

Experts from industry and academia are kindly invited to present their latest developments and expectations for future trends at the PCIM 2008 conference (previously unpublished submissions only). PCIM Europe Conference is one of the most leading conferences addressing the fields of Power Electronics, Intelligent Motion, Power Quality and Energy Management.

# Call for Papers

## Topics

1. **POWER SEMICONDUCTORS**
  - 1.1 High Power Semiconductors
  - 1.2 MOSFETs and IGBTs
  - 1.3 Fast Recovery Rectifiers (FRED) and Diodes
  - 1.4 Wide Bandgap Devices (SiC, etc)
  - 1.5 Power Modules and Power Hybrids
  - 1.6 Smart Power ICs and hybrid system approach
  - 1.7 Technology Trends
2. **THERMAL MANAGEMENT and PACKAGING**
  - 2.1 Cooling Systems (e.g. Materials, Heat Sinks, Heat Pipes, Fans, Thermal Compounds and Insulators)
  - 2.2 Thermal Models of Power Electronic Components and Systems
  - 2.3 Packaging, Component Layout, Mounting Procedures Interfacing Technologies
  - 2.4 High Power Density Design Criteria
  - 2.5 High Temperature Design Aspects
3. **CONTROL and DRIVE STRATEGIES in POWER CONVERTERS**
  - 3.1 Control of Power Electronic Converters
  - 3.2 Gate Drive Units, Intelligent Integrated Drivers
  - 3.3 Control ICs, FPGAs, ASICs and their Applications
  - 3.4 Micro Controllers, DSPs and their Applications
4. **ELECTRONIC POWER CONVERTERS**
  - 4.1 AC-DC Power Supplies, Single- / Three-Phase
  - 4.2 DC-DC Converters, hard- /soft-switched
  - 4.3 DC-AC Converters
  - 4.4 AC-AC Converters
  - 4.5 Voltage Regulator Modules (VRM)
  - 4.6 Power Factor Correction, Single / Three-Phase
  - 4.7 Lamp Ballasts and Lighting Systems
  - 4.8 Uninterruptible Power Supplies (UPS)
  - 4.9 Voltage Source Converters (VSI)
  - 4.10 Current Source Converters (CSI)
  - 4.11 Cyclo and Matrix Converters
  - 4.12 Medium-Voltage Power Converters
  - 4.13 Aerospace Power Applications
  - 4.14 EMC of Power Electronic Converters
  - 4.15 Improvement of Efficiency of Power Electronic Converters
  - 4.16 Power Electronics for Physics and Accelerators
5. **POWER ELECTRONICS IN AUTOMOTIVE and TRACTION**
  - 5.1 Power Devices, Circuits and Systems Technologies and Sub-system Units in Automotive Applications
  - 5.2 Low Voltage / High Voltage Supply (Converters and Power Distributions)
  - 5.3 Installation Strategies for Higher Voltage Applications
6. **MOTORS and ACTUATORS**
  - 6.1 Magnetic, Thermal and Noise Design (AC, DC, BLDC, Step Motors, SR, Actuators)
  - 6.2 New Drive Schemes
  - 6.3 Motors and Drives for Consumer Applications
  - 6.4 Motors and Actuators for Automotive Applications
  - 6.5 Actuators and Drive Systems for Aircraft Applications
  - 6.6 Motors and Actuators for Automation Applications
  - 6.7 Piezoelectric and Magnetostrictive Actuators
  - 6.8 Magnetic Bearings
  - 6.9 Gears and Brakes
7. **EMBEDDED MOTION**
  - 7.1 Mechatronic Systems
  - 7.2 Variable Speed Drives (AC, DC, SR) and Applications
  - 7.3 Automotive Subsystems (e.g. Starter-Generator, Break-by-Wire, Steer-by-Wire, Active Suspension/Damping/Stabilization)
  - 7.4 Transportation (e.g. Electric and Hybrid Vehicles, Traction and Auxiliaries, Off-Road Transportation)
  - 7.5 Contactless Energy Transmission
  - 7.6 Embedded Control and Modulation
8. **ADVANCED CONTROL TECHNIQUES in INTELLIGENT MOTION SYSTEMS**
  - 8.1 System Modelling, Estimation and Identification
  - 8.2 Sensorless Drives
  - 8.3 New Control Techniques, hard- and software solutions
9. **MOTION CONTROL**
  - 9.1 Servo and Step Positioning Systems
  - 9.2 Nanopositioning
  - 9.3 Servo Applications
  - 9.4 Control of Piezoelectric and Magnetostrictive Actuators
  - 9.5 Automation Mechanisms
  - 9.6 Industrial Networks, Internet Applications in Drive Systems
  - 9.7 Drivetrain of Hybrid Cars
10. **EQUIPMENT for TESTING, DIAGNOSTICS and CONDITION MONITORING**
11. **POWER ELECTRONICS in ENERGY GENERATION, TRANSMISSION and DISTRIBUTION**
  - 11.1 Fuel Cells
  - 11.2 Microturbines and Cogeneration
  - 11.3 Distributed Generation, Virtual Utilities
12. **RENEWABLE ENERGY SYSTEMS**
  - 12.1 Wind Farms
  - 12.2 Solar Power Plants
  - 12.3 Power Conversion Techniques in Renewable Energies
13. **ENERGY STORAGE**
  - 13.1 Batteries (New Technologies, Selection, Maintenance/Monitoring, Discharging Characteristics, Charging)
  - 13.2 Ultra/Supercapacitors
  - 13.3 Flywheels and Compressed Air Storage
  - 13.4 Superconducting Magnets
14. **POWER QUALITY SOLUTIONS**
  - 14.1 Novel UPS Concepts and Applications
  - 14.2 Power Quality Facility Management
15. **UNITY POWER FACTOR, HARMONICS and FLICKER**
  - 15.1 Unity Power Factor Rectifiers, Single- and Three-Phase
  - 15.2 Harmonics, Voltage Sags, Supply Interruptions – Sources and Effects
  - 15.3 Active and Hybrid Filters
16. **POWER ELECTRONICS in UTILITIES**
  - 16.1 Developments in Power Generation, Transmission and Distribution (FACTS, etc.)
  - 16.2 Standards of Power Quality
17. **SOFTWARE TOOLS and APPLICATIONS**
  - 17.1 Modelling and Simulation of Power Electronic Circuits and Applications
  - 17.2 Motor and Drive Design Tools and Applications (FEM, Simulation)
  - 17.3 Modelling and Simulation of Power Quality Solutions
  - 17.4 Real-time Software (Simulation and target) and Applications
  - 17.5 Rapid Prototyping in Power Electronics, Motion Control and Power Quality
  - 17.6 Future Trends in Design-, Real-time- and Rapid Prototyping Software for Power Electronics, Motion Control and Power Quality systems
18. **PASSIVE COMPONENTS and NEW MATERIALS**
  - 18.1 Capacitors, Supercapacitors
  - 18.2 Fuses
  - 18.3 Resistors, Varistors, Thermistors
  - 18.4 Inductors and Transformers (High Frequency)
  - 18.5 Piezo Transformers
  - 18.6 Magnetic Materials and Applications to Motors and Actuators
  - 18.7 Materials, Trends and Technologies for Magnetics
  - 18.8 New Materials and Applications for Heat-Sinking and Insulation
  - 18.9 New Passive Components for System Integration
  - 18.10 New Materials and Applications
19. **SENSORS**
  - 19.1 Sensors specific to Power Electronics (e.g. voltage, current, power, temperature)
  - 19.2 Sensors specific to Drives and Actuators (e.g. position, speed, acceleration, force and torque)
  - 19.3 Sensors specific to Renewable Energy Systems (e.g. wind speed, solar radiation density)
20. **METERING and DIAGNOSTICS and STANDARDS**
  - 20.1 Metering, Diagnostics and Condition Monitoring in Power Electronics (for Devices and Circuits)
  - 20.2 Metering, Diagnostics and Condition Monitoring in Motion Applications
  - 20.3 Metering, Diagnostics and Condition Monitoring in Power Quality Applications and Renewable Energy Plants
  - 20.4 Electromagnetic Interference / Compatibility
  - 20.5 Circuit Measures ensuring EMC and Immunity
21. **SYSTEM AVAILABILITY**
  - 21.1 Reliability
  - 21.2 Fail-Safer and Fault-Tolerant Applications
  - 21.3 Life Cycle Cost Analysis
  - 21.4 Stress Monitoring and Lifetime Predictions



International Exhibition  
& Conference for  
**POWER ELECTRONICS  
INTELLIGENT MOTION  
POWER QUALITY**  
**27 – 29 May 2008**  
Exhibition Centre Nuremberg

# Power On!

## Deadlines:

Submission of abstracts:  
**15 October 2007**

Notification:  
**January 2008**

Submission full manuscript:  
**7 March 2008**

Online submission at:  
**[www.pcim.de](http://www.pcim.de)**

Best Paper Award  
»Power Electronics in Industrial  
or Automotive Applications«

Young Engineer Award

All conference papers are  
published in the conference  
proceedings and registered  
in the PCIM Europe Index

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## Submission Requirements

### Possibilities to present your expertise

Oral presentation: will be held within conference sessions addressing key elements of the same topic

Poster presentation: authors will have the opportunity to present their posters during a special poster/dialogue session

Tutorial: half and one-day tutorials are supposed to give profound knowledge about special topics. They can be held by one or more speakers.

### Conference language

English

### Online submission

Please use the online form and pattern for your submission at [www.pcim.de](http://www.pcim.de).

The synopsis/abstract should be submitted as pdf-file and shouldn't exceed 3 pages. Deadline for submissions: 15 October 2007

### Conditions of acceptance

Authors are expected to secure registration fees (cut-price) of 250 EUR + 19% VAT (150 EUR + 19% VAT for Students/University Staff), travel and accommodation funding through their sponsoring organizations before submitting abstracts. Only original material should be submitted. There is no registration fee for authors organizing a tutorial.

### Selection process

All submitted abstracts will be reviewed by the Advisory Board to ensure a high-quality conference. Submitted abstracts may be selected for oral or poster presentation. Notification about acceptance in January 2008.

### Awards

#### Young Engineer Awards

Engineers not older than 35 years may apply for a young engineer award. The awards for the three best papers in this category are 1000 Euro each. The papers will be selected upon the submitted final paper by the conference directors and will be granted to the three best applicants at PCIM Europe 2008 Conference.

#### Best Paper Award »Power Electronics in Industrial or Automotive Applications«

The best paper in this category will be selected upon the submitted final paper and granted at PCIM Europe 2008 Conference. The award comprises the participation at PCIM China 2009 in Shanghai (March 2009) including flight and accommodation. This award is sponsored by Power Electronics Europe



### Venue

Congress Centre West, Exhibition Centre Nuremberg, Germany

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