

2011 IEEE Industrial and Commercial Power Systems Technical Conference

(I&CPS 2011)

**Newport Beach, California, USA
1-5 May 2011**



**IEEE Catalog Number: CFP11CPS-PRT
ISBN: 978-1-4244-9999-1**

TABLE OF CONTENTS

Load Estimation in Industrial Power Systems for Expansion Planning	1
<i>C.L. Su</i>	
Short-term Wind Power Prediction Based on Wavelet Transform-Support Vector Machine and Statistic Characteristics Analysis	12
<i>J. Shi, Y. Liu, Y. Yang, W.J. Lee</i>	
Design of Phase Identification System to Support Three-Phase Loading Balance of Distribution Feeders	19
<i>C.S. Chen, T.T. Ku, C.H. Lin</i>	
Design of Tie Line Tripping and Load Shedding Scheme for Distribution Microgrid Systems with Wind Power Generation	27
<i>C.S. Chen, C.T. Hsu, C.H. Lin, T.T. Ku, H.J. Chuang, Y.J. Ju</i>	
An AMI Based Measurement and Control System in Smart Distribution Grid	34
<i>H. Sui, W.J. Lee</i>	
Battery Float Charge Technique Using Parallel-Loaded Resonant Converter for Discontinuous Conduction Operation	39
<i>Y.C. Chuang, Y.L. Ke, H.S. Chuang, S.Y. Chang</i>	
Photovoltaic Energy Battery Chargers with a Series-Parallel Load Resonant Converter	47
<i>Y.L. Ke, Y.C. Chuang, Y.K. Wu, S.J. Cai</i>	
Design of Closed-loop Buck-boost Converter for LED Driver Circuit	55
<i>C.J. Huang, Y.C. Chuang, Y.L. Ke</i>	
A Novel Method of Measuring Inherent Power System Charging Current	61
<i>D. Paul, P. Sutherland, S. Panetta</i>	
Compatibility, Sizing and Design Considerations for Generators and UPSs in Tiers I, II, III & IV Topologies	70
<i>S. Siu, J. Lopopolo</i>	
IEC Grounding Terminology Related to Typical North American Installations	76
<i>P. Cardinal</i>	
Influence of Reactors on Input Harmonics of Variable Frequency Drives	81
<i>X. Liang, O. Iiochonwu, J. Lim</i>	
Power System Optimization for Industrial Facilities Using Power Studies	90
<i>X. Liang, J. Lim, O. Iiochonwu</i>	
Micro-Electromechanical-System (MEMS) Based Switches for Power Applications	97
<i>C. Keimel, G. Claydon, B. Li, J. Park, M. Valdes</i>	
User Specifications for Operational and Switching Procedures, a Working Group Report	105
<i>E. Hesla</i>	
Grounding System in Marinas: the Micro-System Approach	110
<i>G. Parise, L. Parise, M. Mitolo</i>	
Branch Circuit Design	116
<i>G. Parise, L. Parise</i>	
A Darwinian Evolution Of Electrical Power Systems Design For Preventing Seismic Risks In Sensitive Buildings	122
<i>G. Parise, M. De Angelis, A. Reggio</i>	
Microsystem Criteria in Branch Circuits Design	128
<i>G. Parise, L. Parise</i>	
NFPA 780 Standard for the Installation of Lightning Protection Systems 2011 Edition	134
<i>M. Sanders</i>	
Reliability Engineering Applied to Critical Operations Power Systems (COPS)	138
<i>M. Anthony, R. Arno, P. Saba, R. Schuerger, M. Beime</i>	
Unexpected Changes to the Protection of a 4160 V Motor	146
<i>R. Hoerauf</i>	
Improvements in Protection and Commissioning of Digital Transformer Relays at Medium Voltage Industrial Facilities	155
<i>C. Mozina</i>	
Traditional Time Current Curves (TCC) are Not Enough, Adding I²T Considerations	165
<i>T. Papallo, M. Valdes</i>	
Transformers Failure Due to Circuit Breaker Induced Switching Transients	177
<i>D. Shipp, T. Dionise, V. Lorch, B. MacFarlane</i>	

Protection and Control of Low Voltage Motors Used in Industrial Applications	187
<i>J. Vico, D. Allcock, C. Wester, P. Ostojic, S. Patel</i>	
An Experience with Transformer Connections and Relay Settings for Temporary Generator Step Up Unit	195
<i>P. Sutherland, C. Parra</i>	
Dimensioning CTS for Small Generator Differential Protection	205
<i>R. Hunt, S. Patel</i>	
Protection of Remotely Located Motors	213
<i>R. Hunt, R. Luna, S. Patel</i>	
Author Index	