IEEE ENERGY CONVERSION CONGRESS & EXPOSITION

ECCE 2011

SEPTEMBER 17-22, 2011
HYATT REGENCY PHOENIX & PHOENIX CONVENTION CENTER IN PHOENIX, ARIZONA
www.ecce2011.org

Energy Conversion Innovation for a Clean Energy Future — TENTATIVE AGENDA

SATURDAY, SEPTEMBER 17, 2011

3:00 pm – 5:00 pm	Registration Open

SUNDAY, SEPTEMBER 18, 2011

7:00 am – 7:00 pm	Registration Open

Tutorials Group 1 • 8:30 am – 12:00 pm

T1-1 Practical Aspects in Modern Design Process of Electric Motors	T1-2 Understanding of Electrical Concepts in Wind Turbines and Photovoltaic Arrays	T1-3 Carrier Based PWM Methods For AC/DC/AC and AC/AC Power Conversion Systems	T1-4 Reliability of IGBT Modules in Energy Conversion	T1-5 Ultra-capacitors in power conversion: analysis, modeling and design in theory and practice	T1-6 Inductive wireless power transmission

12:00 pm – 1:00 pm	Lunch on Own

Tutorials Group 2 • 1:00 pm – 5:00 pm

T2-1 Design and Modeling of Dual Fed Asynchronous Generators: Application to Wind Power Generation	T2-2 Multilevel Converters: Recent Development of Topologies and PWM Control Methods	T2-3 Artificial Intelligence Techniques in Power Electronics and Motor Drives	T2-4 Practical Design and Challenges of Traction Inverter for Electrified Vehicles	T2-5 Designing with Lithium-ion Batteries: An Engineering Perspective	T2-6 Design Considerations for Photovoltaic Systems Installed on Curved Surfaces

4:30 pm – 5:00 pm	New to ECCE/PELS/IAS Reception *(for those new to the organizations)*
5:00 pm – 7:00 pm	Opening Reception

MONDAY, SEPTEMBER 19, 2011

7:00 am – 7:00 pm	Registration Open
8:00 am – 10:00 am	Plenary Session
10:00 am – 10:20 am	AM Break

Breakout Sessions • 10:20 am – 12:00 pm

A19: Solar PV Technology	L1: Power Semi-conductors: Thermal Management	K1: Model-Based Sensorless Control	A11: Distributed Utility Voltage Regulation	F1: DC-DC Converters: Topologies I	J1: Induction Machines	H1: Multilevel Converters I	A20: MPPT Algorithms for Solar PV Systems	I1: Indirect AC-AC Converters I	C1: Transportation Applications: General	SP1: Wind Energy

12:00 pm – 1:20 pm	Lunch on Own

Breakout Sessions • 1:20 pm - 3:00 pm

A1: Wind Energy: Generators and Drives	L2: Power Semiconductors: Packaging	K2: Direct Torque Control	A12: Distributed Grid Controls	F2: DC-DC Converter Controls I	J2: Thermal Analysis and Losses I	H2: Voltage Source Inverters	A21: DC-DC Converters for Solar PV Systems I	I2: Indirect AC-AC Converters II	C2: Transportation Applications: Voltage Converters	SP2: Power supply on Chip

3:00 pm – 3:20 pm	PM Break

Breakout Sessions • 3:20 pm - 5:00 pm

A2: Wind Energy: Power Electronic Converters	L3: Magnetic Component Design & Applications	K3: Sensorless Control Issues	A13: Microgrid Controls	F3: DC-DC Converter Modeling	J3: Thermal Analysis and Losses II	H3: Inverter Control Techniques	A22: DC-DC Converters for Solar PV Systems II	I3: Modeling and Control of AC-AC Converters	C3: Transportation Applications: Infrastructures	SP3: PEV Infrastruture and Technologies

5:00 pm – 7:00 pm	Expo Reception/Expo Open

TUESDAY, SEPTEMBER 20, 2011

7:00 am – 7:00 pm	Registration Open
9:00 am – 6:00 pm	Exhibit Hall Open (including Demo Sessions. Industrial Seminars, and Student Demonstrations)
9:40 am – 10:00 am	AM Break
12:00 pm – 1:20 pm	Lunch
1:30 pm – 3:00 pm	Poster Session I
3:00 pm – 3:30 pm	PM Break
3:30 pm – 5:00 pm	Poster Session II

Rap Sessions • 8:00 pm – 9:00 pm

Rap Session 1 **Mission Impossible? A 100% renewable energy society,** organized by Dr. Dan M. Ionel, 90 minutes (tentative)	Rap Session 2 **Vehicle Electrification Technologies, today and tomorrow** (tentative), organized by Dr. Chris Mi, 60 minutes (tentative)	Rap Session 3 **Future Personal Vehicles, 2020 and beyond** (tentative)

WEDNESDAY, SEPTEMBER 21, 2011

7:00 am – 7:00 pm Registration Open

Breakout Sessions • 8:00 am - 9:40 am

A3: Wind Energy: Grid Connection and System Integration	L4: Magnetics	K4: Drive Issues I	A14: Transient Behavior in Grid Connected and Stand Alone Systems	F4: Resonant DC-DC Converters I	J4: Fractional Slot Machines	H4: Z-Source Inverters	B1: LED Drivers I	G1: Three Phase AC-DC Rectifiers	C4: Transporation Applications: Electric Drivetrain	SP4: Super-conducting Machines

8:00 am – 9:40 am S62 Special Session

9:40 am – 10:00 am AM Break

Breakout Sessions • 10:00 am - 11:40 am

A4: Wind Energy: Generators and Controls	L5: Power Semiconductors: High Temperature Devices	K8: PM Machine Controls	A23: Grid Interactive Solar PV Systems I	F5: DC-DC Converter Topologies II	J5: Faults and Diagnostics	H5: Modeling and Control of Single-Phase Inverters	B2: LED Drivers II	G2: High Performance Power Factor Correction	C5: Transportation Applications: Battery Modeling	SP5: Power Magnetics for Smart Grid

11:40 am – 1:30 pm Lunch on Own

Breakout Sessions • 1:30 pm - 3:10 pm

A5: Wind Energy: Control Techniques	L6: Power Semiconductors: Wide Bandgap Devices	K6: Sensorless Control I	A24: Grid Interactive Solar PV Systems II	F6: Resonant DC-DC Converters II	J6: Electrical Traction Machines	H6: Modeling and Control of Three-Phase Inverters	B3: Lighting Applications	G3: AC-DC Rectifier Controls I	C6: Transportation Applications: Batteries, Ultracapacitors, and Fuel Cells	F11: DC-DC Converters: Digital Control

3:10 pm – 3:30 pm PM Break

Breakout Sessions • 3:30 pm - 5:10 pm

A8: Energy Storage I	L7: Power Devices: Parallel and Series Operation	K7: Sensorless Control II	A17: Impact of Renewable Energy Systems on Utility Grid	F7: Resonant DC-DC Converters III	J7: Advanced Electrical Machine Design I	H7: High Power Inverters	B4: Medium Voltage Industrial Drives	G4: Single Phase AC-DC Rectifiers: Control and Analysis	C7: Rail, Aerospace, and Marine	F12: Integrated DC-DC Converters

7:00 pm – 9:30 pm ECCE Banquet

THURSDAY, SEPTEMBER 22, 2011

7:00 am – 3:00 pm Registration Open

Breakout Sessions • 8:00 am - 9:40 am

A9: Energy Storage II	J11: Electrical Machine Modeling	K5: Modulation Techniques	A18: DC-DC Converters for Renewable Energy Systems	F8: DC-DC Converter Controls II	J8: Advanced Electrical Machine Design II	H8: Multilevel Converters II	B5: Uninterruptible Power Supplies	G5: Single Phase AC-DC Rectifiers: Topologies	C8: Contactless Power Transfer	H11: Inverter Applications

9:40 am – 10:00 am AM Break

Breakout Sessions • 10:00 am - 11:40 am

A10: Energy Storage: Bateries	J12: Switched Reluctance Machines	K9: Drive Control	A25: Solar PV System Design and Architecture	F9: DC-DC Converter Controls III	J9: Permanent Magnet Machine Optimization	H9: Inverter PWM Techniques	B6: STATCOM Controls	G6: AC-DC Rectifier Controls II	F13: DC-DC Converters: Passive Components	H12: General Inverter Technologies

11:45 am – 1:40 pm Awards Luncheon

Breakout Sessions • 1:40 pm - 3:20 pm

A6: Ocean and Wave Energy Harvesting I	L8: Power Devices: Measurement and Characterisation	K10: Drive Issues II	A16: Grid Interactive Renewable Energy Systems	F10: DC-DC Converter Topologies III	J10: Special Application Machines	H10: Modular Multilevel Converters	B7: Active Filters Applications	G7: AC-DC Rectifier Design and Applications	H13: Soft-Switching Inverters

3:20 pm – 3:40 pm PM Break

Breakout Sessions • 3:40 pm - 5:00 pm

A7: Ocean and Wave Energy Harvesting II	L9: IGBT Modules	A15: DC Microgrids	F14: Multiphase DC-DC Converters	J13: Synchornous Reluctance Machines	H14: Boost Inverters	B8: Utility Applications