Organisational Information

For registration please use the registration form which is available on the ECPE web page: www.ecpe.org
> ECPE Events > ECPE Workshop: Power Supplies in Low Power Applications > Registration Form

www.ecpe.org/ecpe-events

Deadline for registration:

- ➢ **11 September 2017**

Participation fee:

- ➢ **€ 595,–** * for industry
- ➢ **€ 445,–** * for universities/institutes
- ➢ **€ 150,–** * for students/PhD students
  (copy of student ID requested)
  (limited number only)
  (optional dinner: € 50,-* extra fee)

  *plus 22 % VAT

- ➢ The participation fee includes dinner, lunches, coffee/soft drinks and a flash drive with the workshop presentations. Students/PhD students can book the dinner for an extra fee of € 50,-*
- ➢ A printed version of the workshop handout is available on request (€ 50,-*).
- ➢ With the confirmation of registration by email you are registered for the workshop and the invoice will be sent by post.
- ➢ Three participants from each ECPE member company free of charge. Allocation in sequence of registration.
- ➢ Further information (hotel list and maps) will be provided after registration and is available on the ECPE web page.
- ➢ In case of cancellation later than two weeks before beginning or non-attendance 50 % of the participation fee is payable.

Organisational Information

Organiser	ECPE e.V. 90443 Nuremberg, Germany www.ecpe.org
Chairmen	Prof. Giorgio Spiazzi University of Padova
	Dr. Manfred Schlenk Infineon Technologies AG
	Dipl.-Ing. (FH) Jochen Koszescha ECPE e.V.
Organisation	Ingrid Bollens, ECPE e.V. +49 (911) / 81 02 88 – 11 Ingrid.bollens@ecpe.org
Venue	University of Padova Room Catullo Department of Geosciences Via Gradenigo, 6 35131 Padova, Italy

Picture Source: University of Padova
Front Picture Source: RomPower

ECPE
European Center for
Power Electronics e.V.

Programme

ECPE Workshop

Power Supplies in Low Power Applications

18 - 19 September 2017

Padova, Italy

in cooperation with

ECPE Workshop

Power Supplies in Low Power Applications

18 - 19 September 2017
Padova, Italy

During the last years new emerging applications just as IoT as well as the size reduction of electronic equipment have driven new requirements for power supplies up to several hundred watts. Power density, operating efficiency as well as standby power are becoming more and more important. Therefore existing topologies have been modified, new topologies have been developed and advanced control methods have been implemented always considering the cost aspect.

One of the enabling technologies for all of this was digital control. The use of digital controllers or microprocessors becomes now more and more common. It is recognized, that i.e. load and input voltage dependencies on the operationally efficiency, parameter variation can be optimized in an easier way than with analogue control.

The workshop will cover power conversion systems for lighting, consumer and household applications. Concepts for increasing operational efficiency and decreasing standby power will be shown. So i.e. high efficient soft switching strategies for high density flyback converters will be explained. Advanced control concepts for LLC and PFC power stages will be shown.

Besides solutions for highly efficient AC/DC converters also low voltage DC/DC converters will be presented. The latest trends for these kind of converters will be shown. Control methods just like adaptive control will be explained.

The workshop is chaired by:
Prof. Giorgio Spiazzi (University of Padova),
Dr. Manfred Schlenk (Infineon Technologies AG),
Dipl.-Ing. (FH) Jochen Koszescha (ECPE e.V.)

All presentations and discussions will be in English language.

Programme

Monday, 18 September 2017

9:30	**Start of Registration / Welcome Coffee**
10:00	**Welcome, Opening, Introduction** J. Koszescha, ECPE (D), G. Spiazzi, University of Padova (IT), M. Schlenk, Infineon Technologies (D)

Low Power and Consumer Electronic Applications

10:30	**Flyback Evolution in the last 30 Years as a Result of new Devices and Enabling Technologies** Dan Jitaru, Rompower (USA)
11:00	**Practical Application of Digital Control in Power Electronics** Tobias Schmid, NTB University of Applied Sciences Buchs (CH)
11:30	**Digital Control Techniques for Online Efficiency Optimization of DC DC Converters** Luca Corradini, University of Padova (IT)
12:00	**Low Power Variety in Internet of Thing** Flavio Brazzoduro, RECOM Power (AT/IT)
12:30	**Discussion**
12:45	**Lunch**
13:45	**Digital control Concepts for Enhanced PFC Performance** Markus Schmid, Infineon Technologies (D)
14:15	**New Digital PFC Driver for Power Applications** Francesco Gennaro, STMicroelectronics (IT)

Zero-Standby Power and Energy Harvesting

14:45	**Zero-Power Standby – An Overview** Manfred Schlenk, Infineon Technologies (D)
15:05	**Zero-Power Standby, and Zero-Power Monitoring using Sensor-Driven Circuits** Bernard Stark, University of Bristol (UK)
15:35	**Discussion**
15:50	**Coffee Break**
16:20	**Innovative Technology for Zero Stand-by Power Consumption in RF Remote controlled Nodes** Francesco Gennaro, STMicroelectronics (IT)
16:50	**Energy Harvesting – No more Battery Replacement** Cyril Marti, EM Microelectronic (CH)
17:20	**Solving Energy Harvesting Problems for Current Measurement in High Voltage Line** Bernhard Strzalkowski, Analog Devices (D)
17:50	**Discussion**
18:05	**End of 1st Workshop Day**
20:00	**Dinner Caffe Pedrocchi, Via VIII Febbraio, 15**

Programme

Tuesday, 19 September 2017

9:00	**Start of 2nd Workshop Day**

Power Supply for Lighting Applications

9:00	**Toward Inductorless LED Drivers: Hybrid DC-DC Conversion Topologies** Giorgio Spiazzi, University of Padova (IT)
9:30	**Energy-efficient Power Supplies for High-Volume Lighting Applications** Bernd Ackermann, Philips Lighting Research (NL)
10:00	**Digital Power, a Shortcut to Intelligent & Efficient Lighting** Andrea Morici, Infineon Technologies (D)
10:30	**Coffee Break**
11:00	**Very High Frequency Power Converters for LED Lighting Applications** Toke Meyer Andersen, Nordic Power Converters (DK)
11:30	**Single Stage Topologies for LED-Retrofit Lamps** Alexander Pawellek, Friedrich-Alexander-Universität Erlangen-Nürnberg (D)
12:00	**Modular Power Supplies for High End Dimmable LED-Drivers** Dietmar Klien, Tridonic (AT)
12:30	**Discussion**
12:45	**Lunch**
13:45	**New Power Supply Concepts for Automotive Front Light** Andrea Logiudice, Infineon Technologies (IT)

Wireless Energy Transfer and Energy Harvesting

14:15	**Grid-Frequency Emulation on the Secondary Side of a Contactless Power Supply** Faical Turki, Paul Vahle (D)
14:45	**Efficient Wireless Energy Transfer for Low Power Applications** Andreas Berger, Johannes Kepler University Linz (AT)
15:15	**Micro Energy Harvesting: Toward Autonomous Sensing and IoT** Michele Magno, ETH Zürich (CH)
15:45	**Open Questions and Discussion**
16:00	**End of Workshop**