

CURRICULUM VITAE

LUCA CORRADINI

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EDUCATION

- 2008: Ph.D. – Industrial Electronics, University of Padova, Italy
- 2004: M.S. – Electronic Engineering, University of Padova, Italy

POSITION

- *March 2017–present*: Associate Professor, Department of Information Engineering, University of Padova, Italy.
- *March 2011–February 2017*: Assistant Professor, Department of Information Engineering, University of Padova, Italy.
- *July 2008–February 2011*: Professional Research Associate, Colorado Power Electronics Center, University of Colorado at Boulder, USA.
- *June–December 2004*: Research Collaborator, Department of Information Engineering, University of Padova, Italy.

AWARDS

- IEEE IAS Industrial Power Converters Committee 2008 Second Prize Paper Award for: L. Corradini, W. Stefanutti, P. Mattavelli, “Analysis of Multi-sampled current control for active filters,” in *Proc. 42nd IEEE Industry Applications Society Annual Meeting*, New Orleans, LA, 2007, pp. 1608-1615.

VITA

Luca Corradini received the M.S. degree (Laurea) in Electronic Engineering in 2004 from the University of Padova, Italy, with a thesis addressing reliability aspects of Gallium Nitride (GaN) high-electron mobility transistors intended for RF applications. In December 2004 Dr. Corradini obtained a Ph.D. scholarship sponsored by Infineon Technologies AG on the topic “Analysis and Implementation of Digital Control Architectures for DC-DC Switching Converters”. Enrolled in 2005 in the Ph.D School of Information Engineering of the University of Padova, he received the Ph.D. in Industrial Electronics in March 2008. His doctoral thesis focused on the study and development of digital control techniques for low-voltage, high-current DC-DC switching

converters employed in Point-of-Load applications, addressing *i*) the investigation and experimental verification of non-conventional, high-sampling frequency digital controllers for improved converter dynamic performances, and *ii*) the development and experimental validation of a digital auto-tuning technique specifically designed for accurate and repeatable tuning results. As part of his Ph.D. education, in 2006 Dr. Corradini was hosted as visiting research scholar at the Colorado Power Electronics Center (CoPEC), University of Colorado at Boulder (USA), an industry-sponsored university research center for power electronics, under the supervision of Prof. Dragan Maksimović and Prof. Regan Zane.

From July 2008 to February 2011 dr. Corradini worked at CoPEC as a professional Research Associate. His scientific activity further pursued the field of digital power management and control approaches for DC/DC converters, including the development of robust nonlinear controllers for fast transient response in point-of-load applications, digital auto-tuning techniques for automatic calibration of controller parameters, sigma-delta modulators for low-complexity, high resolution control, THD reduction approaches for filterless Class-D audio amplifiers based on digital predistortion, and integrated digital power management for efficiency improvement of RF power amplifiers employed in wireless handsets. Analysis, modeling and experimental verification of switched-mode power converters are integrating part of his background expertise. At CoPEC, Dr. Corradini was also actively involved in preparing research project proposals for potential future industrial partnerships, in the interaction with CoPEC industrial sponsors and in the coordination of M.S. and Ph.D. students.

From March 2011 to February 2017 dr. Corradini was Assistant Professor at the Department of Information Engineering of the University of Padova, Italy, and since March 2017 he has been Associate Professor in the same University. Along with continuing research on digital control, his research interests also encompass advanced power management solutions for small-scale energy harvesting systems.

Luca Corradini was co-organizer of the twelfth edition of the IEEE Workshop on Control and Modeling for Power Electronics (COMPEL 2010), hosted at the University of Colorado at Boulder on June 28-30 2010, and *General Chair* of the nineteenth edition of the same workshop (COMPEL 2018) held in Padova, Italy, on June 25-28 2018.

Dr. Corradini is co-author of more than eighty articles published in journals and conference proceedings of international scope, and of a book on digital control of high-frequency switched-mode power converters published by Wiley-IEEE Press. He regularly serves as a reviewer for several IEEE journals and conferences in the power electronics area. Since August 2015 he has been Associate Editor of the IEEE Transactions on Power Electronics.

TEACHING

- *Power Electronics*, M.S. degree in Electronic Engineering
Role: instructor
Period: Spring 2017-present
- *Power Electronics 2*, M.S. degree in Electronic Engineering
Role: instructor
Period: Spring 2012–Spring 2016
- *PSPICE Laboratory* for the course *Fundamentals of Electronics*, B.S. degree in Information Engineering
Role: instructor
Period: May–June 2007
- *Electronic CAD OrCAD-PSpice*, post-graduate professional certification master
Role: instructor
Period: January–February 2007

STUDENTS SUPERVISION

- Supervision of Ph.D. students
 - Giovanni Bonanno, 2018-present
Topic: current-mode control techniques for multilevel dc-dc converters
 - Eslam Abdelhamid, 2015-2018
Topic: Adaptive efficiency optimization of resonant and quasi-resonant topologies for automotive applications
 - Francesco Bez, 2015-2018
Topic: Control and efficiency optimization of bidirectional converters for automotive battery charging applications
 - Luca Scandola, 2013-2015
Thesis title: “Implementation and modeling of online efficiency optimization techniques for high-frequency dc-dc converters in automotive applications”

- Supervision of M.S. students
 - Stefano Cabizza, 2018-present
Topic: Dead-time optimization of synchronous Buck converters
 - Mahnaz Behnamazad, 2018-present
Topic: Digital identification techniques for dc-dc converters
 - Andrea Tollot, 2018
Topic: Digital predictive current control for three-level flying capacitor Buck converters
 - Nicolò Zilio, 2018
Topic: Digital control techniques for a Quasi-Resonant Synchronous Buck Converters
 - Giovanni Bonanno, 2017
Topic: Modeling and Control of the Synchronous Series Capacitor Tapped Inductor Converter
 - Davide Bottamedi, 2017
Topic: Modeling of a digital V2 controller for dc-dc converters
 - Andrea Borsati, 2016
Topic: Study and implementation of energy harvesting solutions for magnetic wireless switches
 - Bernard Blaise Tchodjie Tchamabe, 2013
Topic: Implementation of a dc-dc switched-capacitor converter for low-power photovoltaic energy harvesting
 - Marco Piovesan, 2013
Topic: Study and implementation of a cold-start oscillator for ultra low-voltage energy harvesting from thermoelectric sources
 - Daniele Viel, 2013
Topic: Analysis and control of a non-inverting buck-boost converter for high-brightness LED driving applications

- Supervision of B.S. students
 - Alessandro Blascovich, 2012 (as co-supervisor)
Topic: Modeling of renewable energy generation for energy harvesting devices

INVITED TALKS

- “Advanced Ideas in Digital Control”, ESA Workshop on Digital Control for Power Systems, ESA-ESTEC, Noordwijk, The Netherlands, June 22, 2017
- “Small-Signal Modeling and Controller Design of Digitally-Controlled Switched-Mode Power Converters”, Universitat Rovira i Virgili, Tarragona, Spain, October 6, 2016
- “Research Lines in Digital Control of High-Frequency Power Converters”, Infineon Technologies Design Center, Villach, Austria, May 11, 2016
- “Digital Control for Inductor Based DC-DC Converters”, 41st European Solid-State Circuits Conference (ESSCIRC) – Workshop on Advanced DC-DC Converter Techniques, Graz, Austria, September 18, 2015
- “Research Activities in Power Electronics at the University of Padova”, University of Toronto, Canada, August 17, 2015

IEEE MEMBERSHIPS AND SERVICES

- IEEE Senior Member (S’06, M’09, SM’14)
- IEEE Power Electronics Society Member (2006–present)
- Associate Editor of the IEEE Transactions on Power Electronics (August 2015–present)
- Conferences Organization:
 - IEEE Workshop on Control and Modeling for Power Electronics (COMPEL):
 - * 2018: General Chair
 - * 2016: Technical Committee Vice-Chair
 - * 2015: Technical Committee Member
 - * 2014: Technical Program Chair for the “Control of Power Converters” session
 - * 2010: Member of the organizing committee
 - IEEE Energy Conversion Conference and Exposition (ECCE):
 - * 2013: member of the *Computer/Telecommunication Applications and Power Converter Topologies Committee* and Track Chair for the *Control of Power Electronics Converters* technical session.
 - * 2012: member of the *Power Converters Topologies Committee*.
 - * 2011: member of the *DC-DC Converters Committee*.
 - IEEE Conference of the Industrial Electronics Society (IECON):
 - * 2016: Track Co-chair for the “High Efficiency DC-DC Power Converters” session
 - International Workshop on Power Supply on Chip (PwrSoC)
 - * 2016: Track Co-chair for the “Topologies & Control II” session
- Journals / Transactions Reviewer:
 - IEEE Transactions on Power Electronics
 - IEEE Journal on Emerging and Selected Topics in Power Electronics
 - IEEE Transactions on Industry Applications
 - IEEE Transactions on Industrial Electronics

- Conferences Reviewer:
 - IEEE Applied Power Electronics Conference and Exposition (APEC)
 - IEEE Energy Conversion Conference and Exposition (ECCE)
 - IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)

PUBLICATION RECORD

BOOKS

- [1] L. Corradini, D. Maksimović, P. Mattavelli, and R. Zane, *Digital Control of High-Frequency Switched-Mode Power Converters*, First ed. Wiley-IEEE Press, Jul. 2015, ISBN: 978-1-118-93510-1.

BOOK CHAPTERS

- [2] L. Corradini, “Chapter 4 – Digital PWM Control of High-Frequency dc-dc Switched-Mode Power Converters,” in *Control Circuits in Power Electronics: Practical Issues and Implementation*, First ed., IET, 2016, pp. 79–101, ISBN: 978-1-84919-822-6.

JOURNAL PAPERS – ACCEPTED FOR PUBLICATION / IN PRESS

- [3] E. Abdelhamid, G. Bonanno, L. Corradini, P. Mattavelli, and M. Agostinelli, “Stability Properties of the 3-Level Flying Capacitor Buck Converter Under Peak or Valley Current Programmed Control,” *IEEE Trans. Power Electron.*, 2018.
- [4] F. Bez, G. Bonanno, L. Corradini, and C. Garbossa, “Control Technique for Reliable Operation of the Synchronous Series Capacitor Tapped Inductor Buck Converter,” *IEEE Trans. Power Electron.*, 2018.
- [5] G. Ripamonti, S. Saggini, L. Corradini, R. Rizzolatti, F. Faccio, S. Michelis, A. Koukab, and M. Kayal, “A Dual-Edge Pulse Width Modulator for Fast Dynamic Response DC-DC Converters,” *IEEE Trans. Power Electron.*, 2018.

JOURNAL PAPERS – PUBLISHED

- [6] F. Bez, W. Han, and L. Corradini, “A Low-Complexity Trajectory Controller for Reduced Conduction Losses in Series-Resonant Dual Half-Bridge Converters,” *IEEE Trans. Power Electron.*, vol. 33, no. 11, pp. 9963–9974, Nov. 2018.
- [7] W. W. Chen, R. Zane, and L. Corradini, “Isolated Bidirectional Grid-Tied Three-Phase AC-DC Power Conversion using Series Resonant Converter Modules and a Three-Phase Unfolder,” *IEEE Trans. Power Electron.*, vol. 32, no. 12, pp. 9001–9012, Dec. 2017.
- [8] A. Petucco, S. Saggini, L. Corradini, and P. Mattavelli, “Analysis of Power Processing Architectures for Thermoelectric Energy Harvesting,” *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 4, no. 3, pp. 1036–1049, Sep. 2016.
- [9] S. Saggini, F. Ongaro, L. Corradini, and A. Affanni, “Low-Power Energy Harvesting Solutions for Wiegand Transducers,” *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 3, no. 3, pp. 766–779, Sep. 2015.
- [10] L. Scandola, L. Corradini, and G. Spiazzi, “Small-signal Modeling of Uniformly Sampled Phase-Shift Modulators,” *IEEE Trans. Power Electron.*, vol. 30, no. 10, pp. 5870–5880, Oct. 2015.
- [11] L. Corradini, D. Seltzer, D. Bloomquist, R. Zane, D. Maksimović, and B. Jacobson, “Zero Voltage Switching Technique for Bidirectional DC/DC Converters,” *IEEE Trans. Power Electron.*, vol. 29, no. 4, pp. 1585–1594, Apr. 2014.
- [12] L. Corradini and G. Spiazzi, “A High-Frequency Digitally Controlled LED Driver for Automotive Applications with Fast Dimming Capabilities,” *IEEE Trans. Power Electron.*, vol. 29, no. 12, pp. 6648–6659, Dec. 2014.

- [13] N. Michelusi, L. Badia, R. Carli, L. Corradini, and M. Zorzi, "Energy Management Policies for Harvesting-based Wireless Sensor Devices with Battery Degradation," *IEEE Trans. Commun.*, vol. 61, no. 12, pp. 4934–4947, Dec. 2013.
- [14] M. Rodriguez, G. Stahl, L. Corradini, and D. Maksimović, "Smart DC Power Management System Based on Software-Configurable Power Modules," *IEEE Trans. Power Electron.*, vol. 28, no. 4, pp. 1571–1586, Apr. 2013.
- [15] L. Corradini, D. Seltzer, D. Bloomquist, R. Zane, D. Maksimović, and B. Jacobson, "Minimum Current Operation of Bidirectional Dual-Bridge Series Resonant DC/DC Converters," *IEEE Trans. Power Electron.*, vol. 27, no. 7, pp. 3266–3276, Jul. 2012.
- [16] L. Corradini, A. Bjeletić, R. Zane, and D. Maksimović, "Fully digital hysteretic modulator for dc-dc switching converters," *IEEE Trans. Power Electron.*, vol. 26, no. 10, pp. 2969–2979, Oct. 2011.
- [17] S. Moon, L. Corradini, and D. Maksimović, "Autotuning of Digitally Controlled Boost Power Factor Correction Rectifiers," *IEEE Trans. Power Electron.*, vol. 26, no. 10, pp. 3006–3018, Oct. 2011.
- [18] L. Corradini, A. Babazadeh, A. Bjeletić, and D. Maksimović, "Current-limited time-optimal response in digitally controlled dc-dc converters," *IEEE Trans. Power Electron.*, vol. 25, no. 11, pp. 2869–2880, Nov. 2010.
- [19] L. Corradini, P. Mattavelli, M. Corradin, and F. Polo, "Analysis of Parallel Operation of Uninterruptible Power Supplies Loaded through Long Wiring Cables," *IEEE Trans. Power Electron.*, vol. 25, no. 4, pp. 1046–1054, Apr. 2010.
- [20] D. Maksimović, R. Zane, and L. Corradini, "Advances in digital control for high-frequency switched-mode power converters," *Power Electronics monthly*, vol. 44, no. 12, pp. 2–19, Dec. 2010, serial no. 217, sponsored by Xi'an Power Electronics Research Institute, China.
- [21] R. Paul, L. Sankey, L. Corradini, Z. Popovic, and D. Maksimović, "Power Management of Wideband Code Division Multiple Access RF Power Amplifiers with Antenna Mismatch," *IEEE Trans. Power Electron.*, vol. 25, no. 4, pp. 981–991, Apr. 2010.
- [22] L. Corradini, A. Costabeber, P. Mattavelli, and S. Saggini, "Parameter-Independent Time-Optimal Digital Control for Point-of-Load Converters," *IEEE Trans. Power Electron.*, vol. 24, no. 10, pp. 2235–2248, Oct. 2009.
- [23] L. Corradini, P. Mattavelli, and S. Saggini, "Elimination of Sampling-Induced Dead Bands in Multiple-Sampled Pulse-Width Modulators for DC-DC Converters," *IEEE Trans. Power Electron.*, vol. 24, no. 11, pp. 2661–2665, Nov. 2009.
- [24] L. Corradini, E. Orietti, P. Mattavelli, and S. Saggini, "Digital Hysteretic Voltage-Mode Control for DC-DC Converters Based on Asynchronous Sampling," *IEEE Trans. Power Electron.*, vol. 24, no. 1, pp. 201–211, Jan. 2009.
- [25] J. Morroni, L. Corradini, R. Zane, and D. Maksimović, "Adaptive Tuning of Switched-Mode Power Supplies Operating in Discontinuous and Continuous Conduction Modes," *IEEE Trans. Power Electron.*, vol. 24, no. 11, pp. 2603–2611, Nov. 2009.
- [26] L. Corradini and P. Mattavelli, "Modeling of Multisampled Pulse Width Modulators for Digitally Controlled DC-DC Converters," *IEEE Trans. Power Electron.*, vol. 23, no. 4, pp. 1839–1847, Jul. 2008.
- [27] L. Corradini, P. Mattavelli, W. Stefanutti, and S. Saggini, "Simplified Model Reference-based Autotuning for Digitally Controlled SMPS," *IEEE Trans. Power Electron.*, vol. 23, no. 4, pp. 1956–1963, Jul. 2008.

- [28] L. Corradini, P. Mattavelli, E. Tedeschi, and D. Trevisan, “High-Bandwidth Multisampled Digitally Controlled DC-DC Converters Using Ripple Compensation,” *IEEE Trans. Ind. Electron.*, vol. 55, no. 4, pp. 1501–1508, Apr. 2008.
- [29] L. Corradini, W. Stefanutti, and P. Mattavelli, “Analysis of Multisampled Current Control for Active Filters,” *IEEE Trans. Ind. Appl.*, vol. 44, no. 6, pp. 1785–1794, Nov./Dec. 2008.

CONFERENCE PROCEEDINGS – ACCEPTED FOR PUBLICATION / IN PRESS

- [30] W. Han and L. Corradini, “Analytical Small-Signal Transfer Functions for Phase Shift Modulated Dual Active Bridge Converters Using Phasor Transformation,” in *Proc. 10th IEEE Energy Conversion Conference and Exposition (ECCE)*, 2018.

CONFERENCE PROCEEDINGS – PUBLISHED

- [31] E. Abdelhamid, G. Bonanno, L. Corradini, P. Mattavelli, and M. Agostinelli, “Stability Properties of the 3-Level Flying Capacitor Buck Converter Under Peak or Valley Current-Programmed-Control,” in *Proc. 19th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, 2018, pp. 1–8.
- [32] F. Bez, G. Bonanno, L. Corradini, and C. Garbossa, “Control Technique for Reliable Operation of the Synchronous Series Capacitor Tapped Inductor Converter,” in *Proc. 33rd IEEE Applied Power Electronics Conference and Exposition (APEC)*, Mar. 2018, pp. 113–120.
- [33] F. Bez and L. Corradini, “Synchronous series capacitor tapped-inductor (SCTI) converter with auxiliary snubber winding,” in *Proc. 19th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, 2018, pp. 1–7.
- [34] W. Han and L. Corradini, “Control Technique for Wide-Range ZVS of Bidirectional Dual-bridge Series Resonant dc-dc Converters,” in *Proc. 19th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, 2018, pp. 1–8.
- [35] F. Lopez, F. Azcondo, L. Corradini, P. Lamo, and A. Pigazo, “Third harmonic compensation of a Bridgeless Current Sensorless PFC,” in *Proc. 33rd IEEE Applied Power Electronics Conference and Exposition (APEC)*, Mar. 2018, pp. 2084–2090.
- [36] N. Zilio and L. Corradini, “Simple Digital Control Technique for a High-Frequency Quasi-Resonant Synchronous Buck DC-DC Converter,” in *Proc. 19th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, 2018, pp. 1–8.
- [37] E. Abdelhamid, L. Corradini, P. Mattavelli, and M. Agostinelli, “Digital controller for optimized efficiency and extended operating range in high-frequency quasi-resonant dc-dc buck converters,” in *Proc. 18th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jun. 2017, pp. 1–8.
- [38] L. Corradini, “Advanced Ideas in Digital Control,” in *Proc. European Space Agency Workshop on Digital Control for Power Systems*, invited talk, Jun. 2017.
- [39] L. Corradini, “Digital Techniques for Online Efficiency Optimization of DC DC Converters,” in *Proc. ECPE Workshop on Power Supplies in Low Power Applications*, invited talk, Sep. 2017.
- [40] W. Han and L. Corradini, “Accurate ZVS Boundary Analysis for Bidirectional Dual-Bridge Series Resonant dc-dc Converters,” in *Proc. 18th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jun. 2017, pp. 1–8.

- [41] F. Bez, L. Scandola, L. Corradini, S. Saggini, and G. Spiazzi, “Two-Dimensional Online Efficiency Optimization Technique for Dual Active Bridge Converters,” in *Proc. 17th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jun. 2016, pp. 1–8.
- [42] W. Han, R. Ma, Q. Liu, and L. Corradini, “A Conduction Losses Optimization Strategy for DAB Converters in Wide Voltage Range,” in *Proc. 42nd Conference of the IEEE Industrial Electronics Society (IECON)*, Oct. 2016, pp. 2445–2451.
- [43] L. Corradini, “Digital Control for Inductor Based DC-DC Converters,” in *Proc. 41st European Solid-State Circuits Conference (ESSCIRC) – Workshop on Advanced DC-DC Converter Techniques*, invited talk, Sep. 2015, pp. 99–144.
- [44] P. Mattavelli and L. Corradini, “Digital Control in Power Electronics,” in *Proc. 13th IEEE Brazilian Power Electronics Conference (COBEP) and 1st Southern Power Electronics Conference (SPEC)*, invited tutorial, Nov. 2015.
- [45] L. Scandola, L. Corradini, and G. Spiazzi, “Multi-Harmonic Small-Signal Modeling of Digitally Controlled dc-dc Series Resonant Converters,” in *Proc. 16th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jul. 2015, pp. 1–8.
- [46] L. Scandola, L. Corradini, and G. Spiazzi, “Small-signal modeling of combined phase shift and pulse width uniformly sampled modulators,” in *Proc. 16th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jul. 2015, pp. 1–7.
- [47] W. Chen, R. Zane, D. Seltzer, and L. Corradini, “Isolated Bidirectional DC/AC and AC/DC Three-Phase Power Conversion using Series Resonant Converter Modules and a Three-Phase Unfolder,” in *Proc. 15th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jun. 2014, pp. 1–6.
- [48] S. Saggini, O. Zambetti, M. Loghi, A. Zafarana, and L. Corradini, “Autotuning Technique for Digital Constant On-Time Controllers,” in *Proc. 29th IEEE Applied Power Electronics Conference and Exposition (APEC)*, Mar. 2014, pp. 1059–1065.
- [49] L. Scandola, L. Corradini, and G. Spiazzi, “Small-signal modeling of uniformly sampled phase shift modulators,” in *Proc. 15th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jun. 2014, pp. 1–8.
- [50] L. Scandola, L. Corradini, G. Spiazzi, C. Garbossa, P. Piersimoni, and A. Vecchiato, “Online Efficiency Optimization Technique for Digitally Controlled Resonant DC/DC Converters,” in *Proc. 29th IEEE Applied Power Electronics Conference and Exposition (APEC)*, Mar. 2014, pp. 27–34.
- [51] G. Spiazzi, S. Buso, and L. Corradini, “Dynamic Effects of Mismatched Time Constants in DC-DC Converters with Inductor DCR Current Sensing,” in *Proc. 6th IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2014, pp. 257–264.
- [52] L. Corradini and G. Spiazzi, “A High-Frequency Digitally Controlled LED Driver for Automotive Applications with Fast Dimming Capabilities,” in *Proc. 5th IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2013, pp. 3110–3117.
- [53] G. Giorgi, A. Veronese, and L. Corradini, “A Method for Estimating State of Charge in Energy-Aware Wireless Sensor Nodes,” in *Proc. 19th IMEKO TC-4 Symposium on Measurements of Electrical Quantities*, Jul. 2013, pp. 108–113.
- [54] N. Michelusi, L. Badia, R. Carli, L. Corradini, and M. Zorzi, “Impact of Battery Degradation on Optimal Management Policies of Harvesting-Based Wireless Sensor Devices,” in *Proc. 32nd IEEE International Conference on Computer Communications (INFOCOM)*, Apr. 2013, pp. 590–594.
- [55] F. Ongaro, S. Saggini, and L. Corradini, “Low-Power Energy Harvester for Wiegand Transducers,” in *Proc. 28th IEEE Applied Power Electronics Conference and Exposition (APEC)*, Mar. 2013, pp. 453–459.

- [56] S. Saggini, F. Ongaro, L. Corradini, and A. Affanni, “Low-Power Energy Harvesting Circuits for Wiegand Sensors,” in *Proc. 45th Meeting of the GE Association, Udine, Italy*, Jun. 2013.
- [57] S. Saggini, F. Ongaro, L. Corradini, and A. Affanni, “Low-Power Energy Harvesting Solutions for Wiegand Transducers,” in *Proc. 10th International Workshop on Piezoelectric Materials and Applications and 8th Energy Harvesting Workshop (IWPMA & EHW)*, Jul. 2013, pp. 156–158.
- [58] S. Saggini, O. Zambetti, M. Loghi, A. Zafarana, and L. Corradini, “Model reference Tuning Algorithm Applied to Constant On Time Controller,” in *Proc. 45th Meeting of the GE Association, Udine, Italy*, Jun. 2013.
- [59] M. Rodriguez, L. Corradini, and D. M. C. Olalla, “Average Current-Mode Control of Boost Converters with Bidirectional Power Transfer Capabilities,” in *Proc. 13th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jun. 2012.
- [60] G. Spiazzi, S. Buso, F. Sichirollo, and L. Corradini, “Small-Signal Modeling of the Interleaved Boost with Voltage Multiplier,” in *Proc. 4th IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2012, pp. 431–437.
- [61] A. Bjeletić, L. Corradini, R. Zane, and D. Maksimović, “Specifications-Driven Design Space Boundaries for Point-of-Load Converters,” in *Proc. 26th IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2011, pp. 1166–1173.
- [62] L. Corradini, D. Seltzer, D. Bloomquist, R. Zane, D. Maksimović, and B. Jacobson, “Zero Voltage Switching Technique for Bi-Directional DC/DC Converters,” in *Proc. 3rd IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2011, pp. 2215–2222.
- [63] S. Jensen, L. Corradini, and D. Maksimović, “Modeling and Digital Control of LCLC Resonant Inverter with Varying Load,” in *Proc. 3rd IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2011, pp. 3823–3829.
- [64] D. Seltzer, L. Corradini, R. Zane, and D. Maksimović, “Small Signal Phasor Modeling of Dual Active Bridge Series Resonant DC/DC Converters with Multi-Angle Phase Shift Modulation,” in *Proc. 3rd IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2011, pp. 2757–2764.
- [65] L. Corradini and D. Maksimović, “A Digital Pulse-Width Modulator for Phase-Shift Operation of Full-Bridge Isolated DC-DC Converters,” in *Proc. 25th IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2010, pp. 277–283.
- [66] S. Moon, L. Corradini, and D. Maksimović, “Accurate mode boundary detection in digitally controlled boost power factor correction rectifiers,” in *Proc. 2nd IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2010, pp. 1212–1217.
- [67] S. Moon, L. Corradini, and D. Maksimović, “Auto-tuning of digitally controlled boost Power Factor Correction rectifiers operating in continuous conduction mode,” in *Proc. 12th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jun. 2010.
- [68] R. Paul, L. Corradini, and D. Maksimović, “Adaptive Non-Inverting Buck-Boost IC with On-Chip Sigma-Delta ADC for Portable Applications,” in *Proc. 12th IEEE Workshop on Control and Modeling for Power Electronics (COMPEL)*, Jun. 2010.
- [69] A. Babazadeh, L. Corradini, and D. Maksimović, “Near Time-Optimal Transient Response in DC-DC Buck Converters Taking into Account the Inductor Current Limit,” in *Proc. 1st IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2009, pp. 3328–3335.
- [70] L. Corradini, A. Bjeletic, R. Zane, and D. Maksimović, “Fully Digital Hysteretic Modulator for DC-DC Switching Converters,” in *Proc. 1st IEEE Energy Conversion Conference and Exposition (ECCE)*, Sep. 2009, pp. 3312–3319.

- [71] L. Corradini, P. Mattavelli, M. Corradin, and F. Polo, "Analysis of Parallel Operation of Uninterruptible Power Supplies Loaded Through Long Wiring Cables," in *Proc. 24th IEEE Annual Applied Power Electronics Conference and Exposition (APEC)*, Feb. 2009, pp. 1276–1282.
- [72] J. Morroni, L. Corradini, R. Zane, and D. Maksimović, "Robust Adaptive Tuning of Digitally Controlled Switched-Mode Power Supplies," in *Proc. 24th IEEE Annual Applied Power Electronics Conference and Exposition (APEC)*, Feb. 2009, pp. 240–246.
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