

Edoardo Bonizzoni

Curriculum Vitae

Personal Informations

DATE AND PLACE OF BIRTH: 22/6/1977, Pavia
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Short Biography

Edoardo Bonizzoni was born in Pavia, Italy, in 1977. He received the Laurea degree (*summa cum laude*) in Electronic Engineering from the University of Pavia, Italy, in 2002, with a thesis titled "*Model and algorithm for design of maximum-efficiency Dickson charge pumps*" (title translated). From the same University, he received in 2006 the Ph.D. degree in Electronic, Computer, and Electrical engineering. His Ph.D. thesis title was "*Phase change memories*" (title translated).

In 2002 he joined the Integrated Microsystems Laboratory of the University of Pavia as a Ph.D. candidate. During his Ph.D., he worked on development, design and testing of non-volatile memories with particular regard to phase-change memories. From 2006 his research interests are mainly focused on the design and testing of DC-DC and A/D converters. In this period he worked on single-inductor multiple-output DC-DC buck regulator solutions and on both Nyquist-rate and oversampled A/D converters. More recently, his research focuses on the design of high precision amplifiers, ultra-low voltage voltage reference circuits, interfaces for Hall magnetic sensors, and on the modelling of memristive devices as well. In these years, 25+ circuits have been designed (including the layout of both the analog and digital sections), integrated in different CMOS and FinFET technologies (0.35 μm , 0.18 μm , 65 nm, 28 nm, 7 nm), and experimentally evaluated. The research activity has been mostly developed in tight cooperation with the leading semiconductor companies (STMicroelectronics, Intel, Texas Instruments (National Semiconductors), Austriamicrosystems (AMS), Infineon) and in cooperation with different Universities and research centers, national and international (Fondazione Bruno Kessler (FBK), Istanbul Technical University (ITU, Turkey), University of Macao (China), Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE, Mexico), Indian Institute of Technology Kharagpur (IIT Kharagpur, India), National University of Defense Technology (NUDT, China), University of Glasgow (UK)). During these years more than 10 master students and about 15 Ph.D. students have been tutored or co-tutored.

Presently, he is an Associate Professor at the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia, where he teaches a course titled "Analog Integrated Circuits" for master students and a course titled "Elettronica I" (basic electronics) for undergraduate students. Dr. Bonizzoni is author or co-author of 120+ papers, published in international journals and in proceedings of international conferences.

Dr. Bonizzoni is co-recipient of the *IEEE International Symposium on Circuits and Systems (ISCAS) 2014 Honorary Mention Paper Award* of the Sensory Systems Track, of the *IEEE/IEEEJ Analog VLSI Workshop (AVLSIWS) 2010* best paper award, of the *IEEE European Solid-State Circuits Conference (ESSCIRC) 2007* best paper award and of the *IEEE/IEEEJ Analog VLSI Workshop (AVLSIWS) 2007* best paper award.

Dr. Bonizzoni is, since 2016, an Associate Editor of the *IEEE Transactions on Circuits and Systems - Part. I*. From 2011 to 2015 he served the *IEEE Circuits and Systems Society* as an Associate Editor of the *IEEE Transactions on Circuits and Systems - Part. II*. Dr. Bonizzoni has been nominated *Best TCAS-II Associate Editor* for the 2012-2013 term. Since 2013 he is a TPC member of the *IEEE Conference on Ph.D. Research in Microelectronics and Electronics (PRIME)* and he has been part of several OCs of *IEEE CASS* conferences. He is an IEEE Senior member since 2018.

Career Progression

- 2002: Laurea Degree in Electronic Engineering (5-year program) at the University of Pavia;
- 2006: Ph.D. Degree in Electronic, Computer, and Electrical Engineering at the University of Pavia;
- 2006-2011: Post-Doctoral Position at the University of Pavia;
- 2011-2015: Junior Assistant Professor at the University of Pavia;
- 2015-2018: Senior Assistant Professor at the University of Pavia;
- Dec. 2018-present: Associate Professor at the University of Pavia.

Activity in the International Scientific Community

- Member of the 2019 *IEEE International Conference on Electronics, Circuits, and Systems (ICECS)* – Genova (Italy) – Organizing Committee as Industrial Liaison Co-chair;
- Technical Program Co-Chair of *International Symposium on Integrated Circuits and Systems (ISICAS) 2019*, Venice, Italy;
- Member of the 2023 *IEEE International Symposium on Circuits and Systems (ISCAS)* – Monterey (California, USA) – Organizing Committee as Publication Co-chair;
- 2018 - present: member of the IEEE CASS Analog and Signal Processing Technical Program Committee;
- Technical Program Co-Chair of *International Symposium on Integrated Circuits and Systems (ISICAS) 2018*, Taormina, Italy;
- Member of the 2019 *IEEE International Symposium on Circuits and Systems (ISCAS)* – Sapporo (Japan) – Organizing Committee as Live Demo Co-chair;
- Member of the 2018 *IEEE International Symposium on Circuits and Systems (ISCAS)* – Florence (Italy) – Organizing Committee as Publication Co-chair;
- 2016 - present: Associate Editor of the *IEEE Transactions on Circuits and Systems - I*;
- 2011 - 2015: Associate Editor of the *IEEE Transactions on Circuits and Systems - II*;
- Responsible and proponent of *STAR-CAS (Selected Topics on Advanced Research on Circuits and Systems) 2015* (<http://ims.unipv.it/STARCAS>), an IEEE Circuits and Systems Society (IEEE CASS) event in the frame of the Outreach program.
- Technical Program Co-Chair of *IEEE TENCON 2015*, Macao, China;
- 2013 - present: Technical Program Committee member of *IEEE Conference on Ph.D. Research in Microelectronics and Electronics (PRIME)*;
- Reviewer for several international journals and conferences (among them, *IEEE Journal of Solid-State Circuits*, *IEEE Transactions on Circuits and Systems - II*, *IEEE Transactions on Power Electronics*, *IEEE International Symposium on Circuits and Systems*);

Invited Presentations/Lessons

- "Analog integrated circuits", short course within the Summer School of the University of Electronic Science and Technology of China (UESTC), Chengdu, China, July 2019.
- "Smart-DEM for energy-efficient incremental ADCs" (invited by Prof. K.A.A. Makinwa, Delft University of Technology), *24th Workshop on Advances in Analog Circuit Design (AACD)*, Neuchâtel, Switzerland, April 2015;
- "Single-inductor multiple outputs (SIMO) DC-DC converters", invited lesson at the Infineon Winter School, <https://winterschool.rocks>, Villach, Austria, February 2017;
- "Low power Nyquist rate data converters", short course within the Global Initiative on Academic Network (GIAN) issued by the Ministry of Human Resource Development of the Government of India, National Institute of Technology (NIT) Goa, India, March 2017.
- "Analog integrated circuits", short course within the Summer School of the University of Electronic Science and Technology of China (UESTC), Chengdu, China, July 2017.

Awards

- **Honorary Mention Paper Award** received at the *IEEE International Symposium on Circuits and Systems 2014* for the paper titled "A Current-Mode CMOS Integrated Microsystem for Current Spinning Magnetic Hall Sensors" authored by H. Heidari, E. Bonizzoni, U. Gatti, F. Maloberti;
- **Best Associate Editor** of the *IEEE Transactions on Circuits and Systems - II* for the term 2012-2013;
- **Best Paper Award** received at the *IEEE/IEEEJ International Analog VLSI Workshop 2010* for the paper titled "High-Resolution Multi-Bit Incremental Converter with 1.5- μ V Residual Offset and 94-dB SFDR" authored by A. Agnes, E. Bonizzoni, A. D'Amato, I. Galdi, F. Maloberti;
- **Best Paper Award** received at the *IEEE European Solid-State Circuits Conference 2007* for the paper titled "Two-path band-pass $\Sigma\Delta$ modulator with 40-MHz IF 72-dB DR at 1-MHz bandwidth consuming 16 mW" authored by I. Galdi, E. Bonizzoni, F. Maloberti, G. Manganaro, P. Malcovati;
- **Best Paper Award** received at the *IEEE/IEEEJ International Analog VLSI Workshop 2007* for the paper titled "Quasi-Second Order $\Sigma\Delta$ Modulator Based on Phase-Integration" authored by H. Caracciolo, E. Bonizzoni, F. Maloberti.

Publications List

Book Chapters

- [B1] E. Bonizzoni, Y. Liu, and F. Maloberti, "Smart-DEM for energy-efficient incremental ADCs," in *Efficient Sensor Interfaces, Advanced Amplifiers and Low Power RF Systems* (K. Makinwa, A. Baschirotto, and P. Harpe, eds.), ch. 1, pp. 3–22, ISBN: 978-3-319-21184-8: Springer, 2015.
- [B2] M. Belloni, E. Bonizzoni, and F. Maloberti, "Single-inductor multiple-output Dc-Dc converters," in *Analog Circuit Design, High Speed Clock and Data Recovery, High Performance Amplifiers and Power Management* (M. Steyaert, A. H. M. Van Roermund, and H. Casier, eds.), pp. 233–253, ISBN: 978-1-4020-8943-5: Springer Science+Business Media, 2008.

International Journals

- [J3] P. Comassetto de Aguirre, E. Bonizzoni, F. Maloberti, and A. Amadeu Susin, "A 170.7 dB FoM-DR 0.45/0.6-V inverter-based continuous-time sigma-delta modulator," *IEEE Transactions on Circuits and Systems II: Express Briefs*, 2019.
- [J4] A. Salimath, E. Botti, G. Gonano, P. Cacciagrano, D. A. Brambilla, T. Barbieri, F. Maloberti, and E. Bonizzoni, "An 86% efficiency, wide-vin SIMO DC-DC converter embedded in a car-radio IC," *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 66, no. 9, 2019.
- [J5] E. Moisello, M. Vaiana, M. Castagna, G. Bruno, P. Malcovati, and E. Bonizzoni, "An integrated micromachined thermopile sensor with a chopper interface circuit for contact-less temperature measurements," *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 66, no. 9, 2019.
- [J6] V. R. Gonzalez-Diaz, S. Romero-Camacho, R. Ambrosio-Lazaro, G. Mino-Aguilar, E. Bonizzoni, and F. Maloberti, "A behavioral model for solar cells with transient irradiation and temperature assessment," *IEEE Access*, vol. 7, 2019.
- [J7] N. Lupo, E. Perez, C. Wenger, F. Maloberti, and E. Bonizzoni, "Analysis of parasitic effects for filamentary-switching memristive memories using an approximated Verilog-A model," *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 66, no. 5, 2019.
- [J8] D. Feng, E. Bonizzoni, F. Maloberti, S.-W. Sin, and R. Martins, "A 10-MHz bandwidth two-path third-order sigma-delta modulator with cross-coupling branches," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 65, no. 10, pp. 1410–1414, 2018.

- [J9] Z. Yin, E. Bonizzoni, and H. Heidari, "Magnetoresistive biosensors for on-chip detection and localisation of paramagnetic particles," *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology*, vol. 2, no. 3, pp. 179–185, 2018.
- [J10] N. Lupo, E. Bonizzoni, E. Perez, C. Wenger, and F. Maloberti, "A voltage-time model for memristive devices," *IEEE Transactions on Very Large Scale (VLSI) Systems*, vol. 26, no. 8, pp. 1452–1460, 2018.
- [J11] W. Germanovix, E. Bonizzoni, and F. Maloberti, "Capacitance super multiplier for sub-Hertz low-pass integrated filters," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 65, no. 3, pp. 301–305, 2018.
- [J12] D. Muratore, E. Bonizzoni, S. Verri, and F. Maloberti, "High-resolution time-interleaved 8-channel ADC for Li-Ion battery stack," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 64, no. 6, pp. 620–624, 2017.
- [J13] H. Heidari, E. Bonizzoni, U. Gatti, F. Maloberti, and R. Dahiya, "CMOS vertical Hall magnetic sensors on flexible substrate," *IEEE Sensors Journal*, vol. 16, no. 24, pp. 8736–8743, 2016.
- [J14] P. B. Basyurt, E. Bonizzoni, D. Y. Aksin, and F. Maloberti, "A 0.4-V supply curvature corrected reference generator with 84.5 ppm/°C average temperature coefficient within -40 to 130 °C," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 64, no. 4, pp. 362–366, 2017.
- [J15] Y. Zhang, E. Bonizzoni, and F. Maloberti, "An energy-efficient switching method for SAR ADCs with bottom plate sampling," *IET Electronics Letters*, vol. 52, no. 9, pp. 690–692, 2016.
- [J16] Y. Zhang, E. Bonizzoni, and F. Maloberti, "A 10-bit, 200-kS/s, 250-nA self-clocked coarse-fine SAR ADC," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 63, no. 10, pp. 924–928, 2016.
- [J17] P. B. Basyurt, E. Bonizzoni, D. Y. Aksin, and F. Maloberti, "Voltage reference architectures for low supply voltages," *Microelectronics Journal*, vol. 46, pp. 1012–1019, Nov. 2015.
- [J18] H. Heidari, E. Bonizzoni, U. Gatti, and F. Maloberti, "A CMOS current-mode magnetic Hall sensor with integrated front-end," *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 62, pp. 1270–1278, May 2015.
- [J19] N. Kumar Y.B., E. Bonizzoni, A. Patra, and F. Maloberti, "Interference rejection in quadrature band-pass sigma-delta modulators," *Analog Integrated Circuits and Signal Processing*, vol. 83, pp. 95–101, 2015.
- [J20] Y. Liu, E. Bonizzoni, A. D'Amato, and F. Maloberti, "A high-resolution low-power and multi-bit incremental converter with smart-DEM," *Analog Integrated Circuits and Signal Processing*, vol. 82, pp. 663–674, 2015.
- [J21] O. Belotti, E. Bonizzoni, and F. Maloberti, "Exact design of continuous-time sigma-delta modulators with multiple feedback DACs," *Analog Integrated Circuits and Signal Processing*, vol. 73, pp. 255–264, 2012.
- [J22] A. Peña Perez, E. Bonizzoni, and F. Maloberti, "A 88-dB DR, 84-dB SNDR very low-power single op-amp third-order $\Sigma\Delta$ modulator," *IEEE Journal of Solid-State Circuits*, vol. 47, pp. 2107–2118, Sept. 2012.
- [J23] N. Kumar Y.B., E. Bonizzoni, A. Patra, and F. Maloberti, "Two-path double delay line based band-pass quadrature $\Sigma\Delta$ modulator," *IET Electronics Letters*, vol. 47, pp. 1316–1317, Nov. 2011.
- [J24] H. Caracciolo, E. Bonizzoni, P. Malcovati, and F. Maloberti, "70-MHz IF 10-MHz bandwidth bandpass sigma-delta modulator for WCDMA applications," *Analog Integrated Circuits and Signal Processing*, vol. 71, no. 3, pp. 411–419, 2012.
- [J25] A. Agnes, E. Bonizzoni, and F. Maloberti, "High-resolution multi-bit second-order incremental converter with 1.5- μ V residual offset and 94-dB SFDR," *Analog Integrated Circuits and Signal Processing*, no. 72, pp. 531–539, 2012.

- [J26] E. Bonizzoni, A. Peña Perez, F. Maloberti, and M. Garcia-Andrade, "Two op-amps third-order sigma-delta modulator with 61-dB SNDR, 6-MHz bandwidth and 6-mW power consumption," *Analog Integrated Circuits and Signal Processing*, vol. 66, pp. 381–388, March 2011.
- [J27] M. Belloni, E. Bonizzoni, A. Fornasari, and F. Maloberti, "A micropower chopper-CDS operational amplifier," *IEEE Journal of Solid-State Circuits*, vol. 45, pp. 2521–2529, Dec. 2010.
- [J28] A. Agnes, E. Bonizzoni, P. Malcovati, and F. Maloberti, "An ultra-low power successive approximation A/D converter with time-domain comparator," *Analog Integrated Circuits and Signal Processing*, vol. 64, pp. 183–190, Aug. 2010.
- [J29] M. Belloni, E. Bonizzoni, P. Malcovati, and F. Maloberti, "A high efficiency 4-output single inductor DC-DC buck converter with self-boosted snubber," *Analog Integrated Circuits and Signal Processing*, vol. 67, pp. 169–177, May 2011.
- [J30] E. Bonizzoni, F. Borghetti, P. Malcovati, and F. Maloberti, "A 200mA, 93% peak power efficiency, single-inductor, dual-output DC-DC buck converter," *Analog Integrated Circuits and Signal Processing*, vol. 62, pp. 121–129, Feb. 2010.
- [J31] I. Galdi, E. Bonizzoni, P. Malcovati, G. Manganaro, and F. Maloberti, "40 MHz IF 1 MHz bandwidth two-path bandpass $\Sigma\Delta$ modulator with 72 dB DR consuming 16 mW," *IEEE Journal of Solid-State Circuits*, vol. 43, pp. 1648–1656, July 2008.
- [J32] F. Bedeschi, C. Boffino, E. Bonizzoni, C. Resta, and G. Torelli, "Staircase-down SET programming approach for phase-change memories," *Microelectronics Journal*, pp. 1064–1069, Sept. 2007.
- [J33] F. Bedeschi, R. Bez, C. Boffino, E. Bonizzoni, E. Buda, G. Casagrande, L. Costa, M. Ferraro, R. Gastaldi, O. Khouri, F. Ottogalli, F. Pellizzer, A. Pirovano, C. Resta, G. Torelli, and M. Tosi, "4-Mb MOSFET-selected μ trench phase-change memory experimental chip," *IEEE Journal of Solid-State Circuits*, vol. 40, pp. 1557–1565, July 2005.

International Conference Proceedings

- [C34] N. Lupo, F. Ravelli, M. Bartolini, P. Pulici, M. Nessi, F. Maloberti, and E. Bonizzoni, "Study of DAC architectures for integrated laser driver systems," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, 2019.
- [C35] E. Moisello, M. Vaiana, M. Castagna, G. Bruno, E. Bonizzoni, and P. Malcovati, "A chopper interface circuit for thermopile-based thermal sensors," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, 2019.
- [C36] W. Qureshi, E. Bonizzoni, and F. Maloberti, "A 5-bit 10-Gs/sec flash ADC with resolution enhancement using metastability detection," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, 2019.
- [C37] P. Kalekar, P. Vernekar, M. Vasantha, N. Kumar Y.B., and E. Bonizzoni, "A 0.5 V low power DTMOs OTA-C filter for ECG sensing applications," in *Proceedings of IEEE Sensors*, pp. 1–4, 2018.
- [C38] V. Ponce-Hinestroza, V. Gonzalez-Diaz, J. Castaneda-Camacho, G. Mino-Aguilar, and E. Bonizzoni, "System-level behavioral model of a 12-bit 1.5-bit per stage pipelined ADC based on Verilog-AMS," in *Proceedings of IEEE International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD)*, pp. 301–304, 2018.
- [C39] F. Boera, A. Salimath, E. Bonizzoni, and F. Maloberti, "Design of a SIBO DC-DC converter for AMOLED display driving," in *Proceedings of IEEE Ph.D. Research in Microelectronics and Electronics (PRIME)*, 2018.

- [C40] R. Siddharth, R. Sunil, N. Kumar Y.B., M. Vasantha, and E. Bonizzoni, “A novel asynchronous analog to digital converter for surveillance camera applications,” in *Proceedings of IEEE Computer Society Annual Symposium on VLSI (ISVLSI)*, 2018.
- [C41] P. Veerendranath, M. Vasantha, N. Kumar Y.B., and E. Bonizzoni, “A novel low power Gm-C continuous-time analog filter with wide tuning range,” in *Proceedings of IEEE International Conference on Embedded Systems (VLSID)*, pp. 214–219, 2018.
- [C42] R. Siddharth, N. Kumar Y.B., M. Vasantha, and E. Bonizzoni, “A low-power auxiliary circuit for level-crossing ADCs in IoT-sensor applications,” in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, 2018.
- [C43] A. Salimath, G. Gonano, E. Bonizzoni, D. A. Brambilla, E. Botti, and F. Maloberti, “Design considerations for integrated, high-voltage, DC-DC converters,” in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, 2018.
- [C44] N. Lupo, E. Bonizzoni, E. Perez, C. Wenger, and F. Maloberti, “An approximated Verilog-A model for memristive devices,” in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, 2018.
- [C45] A. Akdikmen, E. Bonizzoni, and F. Maloberti, “A timing skew calibration method for time-interleaved FATI ADCs,” in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, 2018.
- [C46] A. Salimath, E. Bonizzoni, E. Botti, G. Gonano, P. Cacciagrano, D. A. Brambilla, T. Barbieri, and F. Maloberti, “An 86% efficiency SIMO DC-DC converter with one boost, one buck, and a floating output voltage for car-radio,” in *IEEE International Solid-State Circuits Conference (ISSCC) Digest of Technical Papers*, pp. 426–428, 2018.
- [C47] N. Lupo, E. Bonizzoni, and F. Maloberti, “A cross-coupled sense amplifier for radiation hardened SRAMs,” in *Proceedings of IEEE New Generation of Circuits and Systems (NGCAS)*, pp. 61–64, 2017.
- [C48] W. Qureshi, E. Bonizzoni, and F. Maloberti, “Feasibility study for an ultra high speed current-mode SAR ADC,” in *Proceedings of IEEE New Generation of Circuits and Systems (NGCAS)*, pp. 73–76, 2017.
- [C49] S. Romero-Camacho, V. Gonzalez-Diaz, R. Ambrosio-Lazaro, G. Mino-Aguilar, E. Bonizzoni, and F. Maloberti, “An improved analog maximum power point tracking circuit for solar cells suitable for abrupt variations in irradiation levels,” in *Proceedings of IEEE International Conference on Environment and Electrical Engineering (EEIC)*, pp. 1–6, 2017.
- [C50] S. Romero-Camacho, V. Gonzalez-Diaz, R. Ambrosio-Lazaro, G. Mino-Aguilar, E. Bonizzoni, and F. Maloberti, “A new linearized behavioral model for solar cells,” in *Proceedings of IEEE International Conference on Environment and Electrical Engineering (EEIC)*, pp. 1–6, 2017.
- [C51] A. Akdikmen, E. Bonizzoni, and F. Maloberti, “A third-order time-interleaved $\Sigma\Delta$ modulator,” in *Proceedings of IEEE Ph.D. Research in Microelectronics and Electronics (PRIME)*, pp. 117–120, 2017.
- [C52] P. B. Basyurt, E. Bonizzoni, F. Maloberti, and D. Y. Aksin, “A low-power low-noise CMOS voltage reference with improved PSR for wearable sensor systems,” in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, pp. 184–187, 2017.
- [C53] A. Salimath, G. Gonano, E. Bonizzoni, D. A. Brambilla, E. Botti, and F. Maloberti, “A high-speed level shifting technique and its application in high-voltage, synchronous DC-DC converters with quasi-ZVS,” in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, pp. 1538–1541, 2017.
- [C54] P. B. Basyurt, E. Bonizzoni, F. Maloberti, and D. Y. Aksin, “Design of a compact and low supply voltage CMOS voltage reference generator,” in *Proceedings of IEEE International Conference on Electronics Circuits and Systems (ICECS)*, pp. 740–743, 2016.

- [C55] Y. Zhang, E. Bonizzoni, and F. Maloberti, "Mismatch and parasitics limits in capacitors-based SAR ADCs," in *Proceedings of IEEE International Conference on Electronics Circuits and Systems (ICECS)*, pp. 33–36, 2016.
- [C56] D. Muratore, A. Akdikmen, E. Bonizzoni, F. Maloberti, U.-F. Chio, S.-W. Sin, and R. Martins, "An 8-bit 0.7-Gs/S single channel flash-SAR ADC in 65-nm CMOS technology," in *Proceedings of IEEE European Solid-State Circuits Conference (ESSCIRC)*, pp. 421–424, 2016.
- [C57] A. Salimath, E. Bonizzoni, and F. Maloberti, "A mode-of-operation based switching technique for SIDO buck-boost converter," in *Proceedings of IEEE Ph.D. Research in Microelectronics and Electronics (PRIME)*, pp. 1–4, 2016.
- [C58] D. Muratore, E. Bonizzoni, and F. Maloberti, "A pipeline ADC for very high conversion rates," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, pp. 1446–1449, 2016.
- [C59] D. Muratore, E. Bonizzoni, F. Maloberti, and C. Fiocchi, "A capacitive sensor interface for high-resolution acquisitions in hostile environments," in *Proceedings of IEEE Latin American Symposium on Circuits and Systems (LASCAS)*, pp. 167–170, 2016.
- [C60] F. Maloberti, E. Bonizzoni, and P. B. Basyurt, "Very-low-voltage and ultra-low-power analog circuits for nomadic applications," in *Proceedings of IEEE Latin American Symposium on Circuits and Systems (LASCAS)*, pp. 403–410, 2016.
- [C61] H. Heidari, E. Bonizzoni, U. Gatti, F. Maloberti, and R. Dahiya, "Optimal geometry of CMOS voltage-mode and current-mode vertical magnetic Hall sensors," in *Proceedings of IEEE Sensors*, pp. 1–4, Nov. 2015.
- [C62] P. B. Basyurt, E. Bonizzoni, F. Maloberti, and D. Y. Aksin, "Design of an op-amp free voltage reference with PWM regulation," in *Proceedings of IEEE European Conference on Circuit Theory and Design (ECCTD)*, pp. 1–4, Aug. 2015.
- [C63] Y. Liu, E. Bonizzoni, and F. Maloberti, "A single op-amp 0+2 sigma-delta modulator," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, pp. 2029–2032, May 2015.
- [C64] D. Muratore, E. Bonizzoni, and F. Maloberti, "A split transconductor high-speed SAR ADC," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, pp. 2433–2436, May 2015.
- [C65] A. Demarziani, E. Bonizzoni, F. Maloberti, and A. D'Amato, "Design of a low power time to digital converter for flow metering applications," in *Proceedings of IEEE International Symposium on Circuits and Systems (ISCAS)*, pp. 1646–1649, May 2015.
- [C66] H. Heidari, E. Bonizzoni, U. Gatti, and F. Maloberti, "A 0.18- μm CMOS current-mode Hall magnetic sensor with very low bias current and high sensitive front-end," in *Proceedings of IEEE Sensors*, pp. 1467–1470, Nov. 2014.
- [C67] P. B. Basyurt, D. Y. Aksin, E. Bonizzoni, and F. Maloberti, "A 490-nA, 43-ppm/ $^{\circ}\text{C}$, sub-0.8-V supply voltage reference," in *Proceedings of IEEE European Solid-State Circuits Conference (ESSCIRC)*, pp. 115–118, Sept. 2014.
- [C68] D. Feng, S.-W. Sin, E. Bonizzoni, and F. Maloberti, "Time interleaved current steering DAC for ultra-high conversion rate," in *Proceedings of IEEE Ph.D. Research in Microelectronics and Electronics (PRIME)*, pp. 1–4, June 2014.
- [C69] H. Heidari, E. Bonizzoni, U. Gatti, and F. Maloberti, "Analysis and modeling of four-folded vertical Hall devices in current domain," in *Proceedings of IEEE Ph.D. Research in Microelectronics and Electronics (PRIME)*, pp. 1–4, June 2014.

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