



Fraunhofer

Institut  
Chemische Technologie

air2008  
bag



**PROGRAM**

9<sup>th</sup> International Symposium  
and Exhibition on Sophisticated  
Car Occupant Safety Systems

Karlsruhe, Germany  
Congress Center

**2008, December 1 – 3**



## 9<sup>th</sup> International Symposium and Exhibition on Sophisticated Car Occupant Safety Systems

### Program Committee

**Dr. Baroto Adiprasito**  
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**Dr. Ulrich Tschäschke**  
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Fraunhofer ICT

### Chairman of the Symposium

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Fraunhofer ICT

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**Dr. Karl-Friedrich Ziegahn**  
Forschungszentrum  
Karlsruhe, D



### Registration

Please return the enclosed **registration form**. You will then receive an **invoice**.

**Registration fees** (including proceedings, coffee breaks, lunch, evening receptions), depending on date of arrival of registration form at ICT

**\* up to November 10, 2008**

**EURO 950,-- (incl. 19% VAT)**

**\* up to November 24, 2008**

**EURO 1.050,-- (incl. 19% VAT)**

Participation cannot be guaranteed for registrations arriving after November 24, 2008.

A fee of EURO 500,-- will be charged for cancellations after November 24, 2008. No-shows will be charged the complete fee.

### Accommodation

will be managed by **HORE Hotel Reservation**, Weingartener Str. 70, D-76229 Karlsruhe, Phone (07 21) 48 23 56, Fax (07 21) 48 26 14 e-mail horehotelreservation@t-online.de An application form is enclosed.

**Online reservation:**

[www.hore-hotel-reservation.de/airbag2008.html](http://www.hore-hotel-reservation.de/airbag2008.html)

### Conference Office

is located in the **foyer of the Stadthalle** and may be reached **from December 1 to December 3** by

**Phone** (07 21) 37 20 - 44 43

or (07 21) 37 20 - 44 41

**Fax** (07 21) 37 20 - 59 50

(International access: +49)

### Check In / Welcome Reception

Please check in at the conference office on **Monday, December 1 between 13.00 and 20.00 h**. All participants are cordially invited to the **Welcome Reception** in the foyer of the Stadthalle on **Monday, December 1, 18.00 - 20.30 h**.

**Conference Languages** English, German - **Simultaneous Interpretation**

### Proceedings

**One copy** of the proceedings is **included** in the registration fee.

(Additional copies EURO 150,--, subscription price during the Symposium EURO 130,--)

<b>ACS Industries, Inc.</b>	Rhode Island, USA
<b>Advanced Label Technologies B.V.</b>	Utrecht, NL
<b>apos GmbH &amp; Co. KG</b>	Hösbach, D
<b>Autoliv Inc.</b>	Stockholm, SE
<b>Avery Dennison IAPD</b>	Strongsville/Ohio, USA
<b>Berstscheiben Schlesinger GmbH</b>	Schalksmühle, D
<b>Continental</b>	Regensburg, D
<b>Daimler AG</b>	Sindelfingen, D
<b>Electrovac curamik GmbH</b>	Regensburg, D
<b>ESI Engineering System International GmbH</b>	Eschborn, D
<b>Fraunhofer-Institut für Chemische Technologie ICT</b>	Pfinztal, D
<b>Gabel – M.E.C.A. GmbH &amp; Co. KG</b> Jinheng Airbag	Euskirchen, D Jinzhou, PRC
<b>GSK InTec Co. Ltd.</b>	Shengang Township, Taiwan, ROC
<b>Hirtenberger Automotive Safety GmbH &amp; Co KG</b>	Hirtenberg, A
<b>IEE S.A.</b>	Contern, L
<b>Indet Safety Systems a.s.</b>	Vsetin, CZ
<b>Infineon Technologies AG</b>	Munich, D
<b>INVISTA (Deutschland) GmbH</b>	Oestringen D
<b>iSi Automotive GmbH</b>	Wien, A
<b>Key Safety Systems Deutschland GmbH</b>	Raunheim, D
<b>KSL Keilmann Sondermaschinenbau GmbH</b>	Lorsch, D
<b>LIMESS Messtechnik und Software GmbH</b>	Pforzheim, D
<b>Mikron Assembly Technology</b>	Boudry, CH
<b>Neuman Aluminium Fließpresswerk GmbH</b>	Markt im Traisental, A
<b>PHOENIX TESTLAB GmbH</b>	Blomberg, D
<b>Polyamide High Performance GmbH</b>	Wuppertal, D
<b>QUADRANT CMS N.V. ERTA</b>	Tielt, B
<b>Rhodium GmbH</b>	Weißenburg, D
<b>Robert Bosch GmbH</b>	Stuttgart, D
<b>Schott Electronic Packaging GmbH</b>	Landshut, D
<b>Schreiner Group GmbH &amp; Co. KG</b>	Oberschleissheim, D
<b>SDI-MOLAN GmbH &amp; Co KG</b>	Schönebeck, D
<b>SEVA-TECHNOLOGIES</b>	Mazeres, F
<b>Takata-Petri AG</b>	Aschaffenburg, D
<b>TASS (TNO Automotive Safety Solutions)</b>	Delft, NL
<b>TechnologieRegion Karlsruhe GbR</b>	Karlsruhe, D
<b>TRW Automotive GmbH</b>	Alfdorf, D
<b>Valient Automotive Market Research</b>	New York, USA
<b>voestalpine HTI GmbH &amp; Co. KG</b>	Linz, A
<b>Wehberg Safety GmbH</b>	Lüdenscheid, D
<b>Weil Engineering GmbH</b>	Müllheim, D
<b>Zodiac Automotive Division</b>	Pusignan, F



## Program

Monday, December 1, 2008

Tuesday, December 2, 2008

### Monday, December 1, 2008

- 11.30 – 13.00      **Press Meeting (registered journalists only)**
- 13.00                **Opening of the Exhibition**
- 14.30 – 18.00      **Workshop »Igniter Technique«**  
(Participation on separate invitation)
- 14.30 – 18.00      **Workshop »Airbag – Retten ohne Risiko?«  
für Rettungskräfte mit »Airbag-Update«,  
Einsatzberichten und Erfahrungsaustausch  
(in GERMAN only)**  
**POC: Rolf-Dieter.Erbe@berliner-feuerwehr.de**
- 18.00 – 21.00      **Welcome Reception**  
for all participants  
(Symposium, Workshops, Exhibition)

### Tuesday, December 2, 2008

#### Opening Session

- 9.30 – 9.45                **Welcome and Opening**  
**J. Neutz**  
**Chairman of the Symposium**
- 9.45 – 10.00              **Greeting Addresses**
- 10.00 – 10.30      **V 1    Key Lecture**  
**Upcoming Milestones in Automotive Safety**  
E. Frickenstein  
BMW AG, München, D
- 10.30 – 11.00              **Coffee Break**

**1. Session:**

**General Issues**

Session Chair: Ulrich Tschäschke

Daimler AG, Sindelfingen, D

- |                      |            |  |
|----------------------|------------|--|
| <b>11.00 – 11.25</b> | <b>V 2</b> | <b>Performance of Frontal Airbags with Changes in Frontal Crash-Test Requirements</b><br>S. Ferguson<br>Ferguson International LLC, McLean, USA  |
| <b>11.25 – 11.50</b> | <b>V 3</b> | <b>International Product Liability Law: New Challenges – Increased Criminal Liability, Group Actions and the Compelled Disclosure of Electronic Documents</b><br>T. Smith<br>Lungershausen & Smith, Böblingen, D |
| <b>11.50 – 13.00</b> |            | <b>Poster Session – see Poster Program –</b><br>Session Chair:<br>H. Spies, Ingenieurbüro Spies, Hohenwart, D<br>B. Adiprasito, Volkswagen AG, Wolfsburg, D<br>A. Heilig, TRW Automotive GmbH, Alfdorf, D        |
| <b>13.00 – 14.30</b> |            | <b>Lunch Break</b>   |
|                      |            | <b>2. Session:</b><br><b>R &amp; D Challenges</b><br>Session Chair: Karl-Friedrich Ziegahn<br>Forschungszentrum Karlsruhe, Karlsruhe, D  |
| <b>14.30 – 14.55</b> | <b>V 4</b> | <b>Challenges of China NCAP</b><br>Zhao Hang<br>China Automotive Technology & Research Center, Tianjin, PRC  |
| <b>14.55 – 15.20</b> | <b>V 5</b> | <b>The Changing Outlook of Euro NCAP</b><br>M. van Ratingen<br>Euro NCAP, Brussels, B  |
| <b>15.20 – 15.45</b> | <b>V 6</b> | <b>Results from Real World Accident Studies and their Influence on Occupant Protection Development</b><br>T. Blaas, R. Schöneburg<br>Daimler AG, Sindelfingen, D   |
| <b>15.45 – 16.15</b> |            | <b>Coffee Break</b>  |

**3. Session:**

**Gas Generators**

Session Chair: Stefan Brock

Autoliv B.V. & Co. KG, Dachau, D

- |                      |            |  |
|----------------------|------------|--|
| <b>16.15 – 16.40</b> | <b>V 7</b> | <b>Polymer-bonded Propellant Systems Allow Optimal Adaptation to Customer's Needs</b><br>M. Ramin, J. Rebetz,, A. Skriver<br>Nitrochemie Wimmis AG, Wimmis, CH |
| <b>16.40 – 17.05</b> | <b>V 8</b> | <b>Shockwave Characterisation, Parameter Studies and Visualization for a Cold Gas Curtain Inflator</b><br>H. Kratz<br>Takata Petri AG, Aschaffenburg, D        |
| <b>17.15 – 17.45</b> |            | <b>Awards</b>  |
| <b>18.00</b>         |            | <b>Evening Reception</b>   |

**Fax: +49 - (0) 7 21 / 4 6 4 0 - 1 20**

**Fraunhofer-Institut für  
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Manuela Wolff  
P. O. Box 1240**

**D - 76318 Pfinztal**



Last name

First name

Title / Position

Registration fee must be paid upon receipt of the invoice

Signature

Company / Authority / Complete Address

Participation (please tick)



**Welcome Reception**

Monday, Dec. 1, 6.00 p. m.  
(incl. in the registration fee)

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It is agreed that pictures taken during this event may be published.

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# Accommodation

9<sup>th</sup> International Symposium and Exhibition on Sophisticated Car Occupant Safety Systems  
 December 1 - December 3, 2008 • Karlsruhe, Germany

Name \_\_\_\_\_

First Name \_\_\_\_\_ No. \_\_\_\_\_

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Country \_\_\_\_\_

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Phone \_\_\_\_\_

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Arrival \_\_\_\_\_ Departure \_\_\_\_\_ Arrival time \_\_\_\_\_

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C1	****	Schlosshotel Elegance	EZ/SGL 130,-- Euro	DZ/DBL 175,-- Euro	1,0 km
C2	****	Schlosshotel Classic	EZ/SGL 115,-- Euro	DZ/DBL 160,-- Euro	1,0 km
D1	****	Queens Komfort	EZ/SGL 150,-- Euro	DZ/DBL 177,-- Euro	0,2 km
D2	****	Queens Standard	EZ/SGL 140,-- Euro	DZ/DBL 167,-- Euro	0,2 km
E	****	Residenz	EZ/SGL 119,-- Euro	DZ/DBL 159,-- Euro	1,0 km
F	****	Santo	EZ/SGL 115,-- Euro	DZ/DBL 120,-- Euro	0,8 km
G	***	Alfa	EZ/SGL 79,-- Euro	DZ/DBL 102,-- Euro	0,8 km
H	****	Rio Komfort	EZ/SGL 104,-- Euro	DZ/DBL 124,-- Euro	1,5 km
I1	****	Kübler Alivitalis	EZ/SGL 105,-- Euro	DZ/DBL 140,-- Euro	1,5 km
I2	***	Kübler Komfort	EZ/SGL 92,-- Euro	DZ/DBL 115,-- Euro	1,5 km
I3	**	Kübler Standard	EZ/SGL 81,-- Euro	DZ/DBL 105,-- Euro	1,5 km
I	***	Ambassador	EZ/SGL 79,-- Euro	DZ/DBL 99,-- Euro	0,8 km
K	**	Royal	EZ/SGL 80,-- Euro	DZ/DBL 110,-- Euro	0,4 km

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Platz für Visitenkarte / Personal card

**4. Session:**

**Sensor Systems and Electronics**

Session Chair: Michael Strugala

Robert Bosch GmbH, Stuttgart, D

- 9.00 – 9.25**      **V 9**      **New Sensor Systems – Virtual Bumpers around the Car**  
H. Spies, M. Spies  
Ingenieurbüro Spies, Hohenwart, D
- 9.25 – 9.50**      **V 10**      **Standardization of Airbag Electronics, An Innovative Challenge**  
T. Glaser, A. König, A. Gsell  
Continental Chassis & Safety, Regensburg, D
- 9.50 – 10.15**      **V 11**      **The Safety Domain and the E/E Architecture of Future Vehicles**  
M. Bunse, M. Wellhöfer, I. Durdevic, R. Kornhaas, S. Mischo  
Robert Bosch GmbH, Stuttgart, D
- 10.15 – 10.45**      **Coffee Break**

**5. Session:**

**Development and Testing**

Session Chair: Michael Niess

BMW AG, München, D

- 10.45 – 11.10**      **V 12**      **Characterization and Evaluation of Frontal Crash Pulses**  
L. Kübler, S. Gargallo  
TRW Automotive GmbH, Alfdorf, D
- 11.10 – 11.35**      **V 13**      **Testing of Pre-Crash-Systems with Extremely Low False Alarm Rates**  
N. Waldt, M. Gonter, M. König, M.-M. Meinecke, T. Wohllebe  
Volkswagen AG, Wolfsburg, D
- 11.35 – 12.00**      **V 14**      **Analytical Investigation of Physical Processes for the Load Case Out of Position on Driver Side**  
H. Hofmann, S. Kutschenreuter  
Takata Petri AG, Berlin, D
- 12.00 – 13.30**      **Lunch Break**

**6. Session:**

**Simulation**

Session Chair: Christian Schramm

AUDI AG, Ingolstadt, D

- 13.30 – 13.55      V 15      Relevance of Fabric Modelling for Simulation of Airbag Deployment**  
H. Baldauf  
BMW Group, München, D  
A. Hirth  
Daimler AG, Sindelfingen, D  
R. Luijckx  
Audi AG, Ingolstadt, D  
R. Remensperger  
Porsche AG, Weissach, D  
B. Beesten, H. Dörnhoff  
Volkswagen AG, Wolfsburg, D
- 13.55 – 14.20      V 16      Usage of FEA Methods in Order to Ensure Integration and Application in the Restraint System Control in Early Development Phases**  
A. Neubohn  
Volkswagen AG, Wolfsburg, D  
C. Kärner, O. Körner, J. Kolatschek  
Robert Bosch GmbH, Stuttgart, D
- 14.20 – 14.50                      Coffee Break**

**7. Session:**

**Future of Occupant Protection**

Session Chair: Michael Bischoff

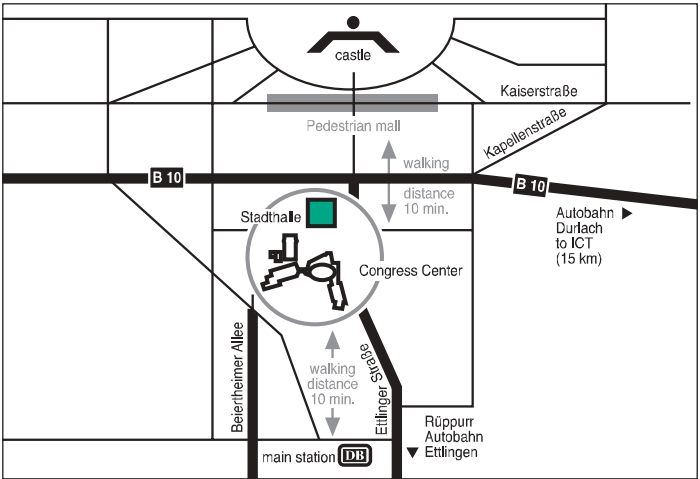
Takata Petri AG, Aschaffenburg, D

- |                      |             |  |
|----------------------|-------------|--|
| <b>14.50 – 15.15</b> | <b>V 17</b> | <b>Application of Pyrotechnic Gas Generators in Sheet Metal Forming Technologies</b><br>J. Neutz, H. Ebeling<br>Fraunhofer ICT, Pfinztal, D<br>S. Scheffler<br>Fraunhofer IWU, Chemnitz, D   |
| <b>15.15 – 15.40</b> | <b>V 18</b> | <b>Application of Advanced Telematics Data to Improve Post-Crash Care for Drivers and Passengers</b><br>G. T. Bahouth<br>Pacific Institute for Research and Evaluation, Calverton, USA<br>J. S. Augenstein<br>William Lehman Injury Research Center, USA<br>K. H. Digges<br>The George Washington University, USA<br>S. Rauscher<br>BMW AG, München, D |
| <b>15.40 – 16.05</b> | <b>V 19</b> | <b>Pedestrian Detection and Warning, a new Generation of Night Vision System</b><br>M. Kozyreff<br>Autoliv Inc., Vargarda, SE  |
| <b>16.05 – 16.15</b> |             | <b>Closing Remarks</b><br>J. Neutz<br>Fraunhofer ICT, Pfinztal, D  |

Posters will be presented in the Foyer of the Conference Hall during the Symposium.  
A special POSTER SESSION will be held on Tuesday, December 2, 11.50-13.00 h.

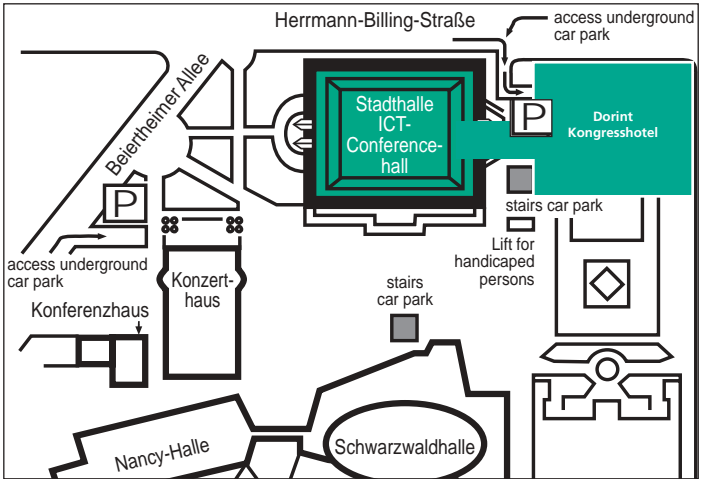
- P 20**      **Alternative Airbag Evaluation Methodology through Cold Gas Inflation System**  
P.M. Slaats, A.J. Pitonyak, P. Wipasuramonton, T. Hunter, M. Rains  
Takata Holdings Inc., USA  
D. Wang, C. Williams, C. Miller  
Microsys Technologies Inc., CAN
- P 21**      **Folding of Complex 3D-Airbags with Numerical Simulation Using PAM-CRASH2G**  
C. Thibaud  
ESI Engineering System International GmbH, Eschborn, D
- P 22**      **Pyrotechnic Articles for Vehicles – Forthcoming European Union Certification Requirements**  
R.K. Wharton  
Health and Safety Laboratory, Buxton, GB
- P 23**      **Analysis of Pedestrian Injuries Using Deformable Model**  
Shang-Wen Wang, Liang-Yann Yuan  
Chung-Shan Institute of Science and Technology, Taiwan, ROC  
Tso-Liang Teng  
Da-Yeh University, Taiwan, ROC
- P 24**      **An Optimized Airbag System for Submunition Dispersion**  
Hyun J. Ko, Bong Y. Park, Dae G. Kim  
Agency for Defense Development, Daejeon, KOR
- P 25**      **Selecting Silicone Materials for Cushions Assembly**  
P. Defaux, B. Bordes  
Bluestar Silicones, Saint Fons, F

- P 26**      **Performance Characteristics of Silicone Seam Sealed Sewn Systems**  
W.R. Blackwood  
Dow Corning, Midland, USA
- P 27**      **Why Control Air-Bags?**  
A.F. Charles  
ACE Consultancy, Winsford, GB
- P 28**      **Estimation of Human Behaviour during Pre-Crash Phase Using a Driving Simulator. Towards a Reduction of Injuries by Means of Bonded Airbags**  
A. Dubrulle, F. Robache, H. Morvan, P. Drazetic  
University of Valenciennes, F  
J.M. Obadia, B. Bouquier  
Zodiac Automotive Division, Pusignan, F
- P 29**      **withdrawn**
- P 30**      **KP200 - Advanced Pressure Sensor IC for Side Crash Detection**  
M. Brauer  
Infineon Technologies AG, München, D
- P 31**      **Infineon Restraints Solution**  
F. Öberg, T. Dittfeld  
Infineon Technologies AG, München, D
- P 32**      **Lighten Modules with SEVA Inflator**  
P.-P. Cord  
SEVA Technologies, Mondouzil, F
- P 33**      **Bonnet Active Actuator for Pedestrian Protection**  
E. Borg, E. Giraud, F. Marlin  
SNPE, St. Medard en Jalles, F



*Karlsruhe is located approx. 120 km (80 miles) south of Frankfurt/Frankfurt International Airport just beside the Autobahn A5, and is also connected to Frankfurt via express train (IC or ICE).*

*Other convenient airports are:  
Strasbourg (F) (approx. 100 km) and Stuttgart (D) (approx. 90 km)*



**By tram:**

from the

Linie / route

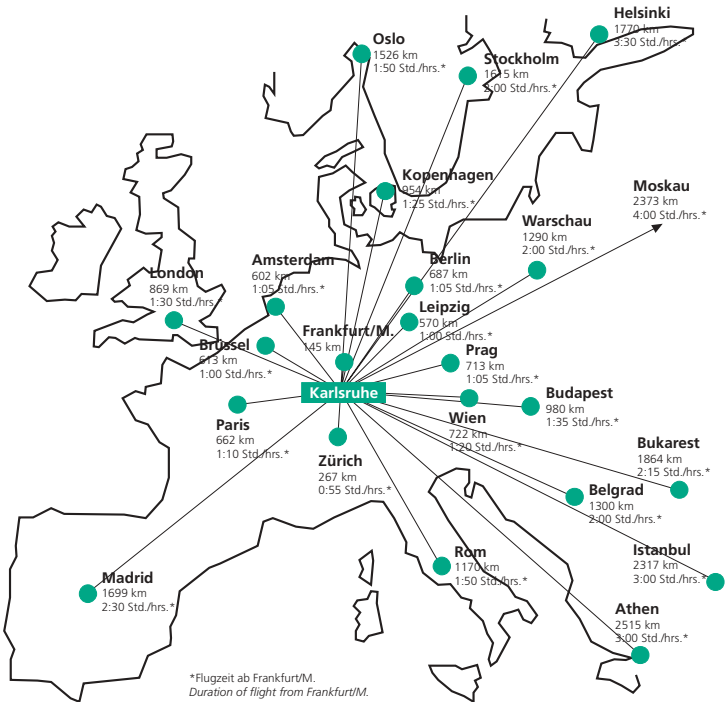
- Main station (Hauptbahnhof) S 1, S 4, S 11, 2
- City center (Stadtmitte) S 1, S 4, S 11, 2
- »Durlacher Tor« S 4, 2

**By car:**

Follow direction signs to the »Kongreßzentrum«



Karlsruhe is located approximately 1 hour south of Frankfurt Airport via motorway/highway (Autobahn) or express train (IC or ICE).



## Conference Management

Fraunhofer-Institut für  
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D-76318 Pfinztal (Berghausen)  
Federal Republic of Germany

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www.airbag2000plus.de

## Exhibition Management

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