

8.30 – 9.15

Key-Note Paper for all Participants

**Electronics for enabling distributed resources in electrical system -
From the State of the Art to Future Trends**
Benoit Jacquemin, Director System Innovations, Schneider Electric, FRANCE
(see introduction page 31)

9.20 – 10.50

Session PQ 5 – Parallel running to Session PQ 7**Wind Energy - General Solutions**

Chairman: Frede Blaabjerg, Aalborg University, DENMARK

PQ 5-1

Windenergy and Offshore Windparks

P. Bauer, S.W.H. De Haan, M.R. Dubois, Delft University of Technology, THE NETHERLANDS

PQ 5-2

Wind Power Generation - State-of-the-Art and Future Trends

M. Deike, SEG, GERMANY

PQ 5-3

Generator Systems for Wind Turbines

H. Polinder, M. Dubois, J.G. Sloopweg, Delft University of Technology, THE NETHERLANDS

10.50 – 11.10

Coffee Break

11.10 – 12.40

Session PQ 6 - Part I – Parallel running to Session PQ 7**Wind Energy - Technical Solutions**

Chairman: Paul Bauer, Delft University of Technology, THE NETHERLANDS

PQ 6-1

**Latest Developments in Power Electronic Converters for Megawatt Class
Windturbines Employing Doubly Fed Generators**

R. Hudson, Xantrex, M. Seehuber, Loher, GERMANY

PQ 6-2

Modeling of Soft-Starters for Wind Turbine Applications

F. Iov, F. Blaabjerg, R. Teodorescu, A.D. Hansen, RISO National Laboratory, DENMARK

PQ 6-3

**Integrated Approach to Network Stability and Wind Energy Technology for
On-Shore and Offshore Applications**

J.H.R. Enslin, J. Knijp, KEMA, P. Bauer, Technical University Delft, THE NETHERLANDS

9.20 – 12.10

Session PQ 7 – Parallel running to Session PQ 5, PQ 6-Part I**Innovative Solutions for Power Factor Corrections**

Chairman: Yasuyuki Nishida, Nihon University, JAPAN

PQ 7-1

Historical Review of Passive PFC Rectifiers

Y. Nishida, Nihon University, JAPAN

PQ 7-2

**Application of the Third Harmonic Current Injection in Three-Phase Thyristor
Rectifiers to reduce the Input Current Harmonic Distortion**

P. Pejovic, Faculty of Electrical Engineering, YUGOSLAVIA, D. Shmilovitz, Tel-Aviv University, ISRAEL

PQ 7-3

A Passive PFC Technique in Dual 3-Phase Bridge Diode Rectifier

Y. Nishida, Nihon University, JAPAN

10.50 – 11.10

Coffee Break

PQ 7-4

**Reactor-Coupled 12-Pulse Rectifiers of High-Frequency Generators for
Cogeneration Systems**

K. Ōguchi, N. Hoshi, T. Kubota, Ibaraki University, JAPAN

PQ 7-5

**Experimental Analysis of a Novel Bidirectional Three-Phase Third Harmonic
Injected AC/DC Rectifier with Low Effects on the Mains**

U. Drogenik, G. Gong, J.W. Kolar, ETH Zürich, SWITZERLAND

12.40 – 1.10 Lunch, Restaurant CCN West 1st floor

1.40 – 2.40 Poster/Dialogue Sessions PQ D-2, CCN West 2nd floor

Chairman: Manfred Grötzbach, University of Federal Defense, GERMANY

PQ D2-1 Modeling and Simulation of Six-Phase Induction Generator Systems for Renewable Energy Applications

S. Kafo, N. Hoshi, K. Oguchi, Ibaraki University, JAPAN

PQ D2-2 An Adaptive Hysteresis Band Current Controller for Shunt Active Power Filter

E. Ozdemir, M. Kale, Kocaeli University, TURKEY

PQ D2-3 Prototyping and Experimental Testing of Unconventional High-Power-Quality Modulators for A.C. Resistive Heaters

D. Casini, L. Taponecco, University of Pisa, ITALY

PQ D2-4 Cable Selection and Shunt Compensation for Offshore Windparks

M. Pavlovsky, P. Bauer, Delft University of Technology, THE NETHERLANDS

PQ D2-5 Application Specific Power Converter solves System Issues

W. Zoske, American Superconductor Europe, GERMANY

PQ D2-6 Use of resistive Dipole in Measuring the Radiation Interference

D. Maga, R. Harsansky, Alexander DubUek University o Treniin, SLOVAKIA

PQ D2-7 Use o Resistive Dipole in Measuring the Radiation Interference

D. Maga, R. Harsansky, Alexander DubUek University o Treniin, SLOVAKIA

PQ D2-8 Possibilities of Electrical Equipment Radiation Interference Measurement

R. Harsansky, D. Maga, Alexander DubUek University o Treniin, SLOVAKIA

2.40 – 5.00 Session PQ 6 Part II – Parallel running to Session PQ 8

PQ 6-4 New Coordination Rules for Power Quality in Wind Parks

M. Berger, G. Brauner, Technical University Vienna, AUSTRIA

PQ 6-5 Control Strategy for Small Stand-Alone Wind Turbines

R. Teodorescu, F. Blaabjerg, F. Iov, Aalborg University, DENMARK

3.40 – 4.00 Coffee Break

PQ 6-6 Investigation of the Harmonic Transformation Properties of Double Fed Asynchronous Generators in Wind Energy Converters

D. Schulz, R. Hanitsch, Technical University Berlin, GERMANY, E. Tognon, ETA Renewable Energies, ITALY

PQ 6-7 Analysis of Reduced Order Models for Large Wound-Rotor Induction Generators in Wind Turbine Applications

F. Iov, F. Blaabjerg, Aalborg University, A.D. Hansen, RISO National Laboratory, DENMARK

2.40 – 4.10 Session PQ 8 – Parallel running to Session PQ 6-Part II

Photovoltaics Applications

Chairman: Johann HR Enslin, KEMA, THE NETHERLANDS

PQ 8-1 Control Behaviour of a Solar Power Inverter

K.H. Edelmoser, Technical University Vienna, AUSTRIA

PQ 8-2 Power Quality Behaviour of different Photovoltaic Inverter Topologies

P.J.M. Heskens, ECN PV Systems Technology, J.H.R. Enslin, KEMA, THE NETHERLANDS

PQ 8-3 Sun HMW THS High Power Air-Cooling for Focused Solar PhV Converters

M. Checchetti, microOptronics, ITALY
