



POWER ELECTRONICS SOCIETY NEWSLETTER

Second Quarter 2007
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Presidents column

PESC2007 Tutorial

COBEP07

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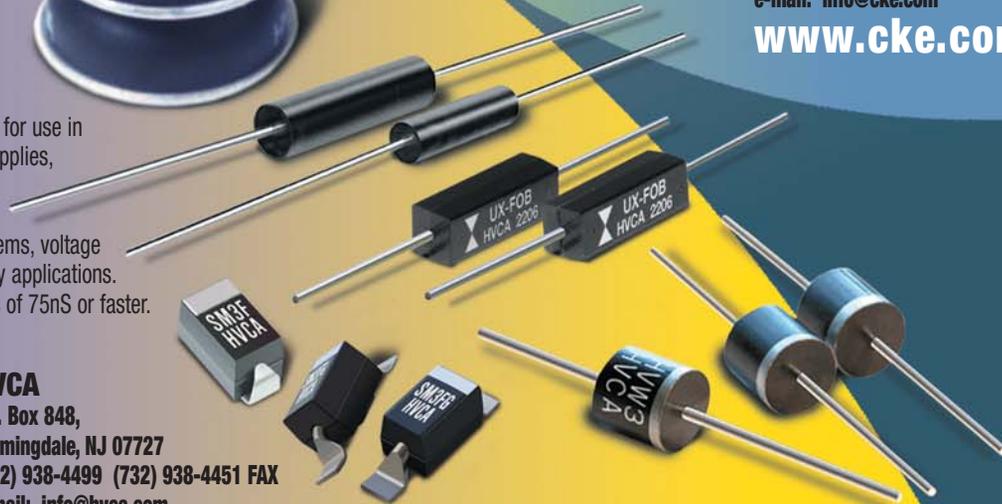
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Table of Contents

From the Editor	3
Presidents Column	4
APEC 2007 meeting photos	5
ISPSD07	6
PESC2007 tutorial	7
OPTIM2008, Presubmission Editing	8
PESC2007	9
SDEMPED2007	10
COBEP07	11
VPPC07	12
ICPE'07	13
Rome INTELLEC, IAS/PELs German Chapter	14
IYCE07	16
Electric Ship Propulsion, ESTS07	17
PESC2008	18
Meetings of Interest	19
APEC 2008	21
IEEE Power & Energy Library	22

From The Editor

John M. Miller



Readers will enjoy the article from our incoming president, Prof. Hirofumi Akagi, and his call to action for participation in society activities. Speaking of action, this issue is packed with society activities, meetings, workshops, tutorials and conference announcements. Please consider participating in these meetings and responding to the call for papers for future meetings. Our society does need your contributions, your ideas and your feedback.

A couple of items did not make it time for this issue. For one, readers will notice the absence of a technical article. An article was planned, but logistics prevented it from making this publication. That will resume in the third quarter issue. Also, in the next issue we will have more on the transition into the Energy Conversion Congress and Exposition (ECCE'09) that will hold its inaugural meeting in San Jose, CA. on 20-24 Sept. 2009. Finally, in the June issue we are planning a new member welcome column for members who have joined the society since 2005. More on this will appear in the next issue. A brief overview of the APEC meeting can be found on page 5 of this issue. Please take a look.

Last, but by no means least, I extend my sincere appreciation to our newsletter associate technical editor Prof. Juan Balda for his many years of dedicated service and contributions to your society. Join me in welcoming our incoming associate editor, Prof. Babak Fahimi, who has agreed to take on the responsibilities of technical article review and editing from Prof. Balda.

The newsletter editorial staff looks forward to providing timely announcements and late breaking news for our membership. But we need your help to keep current with developments in members on the move, articles of interest and meeting announcements. Please submit your comments, news items, and meeting announcements to the EIC.

John M. Miller, EIC
pelsnews@ieee.org

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News Items should be sent to: Dr. John M. Miller, PELS Newsletter, Editor-in-Chief, J-N-J Miller Design Services, PLC, 3573 East Gatzke Road, Cedar, MI. 49621, USA; TEL:+1 231 228 5011; EMAIL: pelsnews@ieee.org. Deadlines for copy are March 15, June 15, September 15 and December 15. Email submission of items in MS-Word or plain-text format are preferred. MS-Word and plain-text (straight ASCII) submissions on CDROMs are welcome and should be accompanied by a backup hardcopy. Fax submissions are acceptable, but are least desirable. Include caption with all photos identifying event and individuals in a back-row, left to right, front-row, left to

right, etc method. Full-page calls for papers and announcements of PELS-supported conferences are welcome and should be sent as both high-quality hardcopy and MS-Word files. Please indicate all trademarked items, such as INTELLEC®, APEC® with the registered trademark symbol, "®".

Technical items should be sent to: Prof Babak Fahimi, PELS Newsletter Associate Editor, University of Texas at Arlington, 416 S. College St., Arlington, TX 76019 USA; TEL: +1 817 272 2667; FAX: +1 817 272 5040; EMAIL: fahimi@uta.edu

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The Newsletter in PDF format is posted at the PELS website approximately three weeks sooner than paper copies can be delivered. To receive email notification when the internet version is available, go to <http://www.pels.org/Mailing/MailForm.html> and provide your email address. Additionally, the email notification sometimes includes timely announcements that are not in the printed newsletter.

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President Column



Dear PELS members

It was at the University of British Columbia, Vancouver, Canada, in 1986 that I presented my paper at our flagship conference, PESC, for the first time. I remember it very well. Because I have attended many IEEE conferences on power electronics and motor drives, including PESC, APEC and IAS Annual Meeting, it is time to pay back to the power electronics community. I am willing to serve as President of the prestigious IEEE Power Electronics Society with great honor and pleasure.

First of all, on behalf of the Power Electronics Society, I sincerely appreciate our former President, Rik DeDoncker and the AdCom members, as well as our former Division II Director, Bob Lorenz, for their excellent contributions through the last two years. We are proud of the fact that our Society membership increased by seven percent last year under the enthusiastic leadership of Rik DeDoncker and Ralph Kennel. Our Society lost a small number of members after September 11, 2001; we are now in the so-called "V-curve recovery process." I expect that all the AdCom members including senior and junior past presidents, and

our Division II Director, Tom Habetler, will continue serving our society through focused Society activities. The AdCom meets three times a year, usually February, June and October. The door is open to PELS members! Two scenes in the form of photographs are picked up from the AdCom meeting on February 25, 2007, the first day of the last APEC in Anaheim.

It is well known that power electronics technology is indispensable for human life, in particular, the proliferation of energy conservation and renewable energy around the world. The market for power electronics is expanding by leaps and bounds from computer power supply, home appliances such as inverter-driven air conditioners and washing machines, industrial and utility applications, and trains as fast as 300 km/h into the state-of-the-art HEV (hybrid electric vehicle) and the near-future Plug-in HEV and PEV (pure electric vehicle), as well as electric ship propulsion and even into passenger air crafts. The IEEE Power Electronics Society keeps international collaboration through technical/financial co-sponsorship with conferences and workshops in the field of power electronics held especially in Regions 8 to 10 – Europe/Africa, South America and Asia/Pacific.

Our former Division II Director, Bob Lorenz told me, "The IEEE is not an American organization but an international one. All members are to be treated as equals. That is the strict IEEE policy." I completely agree with him, judging from my experiences and activities through the IEEE for more than 20 years. His simple and clear message reminds me of a part of the world-famous inaugural address on January 20, 1961 by the 35th President, John F. Kennedy, "Ask not what your country can do for you, ask what you can do for your country." (Of course, I did not hear it directly, but I did learn it in English class when I was a high-school student in Japan.) I suggest you replace "country" with "society," thus resulting in taking a positive action.

Please let me know your idea of what you can do for your society.

Hirofumi Akagi 赤木泰文

*Hirofumi (Hiro) Akagi
IEEE PELS President*

*Professor, Tokyo Institute of Technology
E-mail: akagi@ee.titech.ac.jp*



Presenting a plaque of appreciation to former President, Rik DeDoncker (right).



Presenting a certification of appreciation to outgoing Awards Chair, Randy Frank (right).

APEC 2007 Meeting Photos

PEL's Editor

The 22nd Annual Applied Power Electronics Conference and Exposition was a resounding success thanks to the efforts of the conference committee. Attendance was high as ever and the exhibits were very professional and offered conference attendees the opportunity to examine new products, discuss technical aspects with the experts, and to just browse by the latest developments in power electronics. With over 125 exhibits covering power electronic components, systems, and software attendees were sure to find something new or useful for their current work or future projects. Exhibitor seminars continued their popularity and were well attended on Tuesday afternoon and Wednesday morning.

Members of the APEC 2007 Conference Committee were acknowledged at the sponsor's dinner. In particular plaques were awarded to General Chair Russel Spyker, Program Chair Steve Pekarek, and Finance Chair Bill Dillard. Awards presented by PEL's President Hirofumi Akagi stated that the IEEE Power Electronics Society hereby acknowledges its debt of gratitude to the named individual for services rendered in furthering the objectives of the IEEE for each individuals particular role. Thanks go to Larry Gilbert for taking the photos and documenting this occasion for all of us.



Russ Spyker APEC General Chair

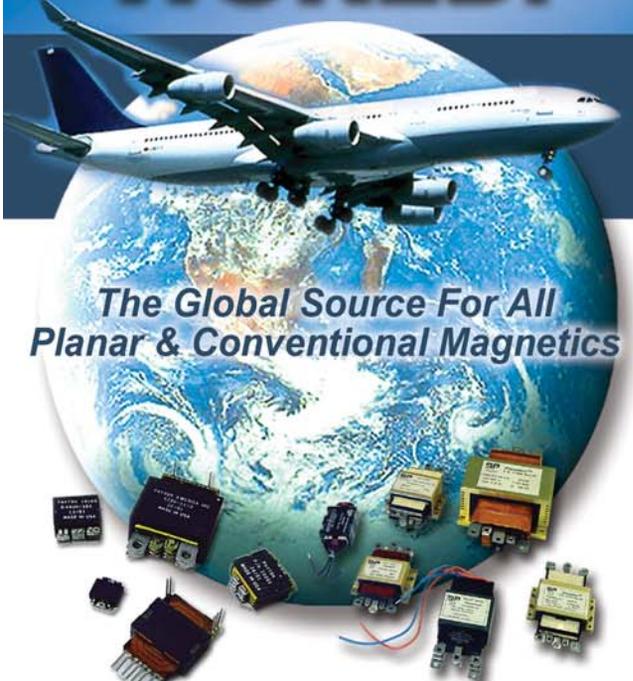


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Announcement

The 19th International Symposium on Power Semiconductor Devices and ICs (ISPSD'07)

Jeju -Korea 27 to 30 May 2007

International Symposium on Power Semiconductor Devices and ICs (ISPSD) is the leading international forum for presentation, review and discussion of the latest advances and developments in all the areas of power semiconductor devices, ICs and their applications for energy transfer. ISPSD07 scheduled to be held in Jeju Island, Korea will provide you with the great opportunity to network, share, and learn about the latest advances in the following subject area.

Materials and Processes: Crystal Growth, Doping, Lifetime Control, Passivation, Characterization, Si, GaAs, SiC, GaN, Diamond.

Semiconductor CAD/Simulation: Process, Device, & Circuit Simulation, Layout, Verification Tools, Device Physics, Device Failure Modes, Reliability.

Discrete Power Devices: Diodes, MOSFETS, BJTs, IGBTs, Thyristors, High Power Devices, Intelligent Devices, Pulse Power Devices, novel device structures in Si, SiC, GaAs and Diamond.

High Voltage and Low Voltage Power ICs: Isolation Techniques, SOI, Circuit Design, Device Technology, Monolithic vs. Hybrid.

RF and High Frequency Power Devices and Circuits: Devices for linear power amplification in the 1-10 GHz range in Si, GaAs, SiC, GaN and Diamond Devices for High Frequency Power Conversion.

Modules and Packaging: Novel Packaging Techniques, Stress and Thermal Simulation, Thermal Management, High Voltage and Power Dissipation Issues

Power Application: Automotive Electronics, Telecommunications, Display Drivers, Audio, Power Systems, Power Supply, EV, Traction, Elevators, Motor Control, Battery, Wind and Solar Systems, Power Factor Correction, EMC, Power Management.

◆ Short Course

Topic : Reliability for Power Devices, ICs and Lateral SJ Devices
Sunday, May 27, 2007

◆ Technical Sessions

10 Oral Sessions : 3 plenary, 31 oral presentations
1 Poster Session : 43 poster presentations
May 28 ~ 30, 2007 (3 days)

Sponsors:



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IEEE Power
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For further information, please visit our official web-site: <http://www.ispsd07.org>

PESC 2007 Tutorial - Call for Proposals

Several tutorials will be held on Sunday June 17, 2006 as part of the PESC 2007 technical conference program.

Authors who are interested and willing to propose a tutorial for PESC 2007 are invited to e-mail a copy of their proposal to both **Dr. Ali Emadi** (emadi@iit.edu) and **Dr. Sudip K. Mazumder** (mazumder@ece.uic.edu).

Tutorial proposal submissions are due by February 1, 2007 to Dr. Emadi and Dr. Mazumder.

The proposal should comprise no more than a three-page (3) single column summary using single space paragraphs and a minimum of 10 pt. font, including:

- tutorial title
- name of presenter(s)
- affiliation/institution
- contact details of the authors(s)
- objectives of the tutorial
- significance and impact of the tutorial
- intended target audience
- technical outline
- tentative duration and schedule of the tutorial

Tutorial proposals on any related topics are invited. Examples of such topics include:

1. Wide-bandgap devices and technology for power electronics

2. Design and packaging issues with high power density
3. Power electronics and power-management controls for stand-alone and grid-connected alternative and renewable energy systems
4. Fuel-cell vehicle (FCV)/hybrid-electric vehicle (HEV) power converter designs for vehicular auxiliary and main power units (APU/MPU)
5. New concepts and applications in motor drives
6. Technology applications of power electronics in power systems
7. New modeling, analysis, and control approaches in power electronics
8. Digital power-management technology
9. Standards related to power electronics applications and their implications
10. Education issues
11. Other related topics

Again, submissions should be e-mailed by February 1, 2007 to: Dr. Ali Emadi (emadi@iit.edu) and Dr. Sudip K. Mazumder (mazumder@ece.uic.edu)

The Hilton in the Walt Disney World Resort, Florida, USA is the site of PESC 2007 and the tutorial site. The registration for hotel rooms will be available in the coming weeks.

Notification of tutorial acceptance will be given by February 16, 2007.

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3 ϕ Bridge Rectifier shown

Announcement: International Conference on Optimization of Electrical and Electronic Equipments, OPTIM 2008

Prof. I. Boldea, IEEE Fellow, General Chair of OPTIM-2008, and Prof. Mihai Cernat, IEEE Member, General Program Chair of OPTIM-2008, and Conference Secretary

OPTIM-2008 venue: Biannual (in same Mountain Resort), on Power Electrical and Electronics Engineering; May 22-24, 2008, Brasov, Romania and technical co-sponsored by IEEE – IAS, IES, and PEL's. For details please visit: <http://info-optim.ro> and <http://optim.8m.com>

The Conference OPTIM holds its own domain and has its own management system. All reviewing process will be managed electronically. You only have to fill in your

data as author (section Authors); we apologize for this small extra effort but we hope the process will get smoother and we all will benefit. To submit your paper please access: <http://www.info-optim.ro/conforg>

Notes: Submit a paper using corresponding item in Authors menu. Fill in carefully the Paper Submission form. Please remember, use a valid e-mail address when you submit your paper. You need to choose your own username and password (do not forget

them). The paper ID, which you will receive via e-mail upon submission of this form, along with corresponding password will allow you to make future changes to the submission. There is an e-mail based mechanism to recover forgotten username and/or password. Make sure paper is completely blinded (i.e., no author's info).

Contacts:

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M. Cernat: cernat@leda.unitbv.ro

Presubmission Editorial Services

In conjunction with a TAB Periodicals subcommittee, chaired by Jacek Zurada, and in response to the interest you expressed at the April 2006 Panel of Editors meeting in Montreal, IEEE Publishing Operations has partnered with one of our established vendors, SPi Publisher Services, to offer presubmission professional editing services to IEEE authors, beginning immediately.

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per year for over 600 journals. SPi has provided content tagging and editing services to IEEE Publishing Operations since 2002.

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Orlando, Florida, USA

June 17 - 21, 2007

THE 38th IEEE POWER ELECTRONICS SPECIALISTS CONFERENCE

SPONSORED BY IEEE POWER ELECTRONICS SOCIETY

JUNE 17-21, 2007

HILTON IN THE WALT DISNEY WORLD® RESORT, ORLANDO, FL

www.pesc07.org

The IEEE Power Electronics Specialists Conference (PESC) is an annual international conference that provides a forum for research results that advance fundamentals and principles of power electronics technologies. PESC includes technical sessions, tutorials, informal discussion sessions, and an exhibition. PESC07 will be held at Hilton in the WALT DISNEY WORLD® Resort, Orlando, Florida, USA. Orlando is the world's premiere family vacation destination offering a great climate, close to 100 theme parks, and beautiful beaches just less than an hour away. The PESC07 conference hotel is located on Disney property, adjacent to the Downtown Disney area and with easy access and transportation to Walt Disney World theme parks as well as other nearby attractions, such as Universal Studios Orlando, Universal Islands of Adventure, Sea World, Cypress Gardens and Kennedy Space Center.



- Invited world-renown keynote speakers
- 544 high quality technical papers in 67 sessions
- Rap sessions, tutorial sessions, and education workshop
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Corporate Sponsorship

Detailed instructions are available on the PESC07 web site: www.pesc07.org.

Conference and hotel registration are now open on www.pesc07.org

Important Dates

- Early Registration Available Through April 20, 2007
- Conference Hotel Discounted Rate Available Through May 26, 2007 (until block is sold out)



WWW.PESC07.ORG



CALL FOR PAPERS

IEEE SDEMPED'07

Cracow (Poland), September 6 - 8, 2007



6th IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives



Sponsor: IEEE Power Electronic Society
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The purpose of this symposium is to provide a forum for presentation and discussion of the state-of-the-art of diagnostics and monitoring for electric machines, power electronics, and adjustable speed drives and related areas. Topics within the scope of the symposium are:

I. ELECTRIC MACHINES: Failure detection and location in electric machines using vibration, audible noise, electrical or mechanical variables, sensors, insulation failures, electrical, mechanical and thermal models.

II. POWER ELECTRONICS: Diagnostics in power converters using input-output monitoring, thermal and/or electrical measurements on power semiconductors, control supervision, signal processing.

III. ADJUSTABLE SPEED DRIVES: Monitoring and diagnostics for ASDs using electric machines, power converters and control systems supervision, computer-based signal processing and data analysis.

IV. TOOLS FOR DIAGNOSTICS: Neural networks, fuzzy logic, artificial intelligence, genetic algorithms, expert systems, identification, signal processing techniques, observers.

V. MATERIALS FOR ELECTRIC MACHINES: Insulating and magnetic materials, remaining life models, ageing tests.

VI. TESTS FOR PREDICTIVE MAINTENANCE: Partial discharge analysis, tests, new instruments for diagnostics.

Regular papers: Submit extended digests or provisional versions of full papers in English as follows. Limitation to **6 full pages**, including paper title, authors and affiliations, figures and references (maximum size 2MB). Authors are requested to prepare the manuscripts in the IEEE two-column format, using the template available in the SDEMPED Website and to translate it in PDF using the IEEE PDF eXpress™ facility. No other format in the submission and in the final version can be accepted.

Special sessions: The symposium will feature special sessions on topics of special interest. The proposal of a special session must provide the session name and a list of about 6 potential papers together with their digests. All special session papers will be reviewed in the usual way.

All submissions should be in electronic form. Instructions will be posted in due course on the web at: www.sdemped07.iut-amiens.fr

Venue: Hotel Novotel Cracow - Poland

Deadlines for paper digest and special session proposals

Submission:	March 15, 2007
Notification of acceptance:	April 15, 2007
Final manuscript due:	June 15, 2007



COBEP 2007

The 9th Brazilian Power Electronics Conference

Blumenau, SC – Brazil
September 30th to October 4th, 2007



Call For Papers

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The 9th Brazilian Power Electronics Conference (COBEP' 2007) is being organized by the Brazilian Power Electronics Association (SOBRAEP). The aim of this conference is to provide a discussion forum for Brazilian and foreign experts in the Power Electronics area, featuring strong participation of industry and academia.

A list of relevant topics includes, but it is not limited to the following:

1. DC/DC converters and DC power supply systems;
2. Inverters for power supply and UPS applications;
3. AC/DC converters and power factor correction;
4. Electric machines, motor drives and motion control;
5. Control theory applied to power electronics systems;
6. Computer-aided modeling, analysis, design and synthesis of power electronics systems;
7. Digital control applications with Microcontrollers, DSP and FPGA;
8. Power quality, harmonics and reactive power compensation, electromagnetic compatibility (EMC) and electromagnetic interference (EMI);
9. Power electronics in generation, transmission and distribution power systems and renewable power systems;
10. Power semiconductor devices, passive components and magnetics;
11. Integration, packaging and modules;
12. Electronic ballast for lighting;
13. Automotive, aerospace, transportation and utility applications of power electronics;
14. Energy storage;
15. Energy conditioning and
16. Education in power electronics.

Information for authors

Authors are invited to submit a copy of an extended digest in English of no less than four pages and no more than six pages, A4 format. The submission of digests and final version of the papers should be made by using the iSobraep electronic system. More information could be obtained in:

<http://www.sobraep.org.br/cobep2007>

Important Deadlines:

Submission of digests: April 15, 2007

Notification of acceptance: June 17, 2007

Final version of the paper: July 22, 2007



Blumenau – SC – Brazil

The Venue – Blumenau was founded in 1850 by German immigrants led by a physician and philosopher Hermann Bruno Otto Blumenau. The city was established in the valley formed by the Itajaí Assu River. After the German immigrants, Italians, Polishes and Brazilians from other regions of the country moved to the city. The German heritage can still be seen in people's face, buildings and culture. Blumenau has about 300,000 inhabitants. It is the third biggest city in Santa Catarina State, in the south region of Brazil. It has a strong economy mainly due to its textile, informatics and electrical and mechanical industries. Thirty percent of all low voltage electrical transformers produced in Brazil are made in Blumenau. It holds the biggest German tradition festival outside Germany, the Blumenau's Oktoberfest. Blumenau is a destination of tourists from many parts of Brazil and abroad.

IEEE
VPPC 2007



September 9-12, 2007, Wyndham Hotel, Arlington, Texas, USA

Co-sponsored by: **IEEE Vehicular Technology Society (VTS)** and **IEEE Power Electronics Society (PELS)**

Call for Papers

2007 IEEE Vehicular Power and Propulsion (VPP) Conference

The 2007 IEEE Vehicle Power and Propulsion (VPP) Conference is located in Arlington, Texas, USA.. VPP conference will include sessions in different technical tracks and potential authors are invited to submit their papers on the following or related topics.

VPP Track 1: Vehicular Electric Power Systems and Loads

VPP Track 2: Vehicular Power Electronics and Electromechanical Actuators

VPP Track 3: Advanced Vehicles

VPP Track 4: Energy Storage Components/Systems

VPP Track 5: Modeling, Analysis, Dynamics, and Control

Papers should make a timely contribution to state-of-the-art technology, be of high technical and editorial quality, and be devoid of commercialism. Papers should not have been published elsewhere and, if accepted, should not be released for publication through other media. All authors must obtain company and government clearance (if necessary) prior to submission of paper proposals. Authors of accepted VPP papers must submit signed copyright transfer forms to IEEE.

Paper Submission Guidelines:

Prospective authors of papers are asked to submit their paper proposals through the conference Web site (<http://www.vppc07.com/>). Each paper proposal must include:

- Technical track number and name, paper title, name(s) of author(s), business affiliation(s), mailing address(es), phone and fax numbers, and e-mail address(es). If there are multiple authors, the corresponding author must be clearly identified.
- An abstract of 50-100 words and a digest of 3-5 pages (including figures and tables) stating the objective of the paper, outlining the problem requiring solution or the method of approach to research, being explicit with respect to the type of data to be included in the full paper, and summarizing the conclusions being made. The digest must not exceed 5 pages in length. The conference program committee may make reassignment of accepted papers to different sessions, if necessary.

Deadlines

April 15, 2007: Submission of paper proposals (abstracts and digests)

June 1, 2007: Author's notification of acceptance

August 1, 2007: Submission of camera-ready manuscripts

Organizing Committee:

VPP'07 General Chair: Dr. Babak Fahimi, University of Texas at Arlington, EML: fahimi@uta.edu

VPP'07 Program Chair: Dr. G. Suresh, GM Research and Development center, EML: suresh.gopalakrishnan@gm.com

VPP'07 Seminar and Invited Speaker Chair: Dr. C.S. Edrington, Arkansas State University, EML: cedrington@astate.edu



<http://www.icpe.or.kr>

Call for Papers

The 7th International Conference on Power Electronics

ICPE'07


October 22 - 26, 2007 / EXCO (Daegu Exhibition & Convention Center), Daegu, Korea

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Kolar, Johan W. (Swiss Federal Inst. of Tech.)

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Taniguchi, Katsunori (Osaka Inst. of Tech.)

Venkataramanan, Giri (Univ. of Wisconsin)

Wu, Bin (Ryerson Univ.)

Wu, Tsai-Fu (Natl Chung Cheng Univ.)

Xu, Dianguo (Harbin Inst. of Tech.)

Yi, Yongdong (Tsinghua Univ.)

Zobaa, Ahmed (Cairo Univ.)

Scope of the Conference

The 7th International Conference on Power Electronics (ICPE'07) will be held at the Daegu Exhibition and Convention Center, Daegu, Korea, from October 22 to 26, 2007. ICPE is the technical forum fully dedicated to Power Electronics and related areas.

- Power Semiconductor Devices
- DC-DC Converters
- Inverters and Inverter Control Techniques
- Electric Machines
- Motor Drives
- Rectifiers and AC-AC Converters
- Renewable Energy Systems
- Power Quality and Utility Applications
- Automotive Applications and Traction Drives
- Energy Storage Systems
- Control Technology Applied to Power Electronics
- Modeling, Analysis, and Simulation
- Consumer Applications (Electronics)
- Other Power Electronics Applications

A selection of outstanding conference papers will be published afterwards in the Journal of Power Electronics (JPE). The conference papers will also be included in the IEEE Xplore database.

Paper Submission

The digest should be written in English, double-spaced, form and 4 pages maximum. Please start your paper with the title and choice of topic categories but do not include any personal information in digest. Conference Papers will be accepted electronically. An abstract of 300 words maximum and author's name(s), affiliation(s), corresponding author and his/her mailing address, and telephone and fax numbers should be provided via a web submission system. Detailed instructions will be available on the ICPE'07 website.

Important Dates

Deadline for Digests	April 30, 2007
Notification of Acceptance	June 15, 2007
Deadline for Final Manuscripts	August 31, 2007

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European Power Electronics (EPE)



China Electrotechnical Society (CES)



For Further Information, Please Contact

ICPE'07 Secretariat

5F, Daehan Bldg, #1018, Dunsan-dong, Seo-gu, Daejeon, 302-120, Korea

Tel: +82-42-472-7464 / Fax: +82-42-472-7459

E-mail: icpe07@icpe.or.kr / Web Site: <http://www.icpe.or.kr>

Rome Intelec 2007- A great Conference is in the making!

As a PELS member (or just as a reader of this newsletter) make sure you plan to attend the 2007 INTELEC Conference that will be held in Rome between September 30th and October 4th, 2007

INTELEC is an annual conference which examines and analyses the latest developments in telecommunications energy systems and related power processing devices and circuits.

Technical papers will include DC power plants, powering architectures, AC systems, DC-DC converters, batteries, prime power systems, grounding, physical and thermal design, alternative power (engines, fuel cells, etc) and building and equipment

cooling systems. There are also tutorials and a technical exhibition of products and equipment.

The organizing committee is in the process of setting up one of the most exciting conference ever, with an outstanding array of technical papers on the cutting-edge technology of the telecom power supply industry. The venue is the new Rome Park Marriott Hotel and the Conference is expected to attract the "crème de la crème" of the telecommunication energy industry from the world over.

But the Rome INTELEC is going to be much more than a great Conference: during your "off" time we would like to

involve you and your companions in the discovery of the most impressive sites of the eternal city such as the Colosseum, the Fori Imperiali monuments and the Sistine Chapel at Vatican city.

For more info about the 2007 INTELEC Conference please consult the website www.intelec.org

We look forward to seeing you in Rome soon.

Ciao.

*Provided by
Maurizio Grossoni
Chairman of Intelec*

2007 Management Committee

IEEE IAS/PELS/IES German Chapter meets at GE Global Research Garching

The third meeting in 2006 of IEEE IAS/PELS/IES Joint German Chapter was held on 26th and 27th of October at GE Global Research Europe facility in Garching near Munich. The research facility is located next to the Garching campus of the Technical University of Munich.

The meeting started on 26th of October with a social meeting at the "Hofbräuhaus" hosted by GE Global Research. Dr. Stefan Schröder of GE and local organizer of this meeting welcomed all participants. During the social meeting the chapter celebrated the 50th year of IEEE membership of Prof. Dr. Werner Leonhard, Technical University Baunschweig, shortly after his 80th anniversary. The laudatio was presented by Prof. Dr. Helmut Späth, University Karlsruhe: In

1956 Prof. Leonhard's first technical paper with the title "Characteristic properties of magnetic frequency multiplier" was published at an AIEE conference, the predecessor of the IEEE. During that year Prof. Leonhard stayed with Westinghouse Electric Corporation.

The chapter also honored past chairman Dr. Peter Magyar of Hella KG for achieving the IAS Outstanding Service Award which was presented to him at the IAS Annual Meeting 2006.

On 27th of October Dr. Stefan Schröder of GE Global Research Europe welcomed all participants at the GE Research Center in Garching. The first presentation was held by Mr. Jörg Stromberger about GE's history and it's today's activities. GE started in the year

1900 in Schenectady, New York. One of it's best known researchers and inventors was Thomas A. Edison. In 2005 GE has nearly a staff of 300,000 people and sales of 152.4 billion US \$. GE has five corporate research centers throughout the world namely the headquarters in Niskayuna, Munich, Shanghai, Qatar and Bangalore. The research center in Munich has actually a staff of 80 people but it is planned to grow up to 150 people. Products of GE can be found in the commercial sector, information technology, industrial sector, healthcare, consumer finance and the television market namely NBC broadcasting company. The markets of GE are energy, aviation and rail, consumer and industrial, water and plastics. Research topics at the research center at Munich are wind power, photo-



All meeting participants in front of the main entrance of GE Global Research Garching.



Prof. W. Leonhard listening to the laudatio presented by Prof. H. Spaeth (left to right: Dr. S. Schröder (GE Global Research Garching), Prof. Rik De Doncker (PELS president), Prof. W. Leonhard).



Social meeting at Munich's Hofbräuhaus (left to right: Prof. Rik De Doncker, Prof. A. Lindemann, Prof. W. Leonhard).

voltaics, hydro, geothermics, biogas and fuel cells. Research at GE is financed in part directly by the business units and by a fixed rate of each business unit.

Next Dr. Stefan Schröder presented the activities of the high power electronics laboratory. Research topics of this lab are power components and their applications, converter topologies and controls for wind power, photovoltaics, fuel cell technology and hybrids, industrial power, sub-sea electrification, pipelines, re-injection electrification, high power liquid nitrogen generators and compressor drives. The design loop for such systems consists of the following repeated steps: analytic design, MATLAB/SIMULINK simulations, prototypes, measurements. As application examples Dr. Schröder presented a photovoltaic facility for electrification and removing salt from sea water, and a large electric drive train with a 35 MW drive and motor. As a last topic Dr. Schröder presented a 1 MW, 4-level inverter consisting of multiple paralleled modules and using interleaved pulse patterns. The future challenges to be solved are weak grids, torque ripple and torsional issues of large drives.

In the sequel Mr. Oliver Meyer reported about the activities of the hybrid and renewable energy systems laboratory. The research areas of this lab are wind power systems up to 3.6 MW, geothermal, hydro, solar and biogas generators. These research areas guide to special research topics in materials and physics, energy conversion, critical electronics and controls, electronics and energy enterprise systems. Mr. Meyer gave some examples for research activities in the wind power technologies namely the ice load detection via spectral analysis of tower oscillations, lightning protection systems and blade bending. Mr. Meyer presented the GE energy efficient home with a roof-integrated photovoltaic system. In the area of photovoltaic

ic systems he gave an overview about the different existing systems: a) grid-dependent, b) grid-independent, b1) single island systems and b2) hybrid systems. As an example he presented a photovoltaic facility consisting of 533 grid-connected photovoltaic systems. The challenges of these systems are over-voltage protection with shifting the energy peak flow to batteries.

The last presentation was given by Dr. Ralph Teichmann about wind power and electrical technology. Actually the growing of renewables and wind power technology in the US is about 9% per year, but the forecasts show a growth of up to 15% per year until 2015. So in 2015 there will be 20% of all US electrical energy generation done by wind farms. Nowadays the on-shore wind power plants of GE have a power range between 1.5 to 2.5 MW, where the 1.5 MW generator is equipped with a doubly-fed induction machine and the 2.5 MW generator is equipped with a permanent-magnet synchronous machine. To get more energy and power from these windmills GE's goals are high-efficiency power conversion systems consisting of permanent magnet generators and gears, medium voltage turbine electric and multilevel power conversion electronics. Multiple paralleled 3-Level power converters are used to minimize the power losses and to maximize the availability. Actually GE has off-shore projects for wind power plants ranging from 3 to 5 MW. As an example Dr. Teichmann presented a future design of a 10 MW off-shore wind power plant. It is planned to use a gearless direct drive with a 2-bladed rotor which has a diameter of up to 180 m. The tower will be constructed as a space-frame structure which will be fixed by a 40 m water depth foundation. An exciting challenge of this giant will be the hurricane ride-through capability.

After these very interesting presentations all participants got the chance to visit the GE research labs at Garching with a guided tour. First point of the lab tour was the alternative energy and environmental lab. Research topics of this lab are compression and combustion processes with organic fluids to extract the remaining thermal energy. Next point of the tour was the hybrid and renewable energy lab. In this lab GE built up a solar simulator to test solar panels. After that the participants visited the high power electronics lab. In this lab GE tests high power diodes and press-packed IGBTs against the manufacturers data. The next point of the lab tour was the sensor technologies lab. Research topics of this lab are technologies used in medical applications like the THz multi-spectral imaging and sensing, trace detection and ion mobility spectrometry to detect for instance explosives worn under the clothes. The last lab of the tour was the medical imaging lab with research topics in magnetic resonance imaging, ultrasound and molecular imaging. As an example of the research results GE presented it's magnetic resonance spectroscopy and imaging of the prostate as a minimum-invasive method to get information about the health state of this organ.

The joint IAS/PELS/IES German chapter has elected its new chapter board for the term 2007/08. The new officers are Prof. Dr. Heinz Van der Broeck (University of Applied Sciences Köln) as chairman, Dr. Ingo Hahn (Bosch Rexroth) as vice-chairman, Prof. Dr. Axel Mertens (University Hannover) as secretary and Dr. Mark Bakran (Siemens) as treasurer.

For further informations please visit our chapter website at <http://www.ewh.ieee.org/r8/germany/ias-pels>.

*Dr. Ingo Hahn,
IEEE IAS/PELS/IES German Chapter*

INTERNATIONAL YOUTH CONFERENCE ON ENERGETICS IYCE 2007

31 May – 2 June, 2007 Budapest, Hungary

www.iyce2007.org

Organizer:



Budapest University of Technology and Economics
Student Association of Energy

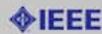
Supporters:



Association of Energy Engineers



International Council on Large Electric Systems



IEEE Hungarian Section, Power Engineering
Chapter



Budapest University of Technology and Economics



BME Periodica Polytechnica

Objectives of the conference:

With the conference, we would like to provide opportunity for young researchers (undergraduate, MSc and PhD students and other young professionals) in the field of energetics and power engineering to present their work in an international forum and make contacts for their future.

Topics include, but are not limited to:

1. Energetics

- Conventional power plants
- Nuclear power plants
- Fusion power research
- Renewable energy sources
- Distributed generation
- Fossil and renewable fuels
- Energy supply, energy efficiency
- Current questions of energy policy
- Sustainable Energy Management

2. Power Engineering

- Power quality
- Power systems
- Industrial electrostatics
- Low frequency interference
- High voltage DC transmission
- Lightning protection
- New solutions in electric traction
- Applications of superconductors
- Power electronics, controllers
- Power system transients
- Insulation technology and diagnostics
- Protection and automation
- Field computation

Location:

The Conference will be in the campus of the Budapest University of Technology and Economics, one of the leading Universities of Central Europe.

Conference language: English

Program will include:

- oral and poster sessions
- conference gala dinner
- sightseeing tours, technical tours
- accompanying persons' program

Deadlines:

Friday 26 January, 2007:

Summary submission

Friday 9 March, 2007:

Notification on acceptance

Friday 13 April, 2007:

Early deadline for payments

Friday 4 May, 2007:

Full paper submission and

Final deadline for payments

Information:

Trivent Conference Office

Etele út 59-61

H-1119 Budapest, Hungary

Tel./Fax: +361 371 1333

trivent@trivent.hu

Find the latest information at

www.iyce2007.org



2007 Electric Ship Technologies Symposium (ESTS)



PELS is proud to cosponsor the 2007 Electric Ship Technologies Symposium (ESTS), to be held in Arlington, VA May 21-23, 2007. This is the second ESTS, following the highly successful inaugural 2005 ESTS. The symposium is focused on the exciting, challenging, and multidisciplinary topic of electric ships, from components to systems to standards.

ESTS 2007 received about 110 technical abstracts, growing from about 70 submissions in 2005. Technical topics include many relevant to PELS members, such as:

- Integrated electric power systems
- Design tools for modeling, analysis, and simulation

- Propulsion (machines and drives)
- Electrical power conversion, storage, and distribution
- Protection, reconfiguration, and survivability

The organizing committee is planning a conference banquet to follow the oral, poster, and panel sessions. You may register at: <http://ewh.ieee.org/conf/ests07/index.php>. I hope to see you there!

Patrick Chapman
ESTS 07 Publications Chair
PELS Adcom, Member at Large



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CONFERENCE ANNOUNCEMENT



The IEEE Power Electronics Specialists Conference (PESC) is an annual international conference that provides a forum for research results, which advance fundamentals and principles of power electronics technologies. PESC includes: technical sessions, tutorials, and informal discussion sessions. PESC08 will be held at Sofitel Chapsis hotel and convention center in the island of Rhodes, Greece. The island of Rhodes is considered to be one of the most popular summer resorts of Europe and can be reached by airplane from all over the world. The island of Rhodes is situated at the cross roads of two major sea routes of the Mediterranean between the Aegean Sea and the coast of the Middle East. The Sofitel Chapsis hotel and convention center is a 5-star hotel located 5 minutes from the city of Rhodes and 15 minutes from Rhodes International Airport.

Topics of Interests

Design, control, analysis, modelling, of power electronics systems, power converters (DC-DC, AC-DC, DC-AC, AC-AC), motor drives and components, semiconductor devices and technologies, magnetic devices and materials, energy storage elements, power quality and utility interface issues, aerospace power applications, intelligent systems, integration and packaging, distributed generation and renewable energy systems, emerging power electronics technologies, and all other aspects of the field.

Paper Submission/Tutorial offering/corporate Sponsorship

Instructions will be available on the PESC08 web site: www.pesc08.org

Please note, PESC policy specifies that each paper must have at least one author registered in full.

Important Dates

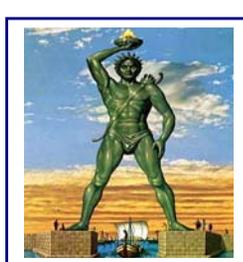
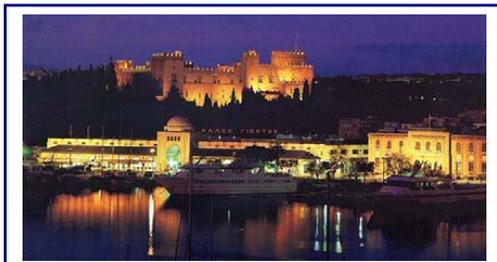
- Submission of abstracts and Digests: November 9th, 2007
- Author's notification: February 15th, 2008
- Submission of Final Manuscript: April 18th, 2008

For further information, please contact

Dr Stefanos Manias, General Chair, National Technical University of Athens, Greece

manias@central.ntua.gr

Dr Vassilios Agelidis, Technical Chair, University of Sydney, Australia, v.agelidis@ee.usyd.edu.au



Meetings of Interest

International Electric Machines and Drives Conference, IEMDC 2007, is scheduled for 3-5 May 2007 in Antalya, Turkey. IEMDC 2007 is jointly sponsored by the IEEE Power Electronics Society. For more information, please visit the conference website <http://www.iemdc07.org/> or contact the General Chair, Okyay Kaynak kaynak@boun.edu.tr or the Technical Chair, Herb Hess, hess@ieee.org

2007 Electric Ship Technologies Sym-posium (ESTS), will be held in Arlington, VA, May 21-23, 2007. This is the second ESTS, following the highly successful inaugural 2005 ESTS. ESTS is co-sponsored by PEL's, those interested please contact Patrick Chapman, PEL's. Registrations are being taken at <http://ewh.ieee.org/conf/ests07/index.php>.

The 38th IEEE Power Electronics Specialists Conference, PESC'07, is scheduled for 17-21 June, 2007 at the Hilton in the Walt Disney World® Resort, Orlando, FL. PESC'07 is sponsored by IEEE PEL's. Deadline for abstract and digest submission is 10 Nov. 2006. General Chair is Prof. Issa Batarseh, batarseh@mail.ucf.edu and technical program chair Prof. John Shen, johnshen@mail.ucf.edu. For more information visit the website at www.pesc-conf.org.

42nd International Universities Power Engineering Conference (UPEC 2007), will be held at the University of Brighton, U.K. UPEC2007 is being hosted by the Faculty of Science and Engineering, University of Brighton, UK, September 4-6, 2007. It will be located at the University's Falmer campus. PO address is: School of Engineering, The University of Brighton, Cockcroft Building, Lewes Rd, Brighton, BN2 4GJ, UK, Tel: +44 1273 642 234, Fax: +44 1273 642 301. The Conference organizer is Dr. Peter Howson (E-mail: P.A.Howson@bton.ac.uk).

12th European Conference on Power Electronics and Applications, EPE2007, is scheduled for 2-5 Sept. 2007 in Aalborg, Denmark. Intending authors should note these deadlines: receipt of synopses by 1 Nov.1, 2006, notification of acceptance March 1, 2007, final review May 15, 2007. Further information can be found at <http://www.epe2007.com/>

4th Vehicle Power and Propulsion (VPP) Conference is announced for Arlington, Texas from 9-12 September 2007 at the Wyndham Hotel in Arlington. Prospective authors are directed to the website for further details: <http://www.vppc07.com/> and notified to submit proposal via that site. Important dates: April 1, 2007 for submission of the paper proposal (abstract and digest); June 1, 2006 author's notification of acceptance; August 1, 2007 for submission of camera-ready manuscript. VPP'07 general chair: Dr. Babak Fahimi, University of Texas-Arlington: fahimi@uta.edu VPP'07 is co-sponsored by PEL's.

9th Brazilian Conference on Power Electronics, COBEP'07, is scheduled for 30 Sept to 4 Oct. 2007 at the Carlos Gomes Theatre, Blumenau, SC, Brazil. COBEP'07 is sponsored by the Brazilian Power Electronics Society and co-sponsored by IEEE PEL's. Deadline for abstracts is 15 April 2007. For more information contact the Conference General Chair, Prof. Eduardo Deschamps at cobep@furb.br or technical program chair, Prof. Adriano Peres at cobepct@furb.br or visit www.furb.br/ppgee

INTELEC® Rome 2007 will take place from 30 Sept. to 4 Oct. at the Rome Marriott Park Hotel, Rome, Italy. INTELEC (International

Telecommunications Energy Conference - www.intelec.org) is an annual conference which examines and analyzes the latest developments in telecommunications energy systems and related power processing devices and circuits. Organising Secretariat Studio Ega srl Viale Tiziano 19 - 00196 Roma, e-mail intelecexhibitions@ega.it

OPTIM-2008 venue: Biannual (in same Mountain Resort), on Power Electrical and Electronics Engineering; May 22-24, 2008, Brasov, Romania and technical co-sponsored by IEEE - IAS, IES, and PEL's. For details please visit: <http://info-optim.ro> and <http://optim.8m.com>. Also, see the announcement in this issue.

39th IEEE Power Electronics Specialists Conference, PESC08 will take place on the island of Rhodes, Greece from 15-19 June 2008. Form more information please visit PELs website or contact PESC08 General Chair, Dr. Stefanos Manias (IEEE IAS/PELs/IES Greece Section Chair) at National Technical University of Athens, manias@central.ntua.gr

5th Vehicle Power and Propulsion (VPP) Conference is announced for 3-5 September 2008 in Harbin, China. Correspondence may be directed to: vppc2008@hit.edu.cn. VPP'08 general chair: Prof. C.C. Chan, Harbin Institute of Technology. Abstracts with contact details should be submitted by 1 March 2008. VPP'08 is co-sponsored by PEL's.

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APEC 2008

23rd Annual IEEE Applied Power Electronics Conference and Exposition
February 24th–February 28th, 2008 at the Austin Convention Center, Austin Texas

Announcement and Call for Papers

APEC 2008 continues the long-standing tradition of addressing issues of immediate and long-term interest to the practicing power electronics engineer. Outstanding technical content is provided at one of the lowest registration costs of any IEEE conference. APEC 2008 will provide a) the best power electronics exposition, b) professional development courses taught by world-class experts, c) presentations of peer-reviewed technical papers covering a wide range of topics, and d) time to network and enjoy the company of fellow power electronics professionals in a beautiful setting. Activities for guests, spouses, and families are abundant in the Austin area.

Papers of value to the practicing engineer are solicited in the following topic areas:

AC-DC and DC-DC Converters

Single- and Multi-Phase AC-DC Power Supplies, DC-DC Converters (Hard- and Soft-Switched)

Devices and Components

Semiconductor Devices, Magnetic Components, Capacitors, Batteries, Sensors, Interconnects, Device Integration

Manufacturing and Business Issues

Production Processes, Quality, Design for Manufacturability, Material Procurement, Supplier Qualification

Power Electronics for Utility Interface

Power Factor Correction, Power Quality, Electronics and Controls for Distributed Energy Systems

System Integration

Packaging, Thermal Management, EMI and EMC

Power Electronics Applications

Automotive and Transportation, Aerospace, Lighting, UPS, Power Generation and Transmission, Telecommunications, Military

Motor Drives and Inverters

AC and DC Motor Drives, Single- and Multi-Phase Inverters, PWM Techniques

Modeling, Simulation, and Control

Device, Component, Parasitics, Circuit and System, CAD /CAE Tools, Sensor and Sensor-less Control, Digital Control

Please note the following dates:

July 20, 2007

Deadline for submission of digests

October 5, 2007

Notification that a paper was accepted or declined

November 30, 2007

Final papers and author registrations are due

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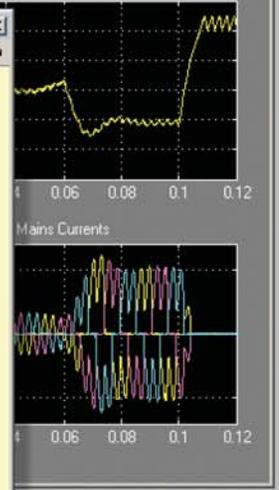
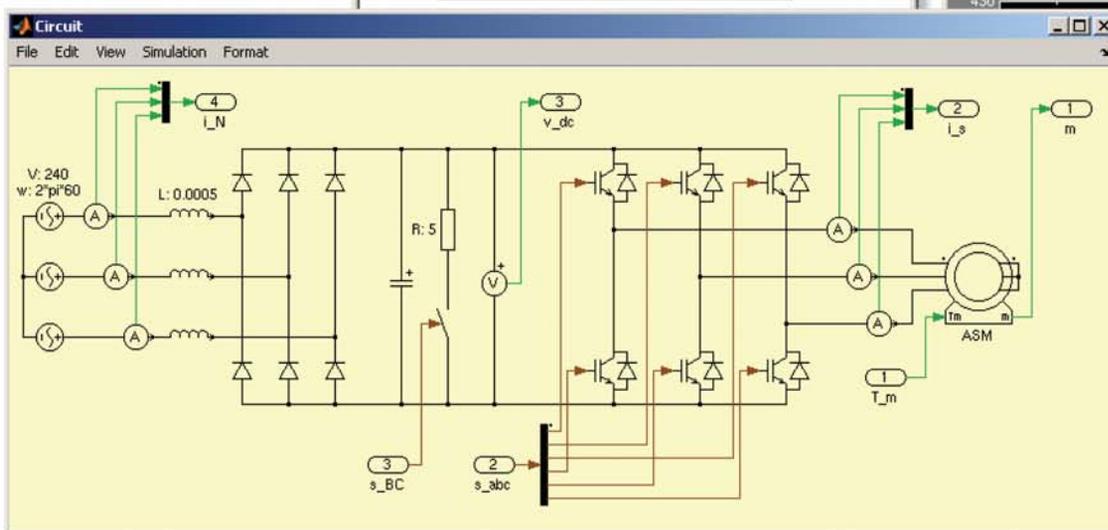
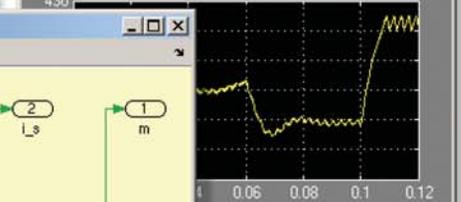
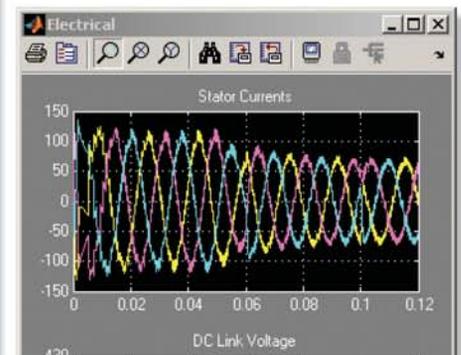
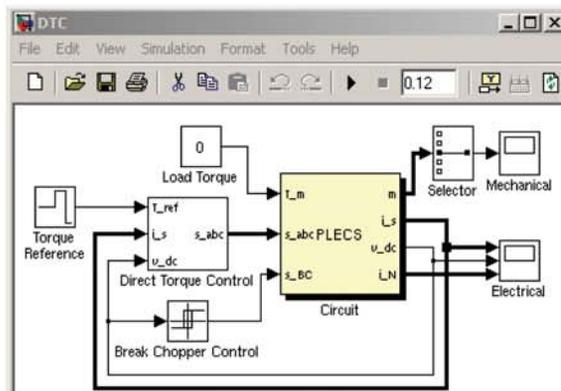
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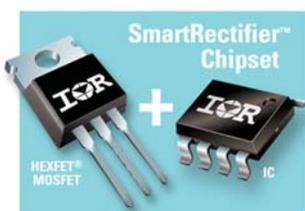
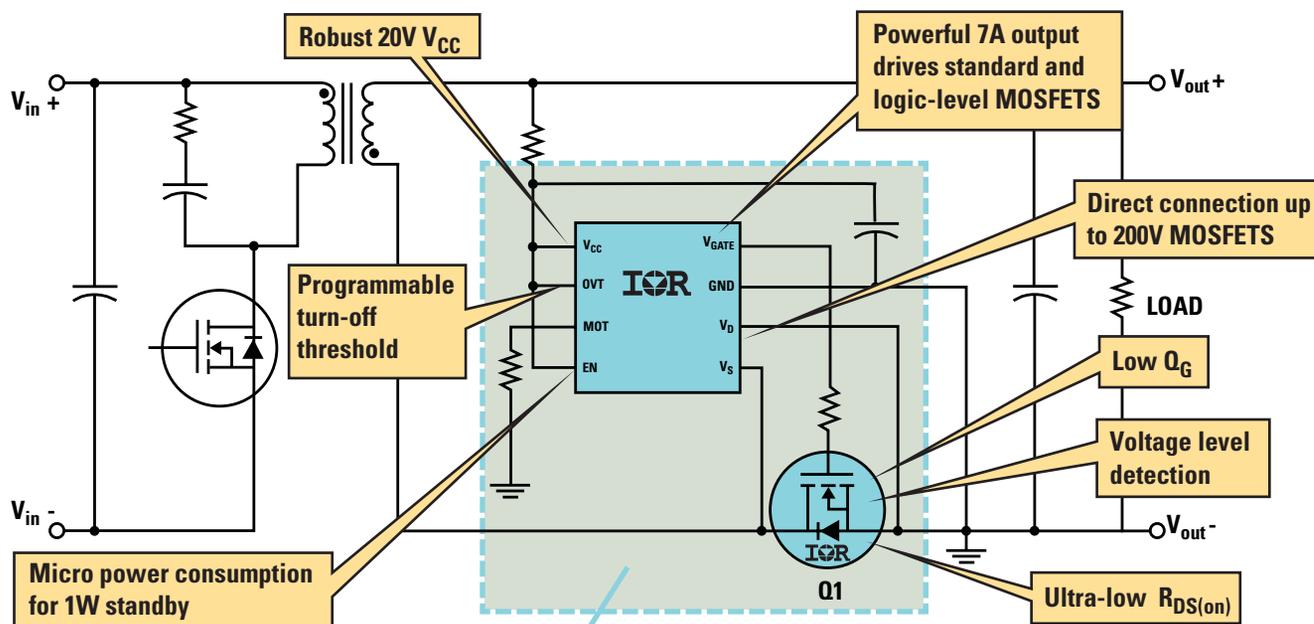
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