Registration (Fax Reply)

To: ECPE e.V.
Att.:   Ingrid Bollens

Fax: +49 (0)911 / 81 02 88 – 28

Register before   **18 June 2008**

Participation fee:
··   **€ 530,-** (plus 19,6 % VAT)
··   **€ 395,-** (plus 19,6 % VAT) for university members
    The fee includes dinner, lunch, coffee/soft drinks
    and seminar handouts.
··   **€ 120,-** (plus 19,6 % VAT)
    for students (shortened seminar package)

   With the confirmation of the registration you will
   receive the invoice.
   In case of cancellation after 18 June 2008 or non-
   attendance 50 % of the participation fee are payable.

   Three participants from each ECPE member company
   free of charge. Allocation in sequence of registration.

Sender:

_____
title, given name, name

_____
company, department

_____
full address

_____
phone, fax

_____
e-mail

_____
date, signature

## Organisational information

Organiser: ECPE e.V.
                    90443 Nürnberg, Germany
                    www.ecpe.org

Chair of seminar: Prof. Eckhard Wolfgang, ECPE
                    Michel Mermet-Guyennet, PEARL
                    Thomas Harder, ECPE e.V.

Organisation: Ingrid Bollens, ECPE e.V.
                    +49 (0)911 / 81 02 88 – 10
                    ingrid.bollens@ecpe.org

Place of seminar: ENSEEIHT – **E**cole **N**ationale
                    Supérieure d'**E**lectrotechnique,
                    d'**E**lectronique, d'**I**nformatique,
                    d'**H**ydraulique et des **T**élé-
                    communications
                    2, rue Charles CAMICHEL
                    31071 Toulouse Cedex 7,
                    FRANCE
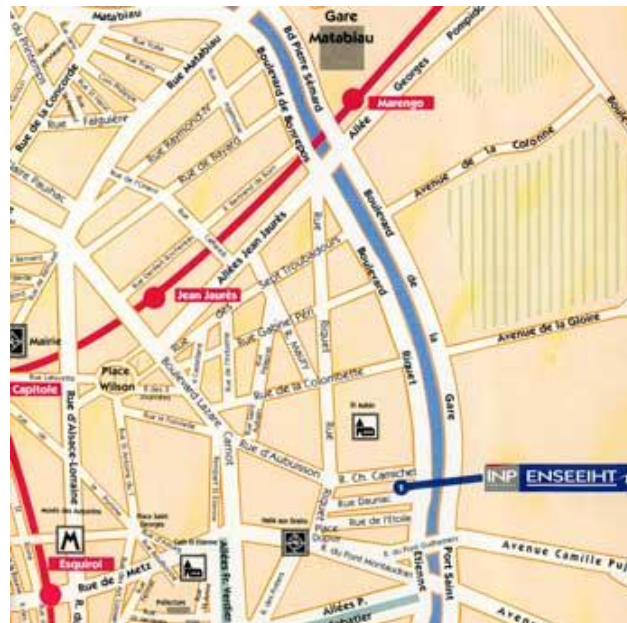
Further information (hotel list and maps) will be
provided after your registration.

**ECPE European Center for
Power Electronics e.V.**

Workshop

Built-in Reliability into
Power Electronic Systems

**25 – 26 June 2008
at ENSEEIHT
Toulouse, France**

in cooperation with

ECPE Workshop

**Built-in Reliability into
Power Electronic Systems**

25 – 26 June 2008
Toulouse, France

19 years ago Intel introduced the concept of buil-ding-in reliability. It basically means to control design, processes and materials which are used for producing chips rather than testing the chip itself.

This concept is also very well suited to secure the reliability of power electronics systems. Today "zero defect" throughout the supply chain is a requirement. Everything has to be done right from the beginning, starting with the require-ments concerning reliability and mission profile.

After having worked out a first design the next step in the design process is "Virtual perfor-mance assessment" which includes electrical, thermal and EMI simulations. The results are compared with data sheets and standards. The fourth step is "Reliability assessment" based on the "physics of failure", and physical models for Life-time prediction. The fifth step is "Robustness validation ", a brand new validation philosophy for components and modules/ ECUs, which has been worked out by many automotive industries under the umbrella of ZVEI, SAE, JSAE. The handbook J 1879 is available since 04/2007, and J1211 will be published 04/2008.

Prof. Eckhard Wolfgang (ECPE) will chair the workshop together with Michel Mermet-Guyennet, (PEARL) and Thomas Harder (ECPE). All presentations and discussions will be in English.

Programme

Wednesday, 25 June 2008

10:00	**Start of Registration**
10:30	**Welcome and Introduction** ECPE, PEARL, ENSEEIHT/ LAPLACE

Performance and Reliability Requirements:

10:55	**Railway** M. Mermet-Guyennet, PEARL (F)

Mission Profiles:

11:15	**Aircraft** O. Tachon, Airbus France (F)
11:40	**Automotive** NN, Continental Automotive (D)
12:05	**Translation of Mission Profile to PE** E. Wolfgang, ECPE (D)
12:30	Lunch

Virtual performance assessment:

13:45	**Multi-Physics Tools for 3D Integration** J.-P. Fradin, EPSILON (F)
14:15	**Safety Management and Fault Tolerant Topologies** F. Richardeau, ENSEEIHT/ LAPLACE (F)
14:45	**Thermal Design** M. Ciappa, ETH Zurich (CH)
15:15	**Vibrational Design** C. Barthes; Continental Automotive (F)
15:45	Coffee break
16:15	**EMI** J.-M. Dienot, E. Batista, PEARL, Alstom (F)

Reliability assessment (Part I):

16:45	**Physics of Failure** P. McCluskey, CALCE (USA)
17:30	**Panel discussion (speakers of day 1)**
18:15	End of 1st day's programme
20:00	**Dinner** **Power Electronics in Future Aircrafts** **Dinner speech: NN**

Programme

Thursday, 26 June 2008

Reliability assessment (Part II):

09:00	**High-Temperature Electronics** P. McCluskey, CALCE (USA)
09:50	**Failure Analysis** M. Medina, D. Trias, S. Drouet, SERMA (F)
10:20	**Life Time Prognosis** M. Ciappa, ETH Zurich (CH)
10:50	Coffee Break

Cases studies for Built-in Reliability:

11:20	**Industry** U. Scheuermann, Semikron (D)
11:40	**Automotive** J.-M. Morelle, Valeo (F)
12:00	**Railway** M. Piton, Alstom Transport (F)
12:20	**Aircraft** R. Meuret, T. Lhommeau, Hispano Suiza (F)
12:40	**Lunch**

Robustness Validation:

14:00	**Introduction to RV handbooks** E. Wolfgang, ECPE (D)
14:15	**Testing of Robustness Margins** M. Piton, Alstom Transport (F)
14:45	**Reliability Testing** G. Coquery, INRETS (F)
15:15	**Panel Discussion (speakers of day 2)**
16:00	**End of Workshop**