12th International Symposium and Exhibition on Sophisticated Car Occupant Safety Systems

Karlsruhe, Germany
Congress Center, Stadthalle

2014, December 1 – 3
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Chairman of the Symposium  
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Fraunhofer ICT

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Ferguson International LLC, McLean, USA

Dr. Karl-Friedrich Ziegahn  
Karlsruhe Institute of Technology KIT, D
Welcome

Current developments in vehicle safety are increasingly focused on the synergies between sophisticated car occupant protection systems and intelligent sensor systems, with the aim of achieving integral safety for all road users. Although the benefits are well known to experts, there is clearly a need for close cooperation between all interested parties.

The 12th AIRBAG 2000+ Symposium in 2014 will again be a meeting place for engineers, scientists, legislators, managers and marketing experts to exchange information, to make and improve contacts, to stimulate further progress and to promote integral safety for road users on an impartial platform.

The Fraunhofer Institute for Chemical Technology ICT is the leading independent research and development facility for airbag technology and testing. As a division of Fraunhofer, Europe’s largest organization for applied and contract research, the Fraunhofer ICT offers a unique event for the automobile industry, suppliers and public authorities.

Welcome again to Karlsruhe, Germany, and the world of Airbag 2014.

Dr. Jochen Neutz
Chairman of the Symposium
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 Fraunhofer ICT

* up to November 5, 2014
  EURO 950,– (incl. 19 % VAT)
* up to November 24, 2014
  EURO 1.050,– (incl. 19 % VAT)

Participation cannot be guaranteed for registrations arriving after November 24, 2014. A fee of EURO 500,– will be charged for cancellations after November 24, 2014. No-shows will be charged the complete fee.

Online registration: www.ict.fraunhofer.de/airbag2014

Accommodation will be managed by HORE Hotel Reservation, Bockstalstraße 20, 76327 Pfinztal, Germany
Phone +49 (0) 7240 / 9445-850
Telefax +49 (0) 7240 / 9445-852
E-mail HHRUdoHamm@t-online.de

An application form is enclosed. Online reservation: www.h-h-reservation.de/airbag2014.html

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

Phone +49 (0) 721 / 3720-4443
or +49 (0) 721 / 3720-4441
Fax +49 (0) 721 / 3720-5950

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 – 21.00 h.

Conference Languages English, German – Simultaneous Interpretation

Proceedings One copy of the proceedings is included in the registration fee. Additional copies EURO 100,—.
Autoliv Inc.  
Stockholm, SE

BS&B Safety Systems GmbH  
Grosswallstadt, D

Continental Automotive GmbH  
Regensburg, D

Daicel Safety Systems Europe  
Żarów, PL

Daimler AG  
Sindelfingen, D

Delphi Connection Systems  
Guyancourt, F

Electrovac Hacht & Huber GmbH  
Salzweg, D

Fraunhofer-Institut für Chemische Technologie ICT  
Pfinztal, D

Jinzhou Jinheng Automotive Safety System Co., Ltd.  
Jinzhou, PRC

Hirtenberger Automotive Safety GmbH & Co KG  
Hirtenberg, A

IEE S.A.  
Contern, LU

Indet Safety Systems a.s.  
Vsetin, CZ

Invista S.á.r.l. I Performance Materials  
Kennesaw, USA

iSi Automotive Berlin GmbH  
Berlin, D

Key Safety Systems Deutschland GmbH  
Raunheim, D

Quadrant CMS NV  
Tielt, B

Robert Bosch GmbH  
Stuttgart, D

SCHOTT AG  
Landshut, D

Schreiner Group, Pro Tech  
Oberschleissheim, D

Takata AG  
Aschaffenburg, D

TRW Automotive GmbH  
Alfdorf, D

Valient Automotive Market Research  
Rochester, NY, USA

voestalpine Rotec GmbH & Co. KG  
Annweiler, D
Monday, December 1

11.30 – 13.00  Press meeting (registered journalists only)

Workshops (in GERMAN only)
begrenzte Teilnehmerzahl, Anmeldung formlos
an manuela.wolff@ict.fraunhofer.de

Teilnahmegebühr: EURO 119,- inkl. MWSt.
Frei für Teilnehmer des airbag-Symposiums

13.30 – 18.00  WS1  Workshop “Retten ohne Risiko!” für
Rettungskräfte mit “Airbag-Update”,
Einsatzberichten und Erfahrungsaustausch
POC: Rolf.Erbe@berliner-feuerwehr.de

14.30 – 18.00  WS2  Expertenmeeting zum Status „Berliner
Erklärung des VDI zur Fahrzeugsicherheit“
Das Programm finden Sie unter:
www.ict.fraunhofer.de/airbagWS2

18.00 – 21.00  Welcome Reception for all participants
(Symposium, Workshop, Exhibition)

Tuesday, December 2

09.00 – 09.15  WELCOME AND OPENING
J. Neutz
Chairman of the Symposium
B. Hefer
Moderator of “airbag 2014”
Fraunhofer ICT, Pfinztal, D

09.15 – 09.30  GREETING ADRESSES

09.30 – 10.00  V1  Honorary Lecture –
History and Future of Safety Systems
ELECTRONIC SENSOR SYSTEMS FOR
OCCUPANT SAFETY – SOME CRAZY IDEAS
OF THE PAST ARE TODAY’S STANDARD
H. Spies, M. Spies
Ingenieurbüro Spies, Hohenwart, D

10.00 – 10.30  Coffee Break
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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
<th>Institution(s)</th>
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<tbody>
<tr>
<td>10.30 – 10.55</td>
<td>AN UPDATE ON THE EURO NCAP SAFETY RATINGS PROGRAM</td>
<td>M. van Ratingen</td>
<td>Euro NCAP, Brussels, B</td>
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<td>10.55 – 11.20</td>
<td>OCCUPANT PROTECTION BY SIDE AIRBAGS IN VEHICLE-TO-VEHICLE COLLISIONS</td>
<td>A. Malczyk</td>
<td>German Insurers Accident Research, Berlin, D</td>
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<td>11.20 – 12.30</td>
<td>POSTER SESSION</td>
<td>Session Chair:</td>
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<tr>
<td></td>
<td></td>
<td>Hans Spies</td>
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<td>Ingenieurbüro Spies, Hohenwart, D</td>
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<td>Karl-Friedrich Ziegahn</td>
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<td>KIT, Karlsruhe, D</td>
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<tr>
<td>12.30 – 14.00</td>
<td>Lunch Break</td>
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</tr>
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<td>14.00 – 14.25</td>
<td>COMPLEX WORLD SAFETY</td>
<td>A. Axelson, P. Harda, P. Nilsson, A. Wogel et al.</td>
<td>Volvo Car Corporation, Göteborg, SE</td>
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<td>14.25 – 14.50</td>
<td>SAFETY 2.0 – A DIMENSION OF VEHICLE SAFETY BASED ON THE EXCHANGE OF SAFETY CRITICAL INFORMATION</td>
<td>G. Jürgens, B. Klumpp, M. Feser, K. Rink</td>
<td>Continental Automotive GmbH, Regensburg, D</td>
</tr>
<tr>
<td>14.50 – 15.15</td>
<td>A STOCHASTIC APPROACH FOR PROSPECTIVE SAFETY PERFORMANCE ASSESSMENT IN ACTIVE SAFETY SYSTEMS</td>
<td>K. Kompass</td>
<td>BMW Group, München, D</td>
</tr>
</tbody>
</table>
15.15 – 15.45  Coffee Break

3rd Session: New Safety Applications I
Session Responsible: Dirk Schultz
TRW Automotive GmbH, Alfdorf, D

15.45 – 16.10  V7  FAR SIDE PROTECTION
H. Rist
TAKATA AG, Aschaffenburg, D

16.10 – 16.35  V8  INNOVATIVE COCKPIT STYLE WITH HIGH LEVEL OF SAFETY: THE AIRBAG IN ROOF TECHNOLOGY
R. Zeitouni
PSA Peugeot Citroen, Velizy Villacoublay, F

16.35 – 17.00  V9  ADVANCED RESTRAINT SYSTEMS TO PROTECT REAR SEAT OCCUPANTS IN FRONTAL IMPACTS
L. Zink, M. Stegmeier, J. Debler
TRW Automotive GmbH, Alfdorf, D

17.00 – 17.30  Awards

17.30 – 21.30  Evening Reception
(for all participants; snacks and drinks in both foyers of the Stadthalle)
<table>
<thead>
<tr>
<th>Hotel</th>
<th>Rating</th>
<th>Zimmerart</th>
<th>Einzelzimmer</th>
<th>Doppelzimmer</th>
<th>Entfernung zur Messe</th>
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<tbody>
<tr>
<td>A Novotel Kongress</td>
<td>****</td>
<td>EZ/SGL</td>
<td>180,-- Euro</td>
<td>225,-- Euro</td>
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<td>B Renaissance</td>
<td>****</td>
<td>EZ/SGL</td>
<td>148,-- Euro</td>
<td>167,-- Euro</td>
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<td>C Schlosshotel Classic</td>
<td>****</td>
<td>EZ/SGL</td>
<td>135,-- Euro</td>
<td>165,-- Euro</td>
<td>0,5 km</td>
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<td>D Leonardo Komfort</td>
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<td>EZ/SGL</td>
<td>164,-- Euro</td>
<td>174,-- Euro</td>
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<td>D Leonardo Standard</td>
<td>****</td>
<td>EZ/SGL</td>
<td>149,-- Euro</td>
<td>159,-- Euro</td>
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<tr>
<td>E Kaiserhof</td>
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<td>EZ/SGL</td>
<td>105,-- Euro</td>
<td>125,-- Euro</td>
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<td>F Avisa</td>
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<td>EZ/SGL</td>
<td>89,-- Euro</td>
<td>124,-- Euro</td>
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<td>G Royal</td>
<td>***</td>
<td>EZ/SGL</td>
<td>90,-- Euro</td>
<td>120,-- Euro</td>
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<td>H1 Ibis</td>
<td>***</td>
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<td>129,-- Euro</td>
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<td>H2 Ibis</td>
<td>***</td>
<td>EZ/SGL</td>
<td>129,-- Euro</td>
<td>139,-- Euro</td>
<td>0,5 km</td>
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</tbody>
</table>

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Fax 0049-(7240) 9445-852
HORE Hotel Reservation Bockstalstr. 20

Online-Reservierung: www.h-h-reservation.de/airbag2014.html
online reservation: www.h-h-reservation.de/airbag2014.html
Zimmerreservierung
Accommodation

12th International Symposium & Exhibition on Sophisticated Car Occupant Safety Systems, 2014 December 1st-3rd, Karlsruhe

Bitte reservieren Sie Hotel / Please reserve Hotel

Ankunft / Arrival  Abreise / Time of Departure  Ankunftszeit / Time of Arrival

Anzahl der Zimmer / No. of Rooms  EZ (Einzelzimmer) / SGL (single room)  DZ (Doppelzimmer) / DBL (double room)

Bitte reservieren Sie Hotel / Please reserve Hotel
Alle Zimmer mit Bad/Dusche/WC, inkl. Frühstück. / All rooms with bath/shower/WC, incl. breakfast.

Falls die gewünschte Hotelkategorie nicht mehr verfügbar ist, reservieren Sie bitte die Kategorie:
If accommodation not available in desired category, please reserve category:

Kreditkarte / Creditcard  Kreditkartennummer zur Garantie / Credit Card No.:  Gültigkeit: / Expiry Date of Credit Card

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Anmeldung / Registration form

12th International Symposium and Exhibition on Sophisticated Car Occupant Safety Systems

December 1 – 3, 2014
Karlsruhe, Germany

Company / Authority / Complete Address

Last name

First name

Title / Position

I will pay the registration fee upon receipt of the invoice.

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

Signature

Fax +49 (0) 721 / 4640-120

Participation (please tick)

□ Welcome Reception*
   Monday, December 1st, 6.00 p.m.

* included in the registration fee

Fax no.

Phone no.

E-mail

Participation (please tick)

□ Welcome Reception*
   Monday, December 1st, 6.00 p.m.

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   Monday, December 1st, 6.00 p.m.

* included in the registration fee

Fax no.

Phone no.

E-mail

Participation (please tick)

□ Welcome Reception*
   Monday, December 1st, 6.00 p.m.

* included in the registration fee

Fax no.

Phone no.

E-mail
Wednesday, December 3

4th Session: Sensor Systems and Electronics
Session Responsible: Jörg Szilagyi
Autoliv B.V. & Co. KG, Dachau, D

8.00 – 8.25 V10 LASER-RANGE IMAGES ENHANCE PASSENGER-SAFETY BY AUTONOMOUS MANEUVERS OF CARS FOR COLLISION AVOIDANCE
M. Spies, H. Spies
Ingenieurbüro Spies, Hohenwart, D

8.25 – 8.50 V11 DRUNK, DROWSY AND DISTRACTED DRIVER MONITORING
O. Boström, J. Karlsson, B. Nilsson, N. Gustafsson, H. Petterson
Autoliv Research, Vargarda, SE

5th Session: Simulation
Session Responsible: Michael Meisel
AUDI AG, Ingolstadt, D

8.50 – 9.15 V12 EFFECTIVENESS ANALYSIS AND VIRTUAL DESIGN OF INTEGRATED SAFETY SYSTEMS ILLUSTRATED USING THE EXAMPLE OF INTEGRATED PEDESTRIAN AND OCCUPANT PROTECTION
I. Ferenczi
BMW AG, München, D
P. Wimmer
Virtual Vehicle Research Center, Graz, A
M. Unger
IAT mbH, Berlin, D

9.15 – 9.40 V13 NEW METHOD FOR DETERMINING THE VOLUME OF AIRBAGS
D. Ruckdeschel
BMW AG, München, D
A. Hirth
Daimler AG, Sindelfingen, D
S. Weber
Audi AG, Ingolstadt, D
R. Remensperger
Porsche AG, Weissach, D
H. Dörnhoff
Volkswagen AG, Wolfsburg, D

9.40 – 10.10 Coffee Break
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<th>Time</th>
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<th>Title</th>
<th>Presenters</th>
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<tr>
<td>10.10</td>
<td>V14</td>
<td>PRE-SAFE® IMPULSE SIDE – A PREVENTIVE PRE-IMPACTING RESTRAINT SYSTEM</td>
<td>M. Paurevic, R. Schöneburg, J. Richert, R. Bogenrieder Daimler AG, Sindelfingen, D</td>
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<td>11.00</td>
<td>V16</td>
<td>THE INTEGRATED SAFETY CONCEPT OF THE ULTRA-COMPACT VEHICLE VISIO.M</td>
<td>T. Unselt Daimler AG, Sindelfingen, D J. Unger Autoliv, Dachau, D L. Quedenbaum IAV, D T. Hierlinger TU München, D</td>
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<tr>
<td>11.25</td>
<td>Lunch</td>
<td>Break</td>
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<tr>
<td>Time</td>
<td>Session</td>
<td>Title</td>
<td>Authors/Company</td>
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<td>13.50 – 14.15</td>
<td>V19</td>
<td>DYNAMIC TESTING METHOD FOR DUMMY-LIKE LOADING OF FRONTAL AIRBAGS</td>
<td>A. Winkler, F. Fürst AUDI AG, Ingolstadt, D</td>
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<tr>
<td>14.15 – 14.45</td>
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<td>Robert Bosch GmbH, Heilbronn, D</td>
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<td>15.35 – 16.00</td>
<td>V22</td>
<td>ACTIVE LOAD PATH WITH VARIABLE LOAD LEVELS – FUNCTIONALITY SHOWN WITH SUBSYSTEM TESTING AND CAE</td>
<td>F. Hoiss BMW AG, München, D</td>
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<td>16.00 – 16.25</td>
<td>V23</td>
<td>INTELLIGENT CLOTHING: MOVING AIR BAGS FROM CARS TO HUMANS</td>
<td>V. Cafaggi, M. Forestan, M. Bencini Dainese S.p.A., Vicenza, I</td>
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<td>16.25 – 16.50</td>
<td>V24</td>
<td>HÖVDING – AIRBAG FOR CYCLISTS</td>
<td>A. Haupt Hövding Sverige AB, Malmö, SE</td>
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<td>16.50</td>
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<td>Closing Remarks</td>
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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, 11.20 - 12.30 h.

P25 ADVANCES IN AIRBAG FABRICS WITH FUNCTIONAL SILICONE COATINGS
P. Defaux, M. Slaviero, D. Djian
Bluestar Silicones, Saint Fons, F

P26 CHANGING AIRBAG POLYMERS: CONFORMANCE TO SPECIFICATIONS IS NOT THE SAME AS CONTROL OF CHANGE
R. Walsh
Invista S.a.r.l., Kennesaw, USA

P27 SPECIFIC INSPECTION OF THE SURFACE APPEARANCE OF AIR BAG FABRICS FOR ADVANCED QUALITY CONTROL
M. Vogelbacher
KIT, Karlsruhe, D
H. Schulte, J. Beyerer, Fraunhofer IOSB, Karlsruhe, D
E. Heber
GST, Maulburg, D

P28 METHODOLOGY TO PREDICT AND VALIDATE ACCELERATION BASED CRASH SIGNALS IN THE EARLY PHASE OF THE AUTOMOTIVE PRODUCT DESIGN CYCLE
S. Nößner, G.A. D’Addetta, J. Kolatschek
Robert Bosch GmbH, Schwieberdingen, D
M. Kröger
University of Technology Freiberg, D

P29 ADVANCED MIXED-SIGNAL EMULATION FOR COMPLEX AUTOMOTIVE ICS
T. Nguyen, D. Hammerschmidt
Infineon Technologies Austria, Villach, A
A.-D. Basa
Infineon Technologies Romania, Bucharest, RO
T. Dittfeld
Infineon Technologies, München, D

P30 NEW DEVELOPMENT IN AUTOLIV SQUIB DRIVER VALIDATION PROCESS
V. Colarossi
Autoliv Electronics, Southfield MI, USA
P31 AUTOMATED OBJECT LABELLING FOR ADVANCED DRIVER ASSISTANCE SYSTEMS USING A CAMERA- AND LIDAR-SYSTEM
D. Kirchhöfer, C. Uhlmann, T. Brandmeier
Technische Hochschule Ingolstadt, D
L. Beste
ADC Automotive Distance Control Systems GmbH, D
B. Reiß
IPG Automotive GmbH, D

P32 FE MODEL BASED ANALYSIS OF THE DYNAMIC BEHAVIOUR OF THE INTERFACE DRIVER AIRBAG AND STEERING WHEEL
A. Wuestendoerfer
BMW AG, München, D

P33 RAPID DEPLOYABLE BALLISTIC BARRIERS BASED ON AIRBAG SYSTEMS
R. Roussel, J. Neutz
Fraunhofer ICT, Pfinztal, D

P34 THUMS USER COMMUNITY – BACKGROUND, MOTIVATION AND STATUS OF THE COLLABORATIVE TUC
C. Mayer
Daimler AG, Sindelfingen, D

P35 INKJET PRINTING TECHNOLOGY FOR IGNITION ELEMENTS
U. Weiß
Consulting Office Dr. Weiß, Jena, D
F. Becker, S. Schulze, D. Weise, R.R. Baumann
Chemnitz University of Technology, Chemnitz, D

P36 TARGET ZERO
A. Charles
Ace Consultancy, Winsford, GB

P37 ENHANCED REACTIVITY OF B/BACRO₄ THROUGH WET BALL MILLING
Junlong Yang, Tiantian Xu, Hongtao Yang, Yi Cheng
Nanjing University of Science and Technology, Nanjing, PRC

P38 INVESTIGATION ON THE COMBUSTION PROPERTIES OF 5-AT/BCN GAS-GENERATING AGENTS
Tiantian Xu, Hongtao Yang, Junlong Yang, Yi Cheng
Nanjing University of Science and Technology, Nanjing, PRC
Karlsruhe is located 120 km south of Frankfurt (Main)/Frankfurt International Airport just beside the Autobahn A5, and is also connected to Frankfurt via the Intercity Express Train ICE.

Additional airports are:
Strasbourg (F) (approx. 100 km) and Stuttgart (D) (approx. 90 km)

Address: Festplatz 9
76137 Karlsruhe
Germany
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 Chemische Technologie ICT
Attn. Manuela Wolff
P.O. Box 12 40
76318 Pfinztal (Berghausen)
Germany
Phone +49 (0) 721 / 4640-121
or +49 (0) 721 / 4640-0
Fax +49 (0) 721 / 4640-120
E-mail manuela.wolff@ict.fraunhofer.de

EXHIBITION MANAGEMENT
Vera Keplinger
Phone +49 (0) 721 / 4640-511
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