ETG POWER ENGINEERING SOCIETY WITHIN VDE

Final Program

CIPS 2010

6th International Conference on Integrated Power Electronics Systems

- **March, 16-18, 2010**
- **Nuremberg / Germany**

http://www.cips-conference.de

VDE

CIPS 2010 Program Overview

Tuesday, March 16, 2010

Time	Room A
10:30	Opening
10:50	Session 1: Power Electronics Systems
12:00	Lunch Break
13:20	Session 2: System Integration
15:10	Coffee Break
15:40	Session 3: Reliability
17:50	Break
18:00	Session 4: Drivers
19:00	Break
19:15	Session 5: Dialog Session & Frankonian Snacks and Beverages

Wednesday, March 17, 2010

Time	Room A	Room B
8:30	Session 6: Power Electronics Applications	
10:00	Coffee Break	
10:30	Session 7: Power Modules	
12:30	Lunch Break	
13:50	Session 8: Power Electronics	Session 10: Packaging
15:30	Coffee Break	
16:00	Session 9: DC/DC Converters	Session 11: Materials
17:20	Break	
17:30	Panel CAD Tools	
18:50	End	
20:00	Conference Dinner	

Thursday, March 18, 2010

Time	Room A
8:30	Session 12: Prognostics – Thermal Management
10:20	Coffee Break
10:40	Session 13: EMI & Cooling
12:20	Lunch Break
13:40	Session 14 : Future Perspectives
15:20	Closing
15:40	End of the Conference

Organized by

The conference is organized by :

- ETG, the Power Engineering Society within VDE.
- VDE, the Association for Electrical, Electronic & Information Technologies (one of the largest technical and scientific associations in Europe with more than 35 000 members).
- ECPE: The European Center for Power Electronics e.V. in conjunction with the ECPE Annual Event

Technical Co-Sponsors

- IEEE PELS
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General Chairs

- J. D. van Wyk, University of Johannesburg, South Africa
- L. Lorenz, Infineon Technologies, China

Technical Chairs

- E. Wolfgang, ECPE e.V., Germany
- D. Silber, University of Bremen, Germany

Technical Program

Tuesday, March 16, 2010

10:30 **Opening**

Session 1: Power Electronic Systems

Chairmen: J. D. van Wyk, University of Johannesburg, South Africa; E. Wolfgang, ECPE e.V., Germany

10:50 **Keynote: Performance, Trends and Limitations of Power Electronics Systems**
J. W. Kolar, ETH Zurich, Switzerland

11:30 **Integrated Gate Driver Solutions (Invited paper)**
R. Herzer, Semikron Elektronik GmbH & Co. KG, Nuremberg, Germany

12:00 **Lunch Break**

Session 2: System Integration

Chairmen: B. Allard, Ampere-Lab, Villeurbanne, France; H. Ohashi, AIST, Ibaraki, Japan

13:20 **High Density System Integration for Medium Power Applications (Invited paper)**
D. Boroyevich, Z. Chen, F. Luo, K. Ngo, P. Ning, R. Wang, Di Zhang, Center for Power Electronics Systems, Virginia Tech, Blacksburg; F. Wang, University of Tennessee, Knoxville; R. Burgos, ABB U.S. Corporate Research Center, Raleigh; R. Lai, GE Global Research Center, Niskayuna; , S. Wang, GE Aviation Systems, Vandalia, United States

13:50 **A Formal Approach to System Integration**
J. M. Gutierrez-Alcaraz, S. W. H. de Haan, J. A. Ferreira, Delft University of Technology, The Netherlands

14:10 **Design for Fault Tolerance and Predictive Failures**
J. Wolmarans, J. A. Ferreira, H. Polinder, I. Josifovic, Delft University of Technology; D. Clarenbach, Aeronamic BV, Almeto, The Netherlands

14:30 **Modular Concept for Power Electronics in Electric Cars**
W. Wondrak, A. Dehbi, A. Willikens, Daimler AG, Boeblingen, Germany

14:50 **Power Module with Solid State Circuit Breakers for Fault-Tolerant Applications**
K. Kriegel, A. Melkonyan, M. Galek, Siemens Corporate Technology, Munich; J. Rackles, Munich University of Applied Sciences, Munich, Germany

15:10 **Coffee Break**

Session 3: Reliability

Chairmen: G. Coquery, INRETS, Versailles, France; U. Scheuermann, Semikron Elektronik GmbH & Co. KG, Nuremberg, Germany

15:40 **Railway Traction Reliability (Invited paper)**
M. Mermet-Guyennet, M. Piton, ALSTOM Transport, Semeac, France

16:10 **First Power Cycling Results of Impoved Packaging Technologies for Hybrid Electrical Vehicle Applications**
A. Hensler, J. Lutz, Chemnitz University of Technology; M. Thoben, K. Guth, Infineon Technologies AG, Warstein, Germany

16:30 **How Materials Behaviour Affects Power Electronics Reliability**
M. H. Poech, Fraunhofer Institute ISIT, Itzehoe, Germany

16:50 **Interface Degradation of Al Heavy Wire Bonds on Power Semiconductors during Active Power Cycling Measured by the Shear Test**
J. Goehre, M. Schneider-Ramelow, K.-D. Lang, Fraunhofer Institute IZM, Berlin; U. Geißler, Berlin University of Technology, Germany

17:10 **Observation of Chip Solder Degradation by Electrical Measurements during Power Cycling**
S. Hartmann, M. Bayer, D. Schneider, L. Feller, ABB Switzerland Ltd., Semiconductors, Lenzburg, Switzerland

17:30 **A Novel Built-In Methodology for Screening LDMOS Transistors to Achieve Zero Defects in the Automotive Environment**
V. Malandruccolo, M. Ciappa, W. Fichtner, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland; H. Rothleitner, Infineon Technologies AG, Villach, Austria

17:50 **The Future of Wire Bonding is? Wire Bonding!**
D. Siepe, R. Bayerer, R. Roth, Infineon Technologies Austria AG, Villach, Austria

18:10 Break

Session 4: Drivers

Chairmen: N. Kaminski, University of Bremen; R. Bayerer, Infineon Technologies AG, Warstein, Germany

18:20 **SiC BJT Driver Applied to a 2 kW Inverter: Performances and Limitations**
D. Tournier, P. Bevilacqua, P. Brosselard, D. Planson, B. Allard, Université de Lyon, Ampere-Lab, Villeurbanne, France

18:40 **Normally-On SiC JFETs in Power Converters: Gate Driver and Safe Operation**
D. Bergogne, D. Risaletto, F. Dubois, A. Hammoud, H. Morel, P. Bevilacqua, B. Allard, Ampere-Lab, Villeurbanne; R. Meuret, S. Dhokkar, Hispano-Suiza SAFRAN group, Moissy Cramaye; O. Berry, S. Raël, F. Meibody Tabar, GREEN ENSEM 2, Vandoeuvre les Nancy, France

18:40 **Insulating IGBT Driver with PCB Integrated Capacitive Coupling Elements**
S. Zeltner, Fraunhofer Institute IISB, Erlangen, Germany

19:20 Break

19:30 Frankonian snacks and beverages will be served

Session 5: Dialog Session – Poster

Chairmen: M. Stoisiek, University of Erlangen, Germany; G. Busatto, University of Cassino, Italy; I. Omura, Kyushu Institute Technology, Japan; G. M. Martin, Valeo Créteil, France

P 01 **MOS-Gated GTO: A New Functionally Integrated Device Suitable for High Voltage Power Applications**
C. Ronsisvalle, V. Enea, ST Microelectronics, Catania; C. Abbate, G. Busatto, A. Sanseverino, University of Cassino, Italy

P 02 **Importance of Boundary Conditions for Optimizing the Thermal Dimensioning of PCB Traces**
L. Coppola, B. Agostini, R. Schmidt, R. Faria Barcelos, ABB Switzerland Ltd., Baden, Switzerland

P 03 **Integrable Semiconductor Current Balancer for Paralleled Fluorescent Lamps**
R. Weger, NMB-Minebea GmbH, Odelzhausen, Germany

P 04 **Mechanical Characterisation of an Au-Ge Solder Alloy for High Temperature Electronic Devices**
S. Msolli, O. Dalverny. J. Alexis, M. Karama, University of Toulouse, Tarbes, France

P 05 **Evaluation of Commercial SOI Driver Performances while Operated in Extreme Conditions (150°C-200°C)**
K. El Falahi, B. Allard, D. Tournier, D. Bergogne, Ampere-Lab, Villeurbanne, France

P 06 **Integrated Rectenna Circuit for Microwave Power Scavenging**
B. Merabet, H. Takhedmit, B. Allard, L. Cirio, F. Costa, O. Picon, C. Vollaire, Ampere-Lab, Villeurbanne, France

P 07 **Fast Extraction of Dynamic Thermal Impedance for Multi-Chip Power Modules**
P. Evans, C. M. Johnson, University of Nottingham, United Kingdom

P 08 **Inductive Parasitics in Power Semiconductor Modules Subject to Multi Objective Optimisation**
S. Förster, A. Lindemann, Otto-von-Guericke-University Magdeburg, Germany

P 09 **Normally-Off AlGaN/GaN HFET with P-Type GaN Gate and AlGaN Buffer**
O. Hilt, A. Knauer, F. Brunner, E. Bahat-Treidel, J. Würfl, Ferdinand-Braun-Institut, Berlin, Germany

P 10 **High Temperature Electronics for High Power Density DC-DC Converters and Motor Drives**
P. Delatte, V. Dessard, A. Saib, N. Pequignot, G. Picún, L. Demeûs, J. C. Doucet; T. Krebs, CISSOID S.A., Mont-Saint-Guibert, Belgium

P 11 **Preliminary Study for the Integrated Design of an Electro-Mechanical Wing De-Icing System**
F. Abdesselam, L. Boissy, Zodiac Aerospace, Paris, France; A. Castellazzi, T. Wijekoon, P. Wheeler, M. Johnson, University of Nottingham, United Kingdom

P 12 **Thermoelectric Cooling for Power Density Maximisation of Power Electronics Converters**
J. Biela, J. W. Kolar, Power Electronic Systems Laboratory, ETH Zurich, Switzerland

P 13 **Design of a Multi-Cell, DCM PFC-Rectifier for a 1mm Thick, 200W Off-Line Power Supply**
C. Marxgut, J. Biela, J. W. Kolar, ETH Zurich, Power Electronic Systems Laboratory, Switzerland

P 14 **Knowledge Matrix for Power Electronics – The Approach of the ZVEI Working Group 'High Temperature and Power Electronics'**
M. Rittner, Robert Bosch GmbH, Schwieberdingen; A. Roth, Fraunhofer IISB, Nuremberg, Germany

P 15 **1200 V 6 A SiC BJTs with very Low VCESAT and Fast Switching**
A. Lindgren, M. Domeij, Transic, Kista, Sweden

P 16 **System based Optimisation of the Chip Size and the Thermal Path for Si and SiC Semiconductors**
T. Köneke, A. Merkert, A. Mertens, Leibnitz University Hannover, Germany

21:15 **End of Dialog Session**

Wednesday, March 17, 2010

Room A

Session 6: Power Electronics Applications

Chairmen: D. Boroyevich, CPES, USA; J.-H. Fabian, ABB Switzerland Ltd., Baden-Daettwil, Switzerland

8:30 **Power Electronics System Integration for Electric and Hybrid Vehicles (Invited paper)**
M. März, A. Schletz, B. Eckardt, S. Egelkraut, H. Rauh, Fraunhofer Institute of Integrated Systems and Devices, Erlangen, Germany

9:00 **Solar Power Inverters (Invited paper)**
R. Mallwitz, B. Engel, SMA Solar Technology AG, Niestetal, Germany

9:30 **Fault Tolerant Drives for Aerospace Applications (Invited paper)**
G. J. Atkinson, J. W. Bennet, B. C. Mecrow, D. J. Atkinson, A. G. Jack, V. Pickert, University of Newcastle, United Kingdom

10:00 **Coffee Break**

Session 7: Power Modules

Chairmen: M. Bakran, Siemens AG, Nuremberg, Germany; J. A. Ferreira, Delft University of Technology, The Netherlands

10:30 **Dynamic Paralleling Problems in IGBT Module Construction and Application (Invited paper)**
U. Schlapbach, ABB Switzerland Ltd. Semiconductor, Lenzburg, Switzerland

11:00 **Non Destructive SOA Testing of Power Modules (Invited paper)**
G. Busatto, C. Abbate, F. Iannuzzo, University of Cassino, Italy

11:30 **Active Reduction of Common Mode Current in Power Modules**
J.-L. Schanen, T. De Oliveira, J.-M. Guichon, G2Elab, Grenoble; S. Mandray, A. Bouzourene, Thales AES, Paris, France

11:50 **Power Module with Additional Low Inductive Current Path**
M. Frisch, Vincotech GmbH, Unterhaching, Germany; T. Ernö, Vincotech Kft, Bicske, Hungary

12:10 **Power Circuit Design for Clean Switching**
R. Bayerer, D. Domes, Infineon Technologies AG, Warstein, Germany

12:30 Lunch Break

Session 8: Power Electronics

Chairmen: E. J. Dede, GH Electrotermia S. A., Valencia, Spain; M. Meinhardt, SMA, Niestetal, Germany

13:50 **Development of a Mid-Power Core (35 kW) Dedicated to Inverters for Aerospace Applications**
R. De Maglie, G. Osvald, A. Mashaly, S. Liebig, J. Engstler, A. Engler, Liebherr Elektronik GmbH, Lindau, Germany

14:10 Evaluation of Power Density of a Reduced Switch Count Five-Level Three-Phase PWM Rectifier for Aircraft Applications
J. Itoh, Y. Noge, Nagaoka University of Technology, Nagaoka, Niigata, Japan

14:30 Development of a Highly Compact and Efficient Solar Inverter with Silicon Carbide Transistors
C. Wilhelm, D. Kranzer, B. Burger, Fraunhofer Institute for Solar Energy System sISE, Freiburg, Germany

14:50 Mixed Switched Mode and Linear Lithium Ion Battery Tester for High Power and Large Bandwidth
M. Fischnaller, J. Melbert, Ruhr-Universität Bochum, Germany

15:10 A Linear 10 kV Power Amplifier for Piezo Actuators
T. Horn, J. Melbert, Ruhr-Universität Bochum, Germany

15:30 Coffee Break

Session 9: DC/DC Converters

Chairmen: J. A. Cobos, UPM, Spain; A. Mertens, Technical University of Hannover, Germany

16:00 **Three-Stage DC-DC Converter Solutions for SMPS Applications in Comparison**
U. Schwalbe, M. Scherf, T. Reimann, ISLE GmbH, Ilmenau, Germany

16:20 **Fast Control Technique for High Frequency (5MHz) DC/DC Integrated Converter**
M. del Viejo, P. Alou, J. A. Oliver, O. García, J. A. Cobos, Universidad Politécnica de Madrid, Spain

17:20 Break

17:30 **Panel: Virtual Prototyping (CAD Tools)**
D. Boroyevich, CPES, United States; D. Cottet, ABB Switzerland; U. Drofenik, ETH Zurich, Switzerland; T. Harder, ECPE e. V., Nuremberg, Germany; J.-L. Schanen, GE2Lab, Grenoble, France; G. Wachutka, Technical University Munich, Germany

Wednesday, March 17, 2010

Room B

Session 10: Packaging

Chairmen: F. P. McCluskey, University of Maryland, College Park, United States; D. Silber, University Bremen, Germany

13:50 **Low Temperature Sinter Technology Die Attachment for Power Electronic Applications**
C. Göbl, J. Faltenbacher, Semikron Elektronik GmbH Co. KG, Nuremberg, Germany

14:10 **Pure Low Temperature Joining Technique Power Module for Automotive Production Needs**
E. Schulze, C. Mertens, Volkswagen AG, Wolfsburg; A. Lindemann, Otto-von-Guericke-Universität, Magdeburg, Germany

14:30 **Power Semiconductor Joining through Sintering of Silver Nanoparticles: Evaluation of Influence of Parameters Time, Temperature and Pressure on Density, Strength and Reliability**
M. Knoerr, A. Schletz, Fraunhofer Institute for Integrated Systems and Devices Technology (IISB), Nuremberg, Germany

14:50 **Sintering Technology Used for Interconnection of Large Areas: Potential and Limitation for Power Modules**
T. Licht, R. Speckels, M. Thoben, Infineon Technologies AG, Warstein, Germany

15:10 **Novel Silver Contact Paste; Lead Free Solution for Die Attach**
W. Schmitt, W.C. Heraeus GmbH, Hanau, Germany

15:30 Coffee Break

Session 11: Materials

Chairmen: D. L. Saums, DS & A LLC, USA; M. Schneider-Ramelow, Fraunhofer Institute IZM, Berlin, Germany

16:00 **Direct Bonded Aluminum on Aluminum Nitride Substrates via a Transient Liquid Phase and its Application**
Y. Kuromitsu, Y. Nagatomo, H. Tonomura, K. Akiyama, Mitsubishi Materials Corp., Naka, Ibaraki; C. M. Montesa. N. Shibata, Y. Ikuhara, The University of Tokyo, Japan

16:20 **Evaluation of Insulation Material in Advanced High Power IGBT Modules with Extended Operation Temperature**
L. Feller, S. Hartmann, D. Schneider, ABB Semiconductors, Lenzburg; D. Granata, Swiss Federal Institute of Technology, Zurich; B. Behzadi, ABB Forschungszentrum Daettwil, Switzerland

16:40 **Innovative Materials of Automotive Power Packaging**
K. L. Tan, L. Vivet, J. M. Morelle, Valeo VEES; B. Pierre, Griset, Villiers Saint Paul; Y. Bienvenu, A. Kaabi, Armines, Evry, France

17:00 **Application of Phase Change Materials for Low Duty Cycle High Peak Load Power Supplies**
A. Stupar, U. Drofenik, J. W. Kolar, Power Electronic Systems Laboratory, ETH Zurich, Switzerland

17:20 Break

Room A

17:30 **Panel: Virtual Prototyping (CAD Tools)**
D. Boroyevich, CPES, United States; D. Cottet, ABB Switzerland; U. Drofenik, ETH Zurich, Switzerland; T. Harder, ECPE e. V., Nuremberg, Germany; J.-L. Schanen, GE2Lab, Grenoble, France; G. Wachutka, Technical University Munich, Germany

18:50 End

20:00 Conference Dinner in the City Hall Nuremberg

Thursday, March 18, 2010

Room

Session 12: Prognostics – Thermal Management

Chairmen: F. P. McCluskey, University of Maryland, College Park, United States; J.-H. Fabian, ABB Switzerland Ltd., Baden-Daettwil, Switzerland

8:30 **Current Status of Pronostics Techniques and Application to Power Electronics (Invited paper)**
C. Bailey, C. Yin, H. Liu, The University of Greenwich; M. Musallam, C. M. Johnson, The University of Nottingham, United Kingdom

9:00 **Validation of a Fast Loss and Temperature Simulation Method for Power Converters**
A. Bryant, N-A. Parker-Allotey, I. R. Swan, D. P. Hamilton, P. A. Mawby, University of Warwick, Coventry, United Kingdom; T. Ueta, T. Nisijima, K. Hamada, Toyota Motor Corporation, Aichi, Japan

9:20 **Thermal Pre-Dimensioning Methodology based on Thermal Impedance**
P. Dubus, Powerlogy, Saint Forget; R. Leon, D. Le Guyader, L. Caves, Valeo, Créteil, France

9:40 **A MATLAB Based Approach for Electro Thermal Design of Power Converters**
P. Cova, M. Bernardoni, University of Parma, Italy

10:00 **Fast and Accurate Simulation of Time-Variant Air-Cooling Systems**
T. Gradinger, Y. Liu, ABB Switzerland Ltd., Baden-Dättwil, Switzerland

10:20 Coffee Break

Session 13: EMI & Cooling

Chairmen: J.-L. Schanen, G2Elab, Grenoble, France; E. Hoene, Fraunhofer Institute IZM, Berlin, Germany

10:40 **Thermo-Mechanical Stress Analysis for a Multilayer SMT Manufacturing Technology**
I. Josifovic, J. Popovic-Gerber, J. A. Ferreira, Delft University of Technology, The Netherlands

11:00 **Investigation and PEEC Based Simulation of Radiated Emissions Produced by Power Electric Converters**
A. Domurat-Linde, E. Hoene, Fraunhofer Institute IZM, Berlin, Germany

11:20 **PEEC-Models for EMC Filter Layout Optimisation**
T. De Oliveira, J. M. Guichon, J.-L. Schanen, L. Gerbaud, G2ELab, Saint Martin d'Héres, France

11:40 **Evaluation of Cooling Methods for a HVAC Drive System**
F. P. McCluskey, V. Jha, R. Zimmermann, P. Hansen, University of Maryland, College Park, MD, United States

12:00 **Vaporizable Dielectric Fluid Cooling for IGBT Power Semiconductors**
D. L. Saums, DS & A LLC, Amesbury, United States

12:20 Lunch Break

Session 14: Future Perspectives

Chairmen: J. D. van Wyk, University of Johannesburg, South Africa; P. Friedrichs, SICED GmbH & Co. KG., Erlangen, Germany

13:40 **New Semiconductor Technologies Challenge Package and System Setup (Invited paper)**
G. Miller, Infineon Technolgies AG, Neubiberg am Campeon, Germany

14:10 **Future Role of Power Electronics (Invited paper)**
I. Omura, Kyushu Institute of Technology, Kitakyushu, Japan

14:40 **Keynote: Is it the End of the Road for Silicon in Power Conversion?**
A. Lidow, Efficient Power Conversion Corporation, El Segundo, United States

15:20 **Closing**
J. D. van Wyk, University of Johannesburg, South Africa; D. Silber, University of Bremen, Germany

GENERAL INFORMATION

Secretariat

For detailed Information please contact:

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Ms Hatice Altintas
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Fax: +49-(0)69-96 31-5213
E-mail: vde-conferences@vde.com
URL: www.vde.com

Website

Visit the CIPS 2010 Homepage for getting the latest information related to the conference:
www.cips-conference.de

Registration

To register for CIPS 2010 please fill in the registration form attached to this program and return it to VDE Conference Services. To enjoy the „early-bird-discount“, VDE conference Services must receive the form before February 15, 2010. Full payment or credit card information must accompany all registrations in order to be accepted.
Please visit http://www.cips-conference.de if you prefer online registration.

Registration fees

	Before February 15, 2010	From February 15, 2010
Presenting Author	€ 510,--	€ 610,--
Member (VDE/ECPE Competence Centre)	€ 510,--	€ 610,--
Non-member	€ 575,--	€ 675,--
Student	€ 420,--	€ 520,--
Additional tickets for conference dinner	€ 60,--	€ 60,--
Additional proceedings	€ 40,--	€ 40,--

- Participants applying for the membership fee must include a copy of their membership card to the registration form.
- A student’s certification form has to be endorsed by a supervisor or Head of department and a photocopy of the student card must be included.
- Presenting authors, co-authors, committee members and session chairs are not exempt from paying registration fees.

Conference Registration

Includes admission to all plenary and technical sessions and to the daily luncheons, reception during the dialog session, the conference dinner in the City Hall Nuremberg, and one copy of the proceedings incl. a CD-ROM.

Payment

Payment for registration, including bank charges and processing fees, must be made in Euro.
The conference fee has to be fully paid in advance. **Confirmation of registration will be sent after full payment has been received at the VDE-Conference Services.**

The following methods of payment are accepted for the online and fax registration:

- By credit card authorisation as per registration form. The 16 digit card number, expiry date, security No. (last 3 digits on rear side of credit card) and holder's name must be indicated on the registration form. For the registration per fax form the Signature of the card holder is mandatory.
- Cash payment on-site in EURO (€)

Cancellation

In case of cancellation, provided that written notice is received at the VDE-Conference Services before **February 15, 2010** the registration fee will be fully refunded less a handling fee of Euro 60,--. After February 15, 2010 no refund will be made. Proceedings and CD-ROM will then be sent to the registrant after the conference.

Proceedings

All papers accepted for presentation at the conference will be published in the proceedings and a CD-ROM. The proceedings will be handed on-site to all delegates attending the event.

The proceedings will be published by VDE Verlag and will also be aviaable in the IEEE Vonfirme Management Publication Program (CPP) and IEEE Xplore®.
Additional proceedings and CD-ROM are on sale during the conference (upon availability) at Euro 40,-

Hotel reservation / Official Travel Agency

For room reservation, you can contact directly the following agency:

Congress- und Tourismus-Zentrale Nürnberg
Frauentorgraben 3
90443 Nürnberg
Tel.: +49 911 2336-122
Fax: +49 911 2336-166
zv@ctz-nuernberg.de

For detailed information on hotel reservations please visit also www.tourismus.nuernberg.de

At the same time of CIPS 2010, a big event will take place in Nuremberg, **therefore we highly recommend you to make your room reservation very early, in order to be sure to book a room in the city centre.**

Table Top Exhibition

During the conference, a table top exhibition is planned presenting results and demonstrators from current research. For more information concerning the table top exhibition, please contact:

VDE-Conference Services
Stresemannallee 15
60596 Frankfurt
Germany

Phone: +49-(0)69-63 08-477
or +49-(0)69-63 08-479
Fax: +49-(0)69-96 31-5213
E-mail: vde-conferences@vde.com

Conference Venue

Nuremberg is a lively city of about half a million inhabitants, with a visible history of almost one thousand years. It is also a city "of wit", where inventiveness and the researchers' curiosity have found a home. In the region Nuremberg-Erlangen many power electronics companies, research institutes and universities are located.

The CIPS 2010 will take place in the Maritim Hotel Nürnberg which offers a wide range of well equipped rooms and foyers. It is located 5 min. off the main railway station where there is also a 10 min. connection from the airport by Subway U 2 direction „Röthenbach”.

Maritim Hotel Nürnberg
Frauentorgraben 11
90443 Nürnberg
Phone: +49 (0) 911 2363-0
Fax: +49 (0) 911 2363-823
E-mail: info.nur@maritim.de

Registration hours on-site

The registration desk on-site will be available at the foyer of the Maritim Hotel Nürnberg
Tuesday, March 16, 2010, 08:00 h to 19:00 h
Wednesday, March 17, 2010, 07:30 h to 18:00 h
Thursday, March 18, 2010, 07.30 h to 15:00 h

Availability by phone or e-mail on-site

Registration counter:
Phone/Fax: +49-(0)911 23 63 895
E-mail: vde-conferences@vde.com

Official Language

All sessions will be held in English, only.

Transport

The Maritim Hotel Nürnberg is located centrally and in a conveniently connected part of the inner city, just a few metres from the main railway station and a few kilometres from the autobahn, airport and the trade fair. The old city with famous buildings and monuments such as the Kaiserburg, or the numerous museums and the world famous Nürnberger Christkindlesmarkt (Christmas Market) are within walking distance.

Distance from the main railway station: 200 m
Distance from the autobahn: 3 km
Distance from the airport: 7 km
Distance from the trade fair: 5 km
Distance from the Kaiserburg: 2 km

By car:
The motorways A3, A6, A9 and the A7 lead to Nuremberg

By train:
Main station Nuremberg with IC and ICE connection, 200 m distance from the hotel, 50 m to the underground.

By plane:
Nuremberg airport is 7 km away. The shuttle bus or the underground commutes between the airport and main station.
Busses and trams: from airport U2 to stop „Hauptbahnhof"
Taxi fares: from airport approx. 15-20 €

Social Program

- The conference dinner will take place on March 17, 2010 in the City Hall Nuremberg
- During the „Dialog Session – Posters" on March 16 2008 at the Foyer of the Maritim Hotel Nürnberg, typical Franconian snacks and Beverages will be served.

The attendance is included in the full conference fee. Additional tickets may be ordered with the registration form within the given deadline.

Insurance

The organisers may not be held responsible for any injury to participants or damage, theft and loss of personal belongings. Participants should therefore make their own insurance arrangements.

Passport and visa Requirements

Foreign visitors entering Germany have to present a valid Identity Card or Passport. Delegates who need a visa should contact the German consular offices or embassies in their home countries. Please note that neither the VDE-Conference Services nor the ETG (the Power Engineering Society within VDE) or the supporting bodies are able to extend any "Invitation" for application of visa.

Currency

The official currency in Germany is the Euro (€). Usual credit cards (Mastercard, American Express, Visa) are accepted in hotels, department stores and restaurants.

Venue map


Frankfurt
Würzburg
Bamberg/
Bayreuth/
Schweinfurt
(A70)
3
2
4
73
Erlanger Str.
Nürnberg
14
8
Nordring
Pegnitz
Führter Str.
Bayreuther Str.
Sulzbacher Str.
Bahnhofstr.
Frauentorgraben
Hbf
Berlin
MARITIM
Hotel Nürnberg
Rothenburger Str.
9
Frankenstr.
Münchener Str.
Regensburger Str.
Kreuz
N-Hafen-Ost
14
73
Kreuz
N-Ost
Heilbronn/
Stuttgart
6
Kreuz
N-Süd
München
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