Publications of Paolo Mattavelli

International Journals:

A.1 L. Malesani, **P. Mattavelli**, L. Rossetto, P. Tenti, W. Marin, A. Pollmann:
"Electronic Welder with High-Frequency Resonant Inverter",

A.2 G. Spiazzi, **P. Mattavelli**, L. Rossetto, L. Malesani,
"Application of Sliding Mode Control to Switch-Mode Power Supplies,"

A.3 **P. Mattavelli**, L.Rossetto, G.Spiazzi:
"Small-Signal Analysis of DC-DC Converters with Sliding Mode Control"

A.4 **P. Mattavelli**, L.Rossetto, G.Spiazzi, P.Tenti:
"General-Purpose Fuzzy Controller for DC-DC Converters"

A.5 Spiazzi, **P. Mattavelli**, L. Rossetto,
"Power factor preregulators with improved dynamic response",

A.6 **P. Mattavelli**, P. Tenti,
"Load and Line Identification in Multi-Phase Systems: a Compensation-Oriented Approach ,"

A.7 **P. Mattavelli**, G.C. Verghese, A.M. Stankovic:
"Phasor Dynamics of Thyristor-Controlled Series Capacitor Systems"

A.8 L. Malesani, **P. Mattavelli**, P. Tomasin,
"High-Performance Hysteresis Modulation Technique for Active Filters,"

A.9 L. Malesani, **P. Mattavelli**, P. Tomasin,
"Improved Constant-Frequency Hysteresis Current Control of VSI Inverters with Simple Feed-forward Bandwidth Prediction"

A.10 S. Buso, L. Malesani, **P. Mattavelli**, R. Veronese
"Design and Fully Digital Control of Parallel Active Filters for Thyristor Rectifiers to Comply with IEC 1000-3-2"

A.11 S. Buso, L. Malesani, **P. Mattavelli**
"Comparison of Current Control Techniques for Active filter Applications "

A.12 **P. Mattavelli**, P. Tenti,
"Design Aspects of Hybrid Compensation Systems"

A.13 S. Buso, **P. Mattavelli**, L. Rossetto, G. Spiazzi
"Simple Digital Control Improving Dynamic Performances of Power Factor Preregulators"

A.14 **P. Mattavelli**, G.C. Verghese, A.M. Stankovic:
"SSR Analysis with Dynamic Phasor Model of Thyristor-Controlled Series Capacitor "

A.15 L. Malesani, **P. Mattavelli**, S. Buso
"Robust Deadbeat current control for PWM Rectifiers and Active Filters"

A.16 S. Buso, S. Fasolo, L. Malesani, **P. Mattavelli**
"A Dead-Beat Adaptive Hysteresis Current Control "
"A Closed-loop selective harmonic compensation for Active Filters"

A.18 P. Mattavelli, G. Escobar, A. Stankovic
"Dissipative-based Adaptive and Robust control of UPS"

A.19 P. Mattavelli
"Synchronous frame harmonic control for high-performance AC power Supplies"

A.20 G. Escobar, A. Stankovic, P. Mattavelli
"Reactive Power and Unbalanced Compensation using STATCOM with Dissipativity-based Control"

A.21 S. Buso, S. Fasolo, P. Mattavelli
"Uninterruptible Power Supply using current and voltage predictive regulators"

A.22 P. Tenti, P. Mattavelli,
"Third-order load identification under nonsinusoidal conditions"
European Transactions on Electrical Power Engineering (ETEP), Vol. 12, No. 2, pp. 93-100, March/April 2002

A.23 G. Escobar, A. Stankovic, P. Mattavelli
"Dissipative-based adaptive and robust control of UPS in unbalanced operation"

A.24 G. Escobar, A. Stankovic, P. Mattavelli
"An Adaptive Controller in the stationary reference frame for D-Statcom in unbalanced operation"

A.25 P. Mattavelli, F. Marafao
"Repetitive-Based Control for Selective Harmonic Compensation in Active Power Filters"

A.26 P. Tenti, P. Mattavelli, "A Time-Domain Approach to Power Terms Definition under non-sinusoidal conditions",
Energia Elettrica, vol.81, pp.75-84. 2004 (special supplement).

A.27 P. Mattavelli, G. Spiazzi, P. Tenti
"Predictive Digital Control of Power Factor Preregulator with Input Voltage Estimation using Disturbance Observers"

(2005 Prize Paper Award for IEEE Transactions on Power Electronics)

A.28 P. Mattavelli
"An improved Deadbeat Control for UPS using Disturbance Observers"

A.29 J. Leyva-Ramos, G. Escobar, P.R. Martinez, P. Mattavelli,
"Analog Circuits to Implement Repetitive Controllers for Tracking and Disturbance Rejection of Periodic Signals"

A.30 P. Mattavelli, L. Tubiana, M. Zigliotto
"Torque-ripple reduction in PM drive using repetitive current-control"

A.31 W. Stefanutti, P. Mattavelli
"Fully Digital Hysteresis Modulation with Switching Time Prediction"

A.32 G. Escobar, P. R. Martinez, J. Leyva-Ramos, P. Mattavelli
"A Negative Feedback Repetitive Control Scheme for Harmonic Compensation"

A.33 W. Stefanutti, P. Mattavelli, G. Spiazzi, P. Tenti
"Digital Control of single-phase Power Factor Preregulators based on current and voltage sensing at switch terminals"

(2006 Prize Paper Award for IEEE Transactions on Power Electronics)

A.34 W. Stefanutti, P. Mattavelli, S. Saggini, M. Ghioni
"Autotuning of Digitally Controlled dc-dc Converters Based on Relay Feedback"

A.35 G. Escobar, A.A. Valdez, J. Leyva-Ramos, P. Mattavelli
“A repetitive-based controller for UPS Inverter to compensate unbalance and harmonic distortion”

A.36 P. Tenti, J.L. Willems, P. Mattavelli, E. Tedeschi
“Generalized Symmetrical Components for Periodic Non-Sinusoidal Three-Phase Signals”

A.37 P. Tenti, E. Tedeschi, P. Mattavelli
“Compensation Techniques based on Reactive Power Conservation”

A.38 G. Escobar, P. Mattavelli, A. Stankovic, A.A. Valdez, J. Leyva-Ramos
“An adaptive control for UPS to compensate unbalance and harmonic distortion using a combined capacitor/load current approach”

A.39 S. Saggini, D. Trevisan, P. Mattavelli, M. Ghioni
“Synchronous/Asynchronous Digital Voltage-Mode Control for dc-dc Converters”

A.40 S. Saggini, W. Stefanutti, E. Tedeschi, P. Mattavelli
“Digital Deadbeat Control Tuning for dc-dc converters using error correlation”

A.41 W. Stefanutti, S. Saggini, P. Mattavelli, M. Ghioni
“Power Line Communication in Digitally-Controlled dc-dc Converters Using Switching Frequency Modulation”,

A.42 L. Corradini P. Mattavelli, E. Tedeschi, D. Trevisan
“High-bandwidth Multi-Sampled Digitally Controlled DC-DC Converters using Ripple Compensation”

A.43 S. Saggini, P. Mattavelli, G. Garcea, M. Ghioni,
“A Mixed-signal Synchronous/Asynchronous control for high-frequency dc-dc boost converters”

A.44 S. Saggini, P. Mattavelli, M. Ghioni, M. Redaelli
“Mixed-signal voltage-mode control with an inherent analog derivative action”

A.45 L. Corradini, P. Mattavelli,
“Modeling of MultiSampled Pulse Width Modulators for Digitally Controlled DC-DC Converters”,

A.46 L. Corradini, P. Mattavelli, W. Stefanutti, S. Saggini,
“Simplified Model Reference-based Autotuning for Digitally Controlled SMPS”,

A.47 G. Spiazzi, P. Mattavelli, L. Rossetto,
“Effects of Parasitic Components in High-Frequency Resonant Drivers for Synchronous Rectification MOSFETs”

A.48 P. Mattavelli, F. Polo, F. Dal Lago, S. Saggini
“Analysis of Control-Delay Reduction for the Improvement of UPS Voltage-Loop Bandwidth”,

A.49 D. Trevisan, P. Mattavelli, P. Tenti
“Digital control of Single-Inductor Multiple-Output step-down dc-dc converters in CCM”

A.50 L. Corradini, W. Stefanutti, P. Mattavelli
“Analysis of multi-sampled current control for active filters”,
(Second Prize Paper Award in the IEEE Industry Application Annual Meeting)

A.51 L. Corradini, E. Orietti, P. Mattavelli, S. Saggini
“Digital Hysteretic Voltage-Mode Control for DC-DC Converters based on Asynchronous Sampling”

A.52 A. Costabeber, L. Corradini, P. Mattavelli, S. Saggini
“Parameter Independent Time-Optimal Digital Controller for Point-of-Load Converters”

A.53 E. Tedeschi, P. Tenti, P. Mattavelli, D. Trombetti
“Cooperative Control of Electronic Power Processors in Micro-Grids”


A.70 D. Desideri, A. Maschio, P. Mattavelli, “Human exposure during operation of GMAW-P welding machine”,

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A.71 Y. Yan, F. Lee, P. Mattavelli
“Unified Three-Terminal Switch Model for Current Mode Controls”,

A.72 Bishnoi, H.; Baisden, A. C.; P. Mattavelli; Boroyevich, D
“Analysis of EMI Terminal Modeling of Switched Power Converters”,

A.73 D. Dong, L. Fang, D. Boroyevich, P. Mattavelli,
“Leakage Current Reduction in Single-phase Bi-directional ac-dc Full-Bridge Inverter”,

A.74 F. Ongaro, S. Saggini, P. Mattavelli,
“Li-Ion Battery-Supercapacitor Hybrid Storage System for a Long Lifetime, Photovoltaic based Wireless Sensor Network”,

A.75 R. Wang, D. Boroyevich, P. Ning, Z. Wang, P., Mattavelli, K. Ngo, R. Rasashekara
“A High-Temperature SiC Three-Phase AC-DC Converter Design for >100C Ambient Temperature”,

A.76 W. Feng, F. C. Lee, P. Mattavelli,
“Optimal Trajectory Control of Burst Mode for LLC Resonant Converters”,

A.77 K.Y. Cheng, F. Yu, F.C. Lee, P. Mattavelli,
“Digital Enhanced V2-Type Constant On-Time Control Using Inductor Current Ramp Estimation for a Buck Converter With Low-ESR Capacitors”,

A.78 Zanchetta, P.; Degano, M.; Junyi Liu, P. Mattavelli,
"Iterative Learning Control With Variable Sampling Frequency for Current Control of Grid-Connected Converters in Aircraft Power Systems,"

A.79 Ruxi Wang; Blanchette, H.F.; Mingkai Mu; Boroyevich, D.; P. Mattavelli,
"Influence of High-Frequency Near-Field Coupling Between Magnetic Components on EMI Filter Design,"

A.80 Dong, D.; Cvetkovic, I.; Boroyevich, D.; Zhang, W.; Wang, R., P. Mattavelli
Grid-Interface Bidirectional Converter for Residential DC Distribution Systems—Part One: High-Density Two-Stage Topology

A.81 Dong, D.; Luo, F.; Zhang, X.; Boroyevich, D.; P. Mattavelli,

A.82 Cvetkovic, I.; Boroyevich, D.; P. Mattavelli; Lee, F. C.; Dong, D.,
"Unterminated Small-Signal Behavioral Model of DC-DC Converters,"

A.83 Yingyi Yan; Lee, F.C.; P. Mattavelli,
"Analysis and Design of Average Current Mode Control Using a Describing-Function-Based Equivalent Circuit Model,"

A.84 Lucia, O.; Cvetkovic, I.; Sarnago, H.; Boroyevich, D.; P. Mattavelli; Lee, F.C.,
"Design of Home Appliances for a DC-Based Nanogrid System: An Induction Range Study Case,"

A.85 Feng, W.; P. Mattavelli; Lee, F. C.,
"Pulsewidth Locked Loop (PWLL) for Automatic Resonant Frequency Tracking in LLC DC-DC Transformer (LLC -DCX)," IEEE Transactions on Power Electronics, vol.28, no.4, pp.1862-1869, April 2013.

A.86 Wei Yi Feng; Lee, F.C.; P. Mattavelli,
"Simplified Optimal Trajectory Control (SOTC) for LLC Resonant Converters,"


A.104 Lingxiao Xue; Zhiyu Shen; Dushan Boroyevich; Paolo Mattavelli; Daniel Diaz
"Dual Active Bridge-Based Battery Charger for Plug-in Hybrid Electric Vehicle With Charging Current Containing Low Frequency Ripple"

A.105 Shuilinx Tian; Fred C. Lee; Paolo Mattavelli; Yingyi Yan
"Small-Signal Analysis and Optimal Design of Constant Frequency V^2 Control"

A.106 Dong Dong; Bo Wen; Dushan Boroyevich; Paolo Mattavelli; Yaosuo Xue
"Analysis of Phase-Locked Loop Low-Frequency Stability in Three-Phase Grid-Connected Power Converters Considering Impedance Interactions"

A.107 Stefano Lissandrone; Luca Dalla Santa; Paolo Mattavelli; Bo Wen
"Experimental Validation for Impedance-Based Small-Signal Stability Analysis of Single-Phase Interconnected Power Systems with Grid-Feeding Inverters"

A.108 Bo Wen; Dushan Boroyevich; Rolando Burgos; Zhiyu Shen; Paolo Mattavelli
"Impedance-Based Analysis of Active Frequency Drift Islanding Detection for Grid-Tied Inverter System"

A.109 M. Guarnieri, P. Mattavelli, G. Petrone and G. Spagnuolo,

A.110 Z. Xin, R. Zhao, P. Mattavelli, P. C. Loh and F. Blaabjerg,
"Re-Investigation of Generalized Integrator Based Filters From a First-Order-System Perspective,"
IEEE Access, vol. 4, pp. 7131-7144, 2016. doi: 10.1109/ACCESS.2016.2616838

A.111 Ahmed Abdelhakim; P. Mattavelli; Giorgio Spiazzi
"Three-Phase Split-Source Inverter (SSI): Analysis and Modulation"

A.112 A. Petucco, S. Saggini, L. Corradini and P. Mattavelli,
"Analysis of Power Processing Architectures for Thermoelectric Energy Harvesting,"

A.113 Riccardo Sgarbossa; Stefano Lissandrone; P. Mattavelli; Roberto Turri; Alberto Cerretti
"Analysis of ΔP-AQ Area of Uncontrolled Islanding in Low-Voltage Grids With PV Generators"

A.114 Bo Wen; Dong Dong; Dushan Boroyevich; Rolando Burgos; P. Mattavelli; Zhiyu Shen
"Impedance-Based Analysis of Grid-Synchronization Stability for Three-Phase Paralleled Converters"

A.115 Bo Wen; Dushan Boroyevich; Rolando Burgos; P. Mattavelli; Zhiyu Shen
"Analysis of D-Q Small-Signal Impedance of Grid-Tied Inverters"

A.116 Yingyi Yan; Fred C. Lee; P. Mattavelli; Shuilinx Tian
"Small Signal Analysis of V2 Control Using Equivalent Circuit Model of Current Mode Controls"

A.117 A. Abdelhakim, P. Mattavelli, G. Spiazzi,
"Three-Phase Three-Level Flying Capacitors Split-Source Inverters: Analysis and Modulation"
IEEE Transactions on Industrial Electronics, vol. 64, no. 6, pp. 4571-4580, June 2017. DOI: 10.1109/TIE.2016.2645501

A.118 S. Ahmed, Z. Shen, P. Mattavelli, D. Boroyevich and K. J. Karimi,
"Small-Signal Model of Voltage Source Inverter (VSI) and Voltage Source Converter (VSC) Considering the DeadTime Effect and Space Vector Modulation Types"
IEEE Transactions on Power Electronics, vol. 32, no. 6, pp. 4145-4156, June 2017. DOI: 10.1109/TPEL.2016.2595568

A.119 T. Cauldronetto, L. Dalla Santa, P. Magnone, P. Mattavelli,
"Power Electronics Based Active Load for Unintentional Islanding Testbenches"

A.120 A. A. Abdelrazek, P. Mattavelli, V. Boscaino, G. Lullo,
"Decoupled Control Scheme of Grid-Connected Split-Source Inverters"
IEEE Transactions on Industrial Electronics, vol. 64, no. 8, pp. 6202-6211, 2017. DOI: 10.1109/TIE.2017.2677343


Peer reviewed International Conferences (mainly IEEE): 1


1 The journal publications, listed in the previous section, are usually extended versions of the corresponding conference papers reported hereafter.

Third International Workshop on Power Definition and Measurements under Nonsinusoidal Conditions, Milan (Italy), September 1995, pp.69-78.


B.16 P. Mattavelli, G.C. Verghese, A.M. Stankovic, "Phasor Dynamics of Thyristor-Controlled Series Capacitor Systems"
IEEE 1996 Summer Meeting, Denver, July 1996, 96 SM 532-2 PWR.

B.17 P. Mattavelli, P. Tenti,"An Integrated Design Approach of Hybrid Compensator Systems"

B.18 S. Buso, L. Rossetto, P. Mattavelli:
"Design Optimization of Soft-Switched Insulated DC/DC Converters With Active Voltage Clamp"

B.19 P. Mattavelli, P. Tenti, R. Blundell
"Hybrid Compensation Strategies in nonsinusoidal conditions"

B.20 P. Mattavelli, M. Perna
"Harmonic Interaction of AC/DC Systems: Effects of Control Action"

B.21 S. Buso, P. Mattavelli, L. Rossetto, G. Spiazzi
"Simple Digital Control Improving Dynamic Performances of Power Factor Preregulators"
IEEE Power Electronics Specialists Conf. (PESC), St. Louis (Missouri), June 1997.

B.22 P. Mattavelli, P. Tenti,
"Design Aspects of Integrated Compensation Systems"
Fourth International Workshop on Power Definition and Measurements under Nonsinusoidal Conditions, Milan (Italy), September 1997.

B.23 S. Buso, L. Malesani, P. Mattavelli, R. Veronese
"Design and Fully Digital Control of Parallel Active Filters for Thyristor Rectifiers"

B.24 G.Spiazz, P. Mattavelli, L.Rossetto
"Sliding-mode control of dc-dc converters"

B.25 P. Mattavelli, A.M. Stankovic, G.C. Verghese:
"SSR Analysis with Dynamic Phasor Model of Thyristor-Controlled Series Capacitor "

B.26 M. Ceroni, A. Mari, P. Mattavelli, L. Fellin, P. Bordignon, L. Radrizzani,;
"ATP Representation of cycloconverter drive for rolling mills: a useful tool for protection design purposes"

B.27 S. Buso, L. Malesani, P. Mattavelli
"Deadbeat control for Active Filters"

B.28 S. Buso, L. Malesani, P. Mattavelli
"Robust Deadbeat current control for Active Filters"

B.29 P. Mattavelli, L.Fellin, P.Bordignon, M.Perna
"Analysis of interharmonics in DC arc furnace installations"

B.30 L. Malesani, P. Mattavelli, S. Buso (invited paper)
"On the applications of active filters to generic loads"

B.31 P. Bordignon, M. Perna, P. Mattavelli, F. D’Amico
"Design Tools of DC EAF Power Supply Systems for Optimum Reduction of Flicker and Interharmonic Disturbances"

B.32 A. Stankovic, P. Mattavelli,
"Dynamical Phasors in Modeling and Control of Active Filters"

B.33 P. Mattavelli, R. Caldon, B. Han
"Dynamic Analysis of UPFC using Transient Simulation"

B.34 S. Buso, P. Mattavelli
"Interactions between Dead-Beat Controlled High-Quality Rectifiers and Input Filters"
European Power Electronics (EPE) Conference, Lausanne, September 1999.

B.35 P. Mattavelli, A. Stankovic
"Dissipative based Control for STATCOM"

B.36 P. Mattavelli, M. Perna
"Analysis of Flicker Generation in DC Arc Furnaces"

B.37 S. Buso, S. Fasolo, L. Maiesani, P. Mattavelli
"A Dead-Beat Adaptive Hysteresis Current Control"

B.38 A. Stankovic, P. Mattavelli,
"Dissipative based Control for Active Filters"

B.39 P. Mattavelli, S. Fasolo
"A Closed-loop control for Active Filters"

B.40 A. Stankovic, G. C. Verghe,se, P. Mattavelli, V. Caliskan (invited paper)
"Modeling and Analysis of FACTS with Dynamic Phasors"

B.41 G. Escobar, A. Stankovic, P. Mattavelli, F. Gordillo, J. Aracil
"From adaptive PBC to PI nested control for STATCOM"

B.42 G. Spiazzi, P. Mattavelli
"A new family of ZVS variable frequency dc/dc converters"
IEEE Power Electronics Conference (PESC), June 2000, Galway (Ireland).

B.43 A. Stankovic, G. Escobar, P. Mattavelli
"Passivity-based Controller for Harmonic Compensation in Distribution Lines with Nonlinear Loads"
IEEE Power Electronics Conference (PESC), June 2000, Galway (Ireland).

B.44 P. Mattavelli, P. Tenti (invited paper)
"High-performance Active Filters using Selective Harmonic Control"

B.45 P. Mattavelli (invited paper)
"Design Aspects of harmonic filters for high-power ac/dc converters"

B.46 B. Han, P. Mattavelli
"Performance Analysis of Dynamic Voltage Compensator using EMTP simulation"

B.47 G. Escobar, A. Stankovic, P. Mattavelli
"Reactive Power and Unbalanced Compensation using STATCOM with Dissipativity-based Control"

B.48 P. Mattavelli, S. Fasolo
"Implementation of Synchronous frame harmonic control for high-performance AC power Supplies"
B.49 P. Tenti, P. Mattavelli
"Third-order load identification under nonsinusoidal conditions"
Fifth International Workshop on Power Definition and Measurements under Nonsinusoidal Conditions, Milan (Italy), 16-18 October 2000, pp 101-110.

B.50 G. Escobar, A. Stankovic, P. Mattavelli
"Reactive Power, Unbalance and Harmonics Compensation using D-STATCOM with Dissipativity-based Controller"

B.51 S. Buso, S. Fasolo, P. Mattavelli
"Uninterruptible Power Supply using current and voltage predictive regulators"

B.52 G. Escobar, A. Stankovic, P. Mattavelli
"Dissipative-based adaptive and robust control of UPS in unbalanced operation"

B.53 G. Escobar, A. Stankovic, P. Mattavelli
"An Adaptive Controller in the stationary reference frame for D-Statcom in unbalanced operation"
9th European Conference on Power Electronics and Applications (EPE 2001), Graz, 27-29 August.

B.54 P. Mattavelli
"Robust Deadbeat Control for UPS using State and Disturbance Observers"
9th European Conference on Power Electronics and Applications (EPE 2001), Graz, 27-29 August.

B.55 G. Escobar, A. Stankovic, P. Mattavelli, Ortega R.
"A comparative study of three nonlinear controllers for TCSC"

B.56 J.M. Carrasco, E. Galvan, M. Perales, A. Stankovic, P. Mattavelli
"Direct Current Control: a novel control strategy for harmonic and reactive compensation with active filters under unbalanced operation"

“On the nonlinear control of TCSC”

B.58 P. Mattavelli
“A Modified Dead-beat Control for UPS using Disturbance Observer”

B.59 P. Mattavelli
“Control of High-performance AC Power Supplies using Adaptive Digital Filters”

B.60 P. Mattavelli, F. Marafao
“Selective Active Filters using Repetitive Control Techniques”

B.61 G. Escobar, A.M. Stankovic, V. Cardenas, P. Mattavelli
“A controller to compensate voltage sags, unbalance and harmonic distortion using a series active filter”

B.62 G. Escobar, A.M. Stankovic, V. Cardenas, P. Mattavelli
“A controller based on resonant filters for a series active filter used to compensate current harmonics and voltage unbalance”

B.63 G. Escobar, A.M. Stankovic, V. Cardenas, P. Mattavelli
“An Adaptive Controller for a Series Active Filter to Compensate Voltage Sags, Unbalance and Harmonic Distortion”
IEEE International Power Electronics Congress (CIEP02), Guadalajara, Mexico, October 20-24, 2002.

B.64 B. Han, P. Mattavelli
“Operation Analysis of Novel UPFC without Series Injection Transformers”

B.65 P. Mattavelli, G. Spiazzi, P. Tenti
“Predictive Digital Control of Power Factor Preregulator using Disturbance Observer for Input Voltage Estimation”

B.66 P. Mattavelli, G. Spiazzi, P. Tenti
“Digital Control of Power Factor Preregulator with Input Voltage Estimation”
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B.67 F. Marafao, S. Buso, P. Mattavelli
“Repetitive-based Control for selective harmonic compensation using Discrete Cosine Transform”
IEEE 7th Brasilian Power Electronics Conference (COBEP), September 2003, Fortaleza, Brasil.

B.68 P. Tenti, P. Mattavelli
“A Time-Domain Approach to Power Terms Definition under non-sinusoidal conditions”
Six International Workshop on Power Definition and Measurements under Nonsinusoidal Conditions, Milan (Italy), October 2003

B.69 P. Mattavelli, G. Escobar, A. Stankovic
“An adaptive control for UPS to compensate unbalance and harmonic distortion using a combined capacitor/load current approach”
IEEE International Conference on Industrial Electronics, Control and Instrumentation, IECON’03, Roanoke, Virginia, USA, November, 2003.

B.70 P. Mattavelli, W. Stefanutti
“Fully Digital Hysteresis Modulation with Switching Time Prediction”

B.71 P. Mattavelli
“Digital control of dc-dc Boost converters with inductor current estimation”

B.72 P. Mattavelli, W. Stefanutti, G. Spiazzi, P. Tenti
“Digital Control of single-phase Power Factor Preregulator suitable for Smart-Power Integration”

B.73 G. Spiazzi, S. Buso, P. Mattavelli
“Analysis of the Active-Clamped Soft-Switched Forward Converter without Output Filter”

B.74 P. Mattavelli, F. Polo, S. Sattin, F. Dal Lago
“Dynamic Improvement in UPS by Means of Control Delay Minimization”

B.75 Leyva-Ramos, J.; Escobar, G.; Martinez, P.R.; Mattavelli, P.
“Analog circuits to implement a repetitive controller for harmonic compensation”

B.76 S. Saggini, G. Garcea, M. Ghioni, P. Mattavelli
“Analysis of High-Performance Synchronous/Asynchronous digital control for dc-dc boost converters”
IEEE Applied Power Electronics Conference (APEC) ’05, Austin (TX), 6-10 March 2005.

B.77 F. Polo, P. Mattavelli
“Dynamic improvement in Active Power Filters based on the output stage of Uninterruptible Power Supply”
International PCIM Conference 2005, June 7 – 9, 2005 in Nürnberg, Germany.

B.78 G. Escobar, A.A. Valdez, J. Leyva-Ramos, P. Mattavelli
“A Repetitive-based controller for UPS using a combined capacitor/load current sensing”

B.79 W. Stefanutti, P. Mattavelli, S. Saggini, M. Ghioni
“Autotuning of Digitally Controlled Buck Converters Based on Relay Feedback”

B.80 D. Trevisan, P. Mattavelli, P. Tenti
“Digital Control of Single-Inductor Dual-Output dc-dc Converters in Continuous-Conduction Mode”

B.81 W. Stefanutti, P. Mattavelli, S. Saggini, M. Ghioni
“A PID Autotuning Method for Digitally Controlled dc-dc Boost Converters”

B.82 G. Garcea, P. Mattavelli, K. Lee, F.C. Lee
“A Mixed-Signal Control for VRM applications”

B.83 P. Mattavelli, L. Tubiana, M. Zigliotto
“Simple Control Autotuning for PMSM Drives based on Feedback Relay”

B.84 D. Trevisan, W. Stefanutti, P. Mattavelli, P. Tenti
“FPGA control of SIMO dc-dc converters using load current estimation”
IEEE International Conference on Industrial Electronics, Control and Instrumentation, IECON’05, Roanoke, Virginia, USA, November, 2005.

BEST PAPER PRIZE for the Special Session Low-Power Electronics and System on the chip for Industry

B.85 S. Saggini, W. Stefanutti, D. Trevisan, P. Mattavelli, G. Garcea,
“Prediction of Limit-Cycles Oscillations in Digitally Controlled DC-DC Converters using Statistical Approach”
IEEE International Conference on Industrial Electronics, Control and Instrumentation, IECON’05, Roanoke, Virginia, USA, November, 2005.

B.86 P. Tenti, E. Tedeschi, P. Mattavelli
“Optimization of Hybrid Filters for Distributed Harmonic and Reactive Compensation”

B.87 E. Della Monica, W. Stefanutti, P. Mattavelli, E. Tedeschi, P. Tenti, S. Saggini
“Predictive Digital Control for Voltage Regulation Module Applications”

(selected for the PLENARY SESSION - only 2 papers selected among all conference papers)

B.88 W. Stefanutti, P. Mattavelli, S. Saggini, G. Garcea,
“Energy-based Approach for predicting Limit Cycle Oscillations in digitally-controlled dc-dc converters”

B.89 D. Trevisan, P. Mattavelli, G. Garcea, M. Ghioni, S. Saggini
“High-Performance Synchronous/Asynchronous Digital Voltage-Mode Control for dc-dc Converters”

B.90 W. Stefanutti, P. Mattavelli, G. Garcea, M. Ghioni, S. Saggini
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