for the Rear Impact

**Dipl.-Ing. Harald Schluder, Dipl.-Ing. Andreas Rieser**

*VIF, The Virtual vehicle*

17:00 Discussion / Meeting Points

17:15 End of SafetyUpDate Graz



## SPEAKERS



### **Prof. DI Dr. Hermann Steffan**

*VSI - Vehicle Safety Institute, Graz*

Prof. DI Dr. Hermann Steffan is the director of the Vehicle Safety Institute of TU Graz. For more than 15 years he has been involved in the development of software for accident reconstruction and the development of new testing methods. He is a leading expert in accident reconstruction.



### **Dipl.-Ing. Eberhard Faerber**

*Federal Highway Research Institute of Germany, BAST*

Dipl.-Ing. Eberhard Faerber is head of the department 'Passive Safety, Biomechanics' at the Federal Highway Research Institute of Germany (BAST). He is chairman of the EECV work group "Vehicle Compatibility" and German expert with the ECE/GRSP. His department is preparing the European safety regulations.



### **Dipl.-Ing. Andre Seeck**

*Federal Highway Research Institute of Germany, BAST*

Dipl.-Ing. Andre Seeck is head of the department 'Assessment of Vehicle Safety and Driver Assistance Systems' at BAST, the Federal Highway Research Institute of Germany. He currently works on the preparation of European safety regulations. He is also the German representative in the Board of Directors and the technical task group of Euro NCAP.



### **Dipl.-Ing. Christian Amann**

*BMW AG*

Christian Amann worked several years in the field of crash simulation for a system supplier for restraint systems. Mr. Amann has worked for BMW for 7 years, initially in the development of side impact systems. Since 2001 he has been leading the group „virtual testing“ in the interior and deals with measures and methods of the CAE-driven development of interiors.



### **Prof. Dipl.-Ing. Norbert Schaub**

*DaimlerChrysler AG*

Since 1998 Prof Schaub is leading the testing department for passive safety, durability, NVH and vehicle functions at the Mercedes Car Group. He is responsible for all crash tests, sled tests and component tests including the test facilities and the IT infrastructure. Since 1989 he has been lecturing on vehicle safety and project management at the Esslingen University of Applied Sciences. Since 2003 he is also lecturing passive safety at the Vehicle Safety Institute in Graz.

## SPEAKERS



### **Prof. Dr.-Ing. Erich Schelkle**

*Dr.-Ing. h.c. F. Porsche AG*

Prof. Erich Schelkle is Senior Manager for strategies and methods in the department 'CAE-Car body' at the R&D centre of the Porsche AG. In his job he deals with CAx-strategies, development/introduction of new CAE-methods and their application in the virtual development of cars. He studied aerospace engineering at the university of Stuttgart and did his doctorate on the topic of non-linear finite elements simulation. He has been assistant professor there for the diploma study course "methods of modelling and simulation" since 1992 and was appointed honorary professor in 2001. Since 1994 he has been leading the finite elements research group of the Association of the German automotive industry (Forschungsvereinigung Automobiltechnik, FAT)



### **Dipl.-Ing. André Schönekas**

*MAGNA Electronics Europe*

André Schönekas is Sales Director with Magna Electronics. He is responsible for safety related products such as airbags or active pedestrian protection systems. Previously he was head of department of "Mechanics" with ACTS. In the course of his longtime occupation in the development of occupant protection systems as project manager and as head of simulation, he has been able to acquire extensive knowledge in this special field.



### **Dipl.-Ing. Thomas Kinsky**

*Adam Opel GmbH*

Thomas Kinsky studied automotive technology at the Dresden University. From 1991 to 1995 he worked as an authorized motor vehicle expert at TÜV Rheinland. After that he was leading the department of vehicle design at a small company. Since 1999 he has worked for Opel / GM in the field of vehicle regulations, including the regulations for pedestrian protection. He represents GM Europe / Opel in several working groups at VDA, ACEA, and OCIA.



### **Prof. Dr. Hermann Winner**

*TU Darmstadt*

Since 2002 Prof. Dr. Hermann Winner has been head of the special field automotive engineering at the Technical University Darmstadt. After his doctorate in physics at the University of Münster in 1987 he worked for Bosch's advanced development of vehicle equipment. Within the framework of the EU-project PROMETHEUS on the topics Drive-by-Wire and driver assistance systems he dealt with fully electronic vehicle control systems and derived two innovative products from this, the electro hydraulic brake and the radar-based Adaptive Cruise Control (ACC). He developed ACC as a project manager up until the maturity phase in the year 2000.

# The experts for Automotive Safety

## carhs - Your partner for Automotive Safety

Since 1994 we have been working in the field of automotive safety globally. Through our cooperation with leading automotive manufacturers we have gained established and detailed knowledge of the development processes and tools of the automotive industry. We focus on:

- **Widespread education and advanced training for automotive safety**
- **Consulting and simulation services for active and passive safety of vehicles (with our partner TECOSIM GmbH)**
- **viilab for car communication – from an idea to a prototype in a just few minutes**

We would like to help you to develop your products even safer, more robust, faster and cheaper. Our engineers are highly specialized and are always up to date due to our continuous training.

## VSI - Vehicle Safety Institute in Graz

Since July 1<sup>st</sup>, 2004 the University of Technology Graz has a new Institute for automotive safety (VSI – Vehicle Safety Institute). Prof. Hermann Steffan, who directed the Institute for Mechanics interimsly and who founded the workgroup accidental mechanics, is the head of the institute. The VSI is one of three parts of the Frank Stronach Institute.



## Customer Voices

*"I appreciate the SafetyUpdate Congress because of its continuity and the concept to present special knowledge in a short, purposeful and concise way. There is no other place there I can obtain clustered special knowledge so fast and with such high quality. The SafetyUpdate is a must for every specialist in vehicle safety."*

Sören Christ, Head of SVS vehicle safety, business division seats,  
Brose Fahrzeugteile GmbH & Co. KG

# Up-to-date Information

## Invitation for automotive safety experts!

Leading experts in automotive safety meet at the **SafetyUpDate 2007 in Graz.**



### Knowledge-UpDate compact and relevant

Accident Research

Biomechanics

Crash laws

NCAP-test

At this innovative event you will receive a “Knowledge UpDate“ in automotive safety. Leading experts from different fields refer compactly in one hour about new and relevant issues in their field.

Active Safety

Front Impact

Side Impact

Pedestrian protection

Testing

Simulation

### Meeting Points Experts meet Experts

After each presentation you will have the possibility to ask questions and discuss them with our experts in the plenum.



Detailed questions can be answered at the Meeting Point, where the speakers will be available in the breaks for discussions.

# Centre of the vehicle development in Austria

## Graz European Capital of Culture

Universities, research institutes and innovative companies have made Graz a major, international congress destination for 25 years – the attractive Old Town, the international reachability and the top conference facilities contribute to its success. Also visit the best-preserved historical city centre of Central Europe.



## Location

TU Graz, VSI - Vehicle Safety Institute,  
Inffeldgasse 11/II, 8010 Graz, AUSTRIA

## Travel/Accommodation

You will receive travel directions and information about hotels together with your attendance confirmation.

## Organiser: carhs.training gmbh

carhs.training gmbh is a leading knowledge provider in the field of automotive safety and simulation and offers expert seminars, conferences and coaching.

## In cooperation with VSI - Vehicle Safety Institute

The event will be hosted by carhs.training gmbh in cooperation with the VSI - Vehicle Safety Institute under the direction of Prof. Dr. Hermann Steffan.

## FAX-REGISTRATION

# Fax: +49(0)6023-964070

Yes, I will attend the "SafetyUpDate 2007 in Graz" on September 25<sup>th</sup> & 26<sup>th</sup>, 2007. The registration fee is EUR 1190,- plus VAT. I accept the terms & conditions stated below.

SURNAME, NAME

DEPARTMENT / HPC

PHONE

eMAIL

COMPANY

CITY

STREET

INVOICE TO

DATE/SIGNATURE

*The event language is German. For the international guests we will provide simultaneous translation of the lectures into English.*

INFOPHONE: +49 (0)6023-964063 – WEB REGISTRATION: [www.carhs.de](http://www.carhs.de)

### TERMS & CONDITIONS

The registration fee is EUR 1190 plus VAT. It includes detailed conference proceedings, lunches and refreshments, the evening reception. The registration fee is due 10 days after invoicing. A free cancellation is possible until August 24, 2007. Participants who cancel between August 24, 2007 and September 11, 2007 are liable for 50% of the registration fee. Participants who cancel after September 11, 2007, or who do not attend, are liable for the entire registration fee. **The number of participants is limited.** carhs.training gmbh reserves the right to vary or cancel the event in the light of bookings and to vary the duration and content without prior notice. In the event of cancellation, carhs.training gmbh will refund all monies paid to carhs.training gmbh with respect to the event.