

CALL FOR PAPERS

Conference focus

In the next decades, power electronic system development will be driven by energy saving systems, intelligent energy management, power quality, system miniaturization and high reliability. Monolithic and hybrid system integration will include advanced device concepts including wide bandgap devices, new packaging technologies and the overall integration of actuators/drives (mechatronic integration).

CIPS is consequently focused on the following main aspects:

- **assembly and interconnect technology for power electronic devices and converters**
- **integration of hybrid systems and mechatronic systems with high power density**
- **systems' and components' operational behavior and reliability**

Basic technologies for integrated power electronic systems as well as upcoming new important applications will be presented in interdisciplinary invited papers.

In 2018 the successful story of CIPS will continue as the conference focus is today more important than ever – increasing functionality, energy efficiency and system reliability while decreasing cost.

We invite all engineers coming from industry and academia engaged in power electronics-related

- system development
- component development
- reliability engineering
- research

to share their research and technical achievements joining CIPS 2018.

Important Dates

Submission of abstracts July 15, 2017

Notification of acceptance September 16, 2017

Submission of full papers November 1, 2017

Notification of acceptance Full Paper December 15, 2017

Deadline for early bird registration January 31, 2018

Conference begin March 20, 2018

www.cips-conference.de

Conference topics

Applications are wide spread over areas such as

- transportation: automotive, railway, aircraft
- power electronics in the grid, in particular for renewable energy: wind, solar ...
- drives and power supplies

1. Components to be integrated

- advanced Silicon devices and monolithic integration
- wide bandgap devices and monolithic integration
- gate drivers
- passive components
- sensors and actuators

2. General aspects of packaging

- system and component packaging
- assembly concepts, embedded power, 3D integration
- new materials and interconnects
- high voltage insulation
- design for high temperature applications
- cooling concepts
- interface materials
- multi-domain CAD (electrical, thermal, mechanical) as design tool

3. Power packages and modules

- bare chip packaging
- discrete semiconductor packages
- hermetic semiconductor packages
- power semiconductor modules
- heterogeneous integration, power system-in-package

4. Mechatronic systems and their applications

- integration with sensors and actuators
- integration of power electronics into electric machines
- overall system optimisation

5. Reliability

- reliability requirements, mission profiles
- physics of failure, robustness validation
- prognostics and health management
- modeling and simulation of lifetime
- intelligent reliability testing
- failure analysis

6. Clean switching, electromagnetic compatibility (EMC)

- parasitics and interferences, low inductance design
- electrodynamically optimised design
- optimised control through driving scheme
- filters

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Call for Papers

Experts from industry and research institutes wishing to present results of their recent research are cordially invited to submit a paper. Accepted papers will be presented in either oral or poster sessions.

Please submit a pdf formatted abstract in English with a length of two pages including figures, tables & references showing summary, motivation, approach and results. The paper should be headed by title, authors' names and affiliations.

Please register your paper using the EDAS online registration at www.cips-conference.de. If you have already a personal account, please login with your username and password. Otherwise first create a new account, and then register your paper.

Paper Review

A two-stage review process will be applied:

1. The Technical Program Committee will review the abstracts and decide upon the acceptance.
2. Each full paper will be reviewed by peer reviewers. It shall be
 - within conference scope
 - fulfilling the requirements regarding clarity, presentation, innovation and possible realization
 - readable in the proper format as defined by IEEE.

If this would not be the case, the author will be requested to send a revised paper for further review.

Please note:

- After acceptance, the authors are asked to submit the full paper with a length of up to 6 pages for publication.
- The proceedings will be published by VDE Verlag; presented papers will in addition be available on IEEE Xplore®.
- Papers previously presented and published in the Conference Proceedings of CIPS can be considered for publication in IEEE Transactions on Power Electronics when improved with additions beyond the conference paper which needs to be referenced, cf. Guidelines for Manuscript Submission to IEEE Transactions on Power Electronics.
- By submitting your full paper we assume that you have accepted the copyright-statement: www.vde.com/typing-instructions.
- Each presentation including discussion will typically take 20 min.
- After the conference, the presentations will be made available for all participants on a password protected file server.

Chairs

General Chairs

Leo Lorenz, ECPE e.V.

Thomas Harder, ECPE e.V.

Technical Chairs

Andreas Lindemann, Otto-von-Guericke-University Magdeburg

Nando Kaminski, University of Bremen

Honorary Chairs

Dieter Silber, University of Bremen

Eckhard Wolfgang, ECPE e.V.

Award Chairs

Regine Mallwitz, Technical University Braunschweig

Jochen Koszescha, ECPE e.V.

Organised by

VDE

Association for Electrical, Electronic & Information Technologies

VDE is one of the largest technical and scientific associations in Europe with more than 32 000 members.

www.vde.com/en/

ECPE

European Center for Power Electronics e.V.

The industry-driven research network for power electronics in Europe with more than 160 member organisations is promoting research, education, training and public relations in power electronics.

www.ecpe.org

Co-sponsored by

IEEE PELS

Power Electronics Society

The IEEE Power Electronics Society (PELS) helps in the development and effective application of power electronics technology. Activities within PELS include conferences and workshops to provide a forum for the latest advances in power electronics research. PELS also publishes the Transactions on Power Electronics and further publications for the welfare of its members.

www.ieee-pels.org

ZVEI

the German Electrical and Electronic Manufacturers' Association

www.zvei.org/en/

Conference venue

Maritim Hotel Stuttgart
Seidenstraße 34
70174 Stuttgart, Germany

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Discover Stuttgart

Stuttgart is a city where people from over 170 nations live together. A city with many parks and green areas, a great cultural scene, iconic city districts with a bustling club scene, vineyards in the heart of the city, mineral baths for relaxation and much more – in short: the city is all about a high quality of life. Stuttgart is modern, urban, cosmopolitan, sustainable and sometimes also a little edgy. Discover more at www.stuttgart.de/en.