Edoardo Bonizzoni

Curriculum Vitae

Personal Data

Place and Birth Date:	Pavia, 22/6/1977
Marital Status:	Married
E-Mail:	edoardo.bonizzoni@unipv.it

Actual Position

Full Professor at the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia, Pavia, Italy.

Education

Ph.D.

Graduation Date:	10/01/2006
Institution:	University of Pavia, Pavia, Italy
Program:	Ph.D. in Electrical, Electronics, and Computer Science
Thesis Title:	Phase-change memories (original title in Italian) [T204]

Laurea Degree

Graduation Date:	22/3/2002
Institution:	University of Pavia, Pavia, Italy
Faculty:	Engineering
Program:	Electronics - Microelectronics
Graduation Grade:	110/110 with laude
Thesis Title:	Model and design algorithm for maximum efficiency Dickson charge pumps (original title in Italian) [T205]

Identifiers

orcID:	0000-0002-8398-8506
Scopus Author ID:	21833627900

Bibliometric Indicators

Database Scopus on 14/01/2025

- Number of publications: 208
- Number di citations: 1850
- H-index: 22

Database Google Scholar on 14/01/2025

- Number di citations: 3126
- H-index: 28

Job Positions

FROM AUGUST 2024 TO TODAY: Full Professor at the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia, Pavia, Italy.

FROM DECEMBER 2018 TO JULY 2024: Associate Professor at the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia, Pavia, Italy.

FROM DECEMBER 2015 TO DECEMBER 2018: Senior Assistant Professor at the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia, Pavia, Italy.

FROM DECEMBER 2011 TO DECEMBER 2015: Junior Assistant Professor at the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia, Pavia, Italy.

FROM NOVEMBER 2005 TO NOVEMBER 2011: Research grant holder at the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia, Pavia, Italy.

FROM OCTOBER 2002 TO OCTOBER 2005: Ph.D. student at the University of Pavia, Pavia, Italy

Current Teaching Activity

- Analog Integrated Circuits for students in the Master program in Electronics Engineering (University of Pavia, Pavia, Italy - in English);
- Integrated Power Management for students in the Master program in Electronics Engineering (University of Pavia, Pavia, Italy - in English);
- Elettronica I for students in the Undergrad program in Electronics Engineering (University of Pavia, Pavia, Italy - in Italian);

Edoardo Bonizzoni has followed or follows, as supervisor or co-supervisor, more than 50 degree theses at the Integrated Microsystems Laboratory of the Department of Electrical, Computer, and Biomedical Engineering of the University of Pavia. Edoardo Bonizzoni has been or is currently tutor or co-tutor of 27 doctoral students within the Research Doctorate in Microelectronics of the University of Pavia and the Industrial Research Doctorate of National Interest in Micro- and Nano-electronics:

1. D.G. Muratore, "A Study of Successive Approximation Register ADC Architectures", University of Pavia, Tutor: E. Bonizzoni
2. A. Salimath, "SIMO DC-DC Converter for Automotive Audio Amplifiers", University of Pavia, Tutor: E. Bonizzoni
3. N. Lupo, "Resistive Memory for Space Applications: a Radiation-Hardening by Design Approach for Non-Volatile Memories", University of Pavia, Tutor: E. Bonizzoni
4. A. Akdikmen, "Design Techniques for High-Speed ADCs in Nanoscale CMOS Technologies", University of Pavia, Tutor: E. Bonizzoni
5. W.A. Qureshi, "An Extended-Range Hybrid Analog-to-Digital Converter for Audio Applications", University of Pavia, Tutor: E. Bonizzoni

6. E. Moisello, "Integrated Interface Circuits for MEMS Contact-less Temperature Sensors", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
7. F. Boera, "High-Frequency DC-DC Buck Converter for Automotive Post-Regulated Applications", University of Pavia, Tutor: E. Bonizzoni
8. A. Aprile, "Current-mode processing based Temperature-to-Digital Converters for MEMS applications", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
9. M. Oz, "A Ring Oscillator-Based High-Speed ADC Design", University of Pavia, Tutor: E. Bonizzoni
10. M. Abdevand, "Ultra Low-Noise Interface Circuits HDD Fly- Height Resistive Sensors", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
11. Y.J. Satyanarayana, "A SAR-assisted First Order Incremental ΣΔ ADC for Shunt Current Measurements", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
12. L. Novaresi, "Analog Front End Circuits for Highly Integrated MUT Based Ultrasound Imaging Systems", University of Pavia, Tutor: P. Malcovati, Co-Tutor: E. Bonizzoni, A. Mazzanti
13. X. Liu, "Design of Phase-Interpolator Based Open-Loop Fractional Output Dividers", University of Pavia, Tutor: E. Bonizzoni
14. S. Fusetto, "High efficiency Switched-Capacitor 3-Level Inverting Buck-Boost DC-DC Converter", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
15. A. Colucci, "Novel Techniques for Incremental ΣΔ Current-to-Digital Converter in Computed Tomography", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
16. M. Tambussi, "A Quasi-Passive NS-SAR ADC for Ultra-Low Power Audio Activity Detection Applications", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
17. A. Liotta, "A Novel Capacitive-Inductive Channel for Wireless Power and Data Transmission", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
18. M. De Ferrari, "An Optimized 120-dB Dynamic Range Current-Steering DAC for Class-D Audio Amplifier", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
19. A. Amini, "Design of a Receiver for CMUT Based Ultrasound Imaging Systems", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
20. S.M. Radosav, "Design of Building Blocks for Surface Sound Applications", University of Pavia, Tutor: E. Bonizzoni
21. A. Portesan, "Design Techniques for SiC-MOS Protection", University of Pavia, Tutor: E. Bonizzoni
22. A. Joarder, "Design of Analog Building Blocks in GaN Technology", University of Pavia, Tutor: E. Bonizzoni
23. M. Alecci, "Low-Noise DC-DC Converters", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
24. F. Romano, "Advanced Control Techniques for Isolated Converters", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
25. D. La Cognata, "Wireless Power Transfer in AirFuel Standard", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
26. N. Chettri, "Hardware Reusing SAR ADC for PPG Applications", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati
27. C. Cantini, "Ultra Low-Noise AFE for Intertial Sensors", University of Pavia, Tutor: E. Bonizzoni, Co-Tutor: P. Malcovati

Scientific Actifity

Edoardo Bonizzoni's scientific activity has focused on the sector of analogue, digital and mixed integrated circuits and systems. The activity carried out is documented by the following scientific contributions:

- Ph.D. thesis: 1
- Papers in international journals: 60
- Editorials in international journals: 11
- Book chapters: 2
- Conference papers: 139 (6 papers in the proceedings of IEEE ISSCC, 4 of IEEE CICC and 10 of IEEE ESSCIRC)
- Patents: 4

Research Activity

The research activity carried out by Edoardo Bonizzoni at the University of Pavia falls within the field of microelectronics and concerns the design and characterization of integrated circuits. This activity has so far led to the design (both at the transistor and layout level), manufacturing, and consequent experimental characterization of more than 30 integrated circuits, fabricated in different CMOS technological nodes (0.35 μm, 0.18 μm, 110 nm, 90 nm, 65 nm, 28 nm). The research activity focused on the following lines:

- A/D and D/A converters;
- Microsensors, integrated microsystems and sensor interfaces;
- Low-voltage, low-power analog and mixed integrated circuits;
- DC-DC converters and power management;
- Circuits for non-volatile memories.

Scientific Assignments and Recognitions

Edoardo Bonizzoni, at the University of Pavia, carried out both technical and administrative functions of various national and international projects. In particular:

- participant in the national project DSF - Regione Lombardia - POR FESR 1175234;
- participant in the European project M4M - Ecsel JU 876190;
- participant in the national project CONUS - PRIN 20205HFXE7;
- participant in the European project SHIFT - KDT JU 101096256;
- responsible of the national project ACOUSTIC - MISE 10 F/310010/01-03/X56;
- participant in the European project ARTURO - EDF 101074813;
- participant in the national project PROUD - MISE F/310211/01-05/X56.

Edoardo Bonizzoni also manages research collaborations with numerous national and international companies. In particular, he was or is the scientific director of:

- 8 research contracts with STMicroelectronics;
- 3 research contracts with TDK-Invensense;
- 2 research contracts with ams-OSRAM;
- 4 research contracts with Analog Devices;
- 1 research contract with Dialog Semiconductors;
- 2 research contracts with Infineon Technologies;
- 3 research contracts with Inventvm Semiconductors;

- 3 research contracts with M2 Microelettronica;
- 2 research contracts with Microtera;
- 1 research contract with Leonardo.

Edoardo Bonizzoni has also been part of the Scientific Council of the Studio di Microelectronics of Pavia since 2019, a joint laboratory between the University of Pavia and STMicroelectronics.

Editorial Activity

- 2024 - today, Editor in Chief of the *IEEE Transactions on Circuits and Systems – Part II*;
- 2022 - 2023, Associate Editor in Chief of the *IEEE Transactions on Circuits and Systems – Part II* (EiC Y. Ha);
- 2020 - 2021, Digital Communications Associate Editor in Chief of the *IEEE Transactions on Circuits and Systems – Part II* (EiC J.M. de la Rosa);
- 2016 - 2019, Associate Editor *IEEE Transactions on Circuits and Systems – Part I* (EiC A. Demosthenous);
- 2014 - 2015, Associate Editor *IEEE Transactions on Circuits and Systems – Part II* (EiC J. Silva-Martinez);
- 2011 - 2013, Associate Editor *IEEE Transactions on Circuits and Systems – Part II* (EiC Y. Lian).

International Scientific Appointments

- 2024 - today: TPC member of the *IEEE European Solid-State Electronics Research Conferece (ESSERC) - Power Management subcommittee*;
- 2020 - today: TPC member of the *IEEE Custom Integrated Circuits Conference (CICC) - Analog subcommittee* - in 2023 as a subcommittee co-Chair and in 2024 as Chair of the subcommittee;
- 2022 - today: member of the Steering Committee of *IEEE Conference on Ph.D. Research in Microelectronics and Electronics (PRIME)*;
- 2018 - today: member of the *IEEE CASS Analog and Signal Processing Technical Program Committee*;
- 2018 - today: TPC member of *IEEE International Symposium on Circuits and Systems (ISCAS)*;
- 2013 - today: TPC member of *IEEE Conference on Ph.D. Research in Microelectronics and Electronics (PRIME)*;
- 2025: Technical Program Chair of *IEEE International Conference on Electronics, Circuits, and Systems (ICECS)*;
- 2025: Publication Chair of *International Symposium on Circuits and Systems (ISCAS)*;
- 2024: Industrial Liaison Chair of *IEEE Conference on Ph.D. Research in Microelectronics and Electronics (PRIME)*;
- 2023: TPC Co-Chair of *International Symposium on Integrated Circuits and Systems (ISICAS)*;
- 2023: Publication Co-Chair of *International Symposium on Circuits and Systems (ISCAS)*;
- 2023: Publication Co-Chair and Track Chair of *IEEE International Conference on Electronics, Circuits, and Systems (ICECS)*;
- 2023: Industrial Liaison Chair of *IEEE Conference on Ph.D. Research in Microelectronics and Electronics (PRIME)*;
- 2023: Track Chair of *Midwest Symposium on Circuits and Systems (MWSCAS)*;
- 2022: TPC Chair of *IEEE Conference on Ph.D. Research in Microelectronics and Electronics (PRIME)*;
- 2021: TPC Co-Chair of *International Symposium on Integrated Circuits and Systems (ISICAS)*;
- 2020: International Advisor for *International Symposium on Integrated Circuits and Systems (ISICAS)*;
- 2019: TPC Co-Chair of *International Symposium on Integrated Circuits and Systems (ISICAS)*;
- 2019: Industrial Liaison Chair of *IEEE International Conference on Electronics, Circuits, and Systems (ICECS)*;
- 2019: Demo Co-Chair of *International Symposium on Circuits and Systems (ISCAS)*;
- 2018: TPC Co-Chair of *International Symposium on Integrated Circuits and Systems (ISICAS)*;
- 2018: Publication Co-Chair of *International Symposium on Circuits and Systems (ISCAS)*;
- 2015: TPC Co-Chair of *IEEE Region 10 Technical Conference (TENCON)*.

Invited Courses or Talks

- "Integrated circuits for power management: from fundamentals to efficient implementations", Ministry of Industry and Information Technology (MIIT), China, September 2024;
- "Integrated circuits for power management: overview, challenges, and recent advances", Topics on Microelectronics (ToM), Ph.D. School, September 2024;
- "Analog integrated circuits", short course at the Summer School of the University of Electronic Science and Technology of China (UESTC), Chengdu, China, June 2024;
- "Recent advances in the design of high-resolution and energy-efficient incremental analog-to-digital converters", invited talk at the Istanbul Technical University, Istanbul, Turkey, December 2023;
- "Recent advances in the design of high-resolution and energy-efficient incremental analog-to-digital converters", invited talk within the program Science+Coffe of ams-OSRAM, March 2023;
- "Analog integrated circuits", short course at the Summer School of the University of Electronic Science and Technology of China (UESTC), Chengdu, China, July 2019;
- "A Voltage-Time Model for Memristive Devices", invited talk within the program MemoCIS - Cost Action IC1401 "Memristors - Devices, Models, Circuits, Systems and Applications", Dubrovnik, March 2018;
- "Low power Nyquist rate data converters", short course within the program Global Initiative on Academic Network (GIAN) supported 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 at the Summer School of the University of Electronic Science and Technology of China (UESTC), Chengdu, China, July 2017;
- "Single-inductor multiple outputs (SIMO) DC-DC converters", invited talk at Infineon within the Winter School, Villach, Austria, February 2017;
- "Smart-DEM for energy-efficient incremental ADCs" (invited from Prof. K.A.A. Makinwa, Delft University of Technology), *24th Workshop on Advances in Analog Circuit Design (AACD)*, Neuchâtel, Switzerland, April 2015.

Awards

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

Publications List

International Journals

[J1] A. Aprile, J. S. Yarragunta, A. Fugger, F. Conzatti, E. Bonizzoni, and P. Malcovati, "A 78.2-dB Dynamic Range Shunt-Based Current Sensor for BLDC Motor Control With 2.75-µs Conversion Time and 0.4-mm^2 Active Area," *IEEE Journal of Solid-State Circuits*, pp. 1–13, 2024.

[J2] E. Moisello, S. Fusetto, P. Malcovati, and E. Bonizzoni, "A Generalized Active Voltage Balancing Circuit Implementation for Flying Capacitor 3-Level Switching-Mode DCC Converters," *IEEE Open Journal of Circuits and Systems*, vol. 5, pp. 365–376, 2024.

[J3] M. Mohammadi Abdevand, D. Livornesi, A. Emanuelle Vergani, F. Piscitelli, E. Mammei, E. Bonizzoni, P. Malcovati, and P. Pulici, "An Integrated Dual-Mode Precise Bias Circuit and a Low-Noise and Wideband AFE for Fly Height Sensors in Hard Disk Drives," *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 71, no. 10, pp. 4458–4471, 2024.

[J4] N. Chettri, A. Aprile, E. Bonizzoni, and P. Malcovati, "Advances in PPG Sensors Data Acquisition With Light-to-Digital Converters: A Review," *IEEE Sensors Journal*, vol. 24, no. 16, pp. 25261–25274, 2024.

[J5] H. Fan, B. Wu, H. Che, R. Yu, H. Wang, H. Wang, C. Wang, A. Aprile, E. Bonizzoni, H. Wang, Q. Feng, and Q. Wei, "A 13-bit Temperature Sensor With a ±1.45 °C (3σ) Inaccuracy From 5 °C to 125 °C," *IEEE Sensors Journal*, vol. 24, no. 20, pp. 33011–33021, 2024.

[J6] A. Aprile, M. Folz, D. Gardino, P. Malcovati, and E. Bonizzoni, "A BJT-based 0.08-mm^2 Oversampling SAR Temperature-to-Digital Converter for Thermal Drift Compensation in MEMS Inertial Sensors," *IEEE Transactions on Instrumentation and Measurement*, no. 73, pp. 1–11, 2024.

[J7] E. Moisello, L. Novaresi, E. Sarkar, P. Malcovati, T. L. Costa, and E. Bonizzoni, "PMUT and CMUT Devices for Biomedical Applications: A Review," *IEEE Access*, vol. 12, pp. 18640–18657, 2024.

[J8] A. Aprile, M. Folz, D. Gardino, P. Malcovati, and E. Bonizzoni, "An Area-Efficient Smart Temperature Sensor Based on a Fully Current Processing Error-Feedback Noise-Shaping SAR ADC in 180-nm CMOS," *IEEE Journal of Solid-State Circuits*, vol. 59, no. 3, pp. 716–727, 2024.

[J9] A. Bertolini, G. Nicollini, E. Bonizzoni, and P. Malcovati, "Practical Aspects for Analog Compensators Design in Integrated DC-DC Converters," *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 12, no. 1, pp. 446–460, 2024.

[J10] H. Fan, L. Feng, X. Diao, X. Xie, C. Wang, G. Li, Q. Wei, F. Qiao, Q. Feng, and E. Bonizzoni, "A Fast Transient LDO Regulator Featuring High PSRR Over 100-kHz Frequency Range With Adaptive, Dynamic Biasing and Current Mode Feed-Forward Amplifier," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 71, no. 4, pp. 1764–1768, 2024.

[J11] M. M. Abdevand, D. Livornesi, A. E. Vergani, F. Piscitelli, E. Mammei, E. Bonizzoni, P. Malcovati, and P. Pulici, "A 0.13-um BiCMOS, 130-MHz Bandwidth Interface Circuit With Noise Canceling for HDD Fly-Height Resistive Sensors," *IEEE Solid-State Circuits Letters*, vol. 6, pp. 289–292, 2023.

[J12] H. Fan, H. Yue, E. Bonizzoni, Q. Feng, and Q. Wei, "Modeling of Three-Axis Hall Effect Sensor Based on CMOS Process," *IEEE Sensors Journal*, vol. 23, no. 20, pp. 24686–24695, 2023.

[J13] E. Moisello, A. Liotta, P. Malcovati, and E. Bonizzoni, "Recent Trends and Challenges in Near-Field Wireless Power Transfer Systems," *IEEE Open Journal of the Solid-State Circuits Society*, vol. 3, pp. 197–213, 2023.

[J14] E. Moisello, M. E. Castagna, A. L. Malfa, G. Bruno, P. Malcovati, and E. Bonizzoni, "Reference Temperature Sensor for TMOS-Based Thermal Detectors," *IEEE Access*, vol. 11, pp. 96594–96602, 2023.

[J15] E. Moisello, C. M. Ippolito, G. Bruno, P. Malcovati, and E. Bonizzoni, "A MOS-Based Temperature Sensor With Inherent Inaccuracy Reduction Enabled by Time-Domain Operation," *IEEE Transactions on Instrumentation and Measurement*, vol. 72, pp. 1–10, 2023.

[J16] L. Novaresi, P. Malcovati, A. Mazzanti, and E. Bonizzoni, "A Bipolar 3-Level High-Voltage Pulser for Highly Integrated Ultrasound Imaging Systems," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 70, no. 5, pp. 1709–1713, 2023.

[J17] H. Fan, H. Xie, Q. Feng, E. Bonizzoni, H. Heidari, M. P. McEwan, and R. Ghannam, "Interdisciplinary Project-Based Learning: Experiences and Reflections From Teaching Electronic Engineering in China," *IEEE Transactions on Education*, vol. 66, no. 1, pp. 73–82, 2023.

[J18] S. Fusetto, A. Aprile, P. Malcovati, and E. Bonizzoni, "Readout IC Architectures and Strategies for Uncooled Micro-Bolometers Infrared Focal Plane Arrays: A Review," *Sensors*, vol. 23, no. 5, 2023.

[J19] A. Gemelli, M. Tambussi, S. Fusetto, A. Aprile, E. Moisello, E. Bonizzoni, and P. Malcovati, "Recent Trends in Structures and Interfaces of MEMS Transducers for Audio Applications: A Review," *Micromachines*, vol. 14, no. 4, 2023.

[J20] E. Moisello, M. Vaiana, M. E. Castagna, G. Bruno, I. Brouk, Y. Nemirovsky, P. Malcovati, and E. Bonizzoni, "A MEMS-CMOS Microsystem for Contact-Less Temperature Measurements," *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 69, no. 1, pp. 75–87, 2022.

[J21] E. Moisello, M. E. Castagna, A. L. Malfa, G. Bruno, P. Malcovati, and E. Bonizzoni, "High Responsivity Thermopile Sensors Featuring a Mosaic Structure," *Micromachines*, vol. 13, no. 6, 2022.

[J22] A. Aprile, E. Bonizzoni, and P. Malcovati, "Temperature-to-Digital Convertersolution, Trends and Techniques across the Last Two Decades: A Review," *Micromachines*, vol. 13, no. 11, 2022.

[J23] D. Livornesi, A. E. Vergani, F. Piscitelli, E. Mammei, M. M. Abdevand, E. Bonizzoni, P. Malcovati, and P. Pulici, "A 130-nm BiCMOS, 2-nV/$\sqrt{Hz}$ Input-Referred Noise Interface Circuit for Multiple Resistive Sensors," *IEEE Solid-State Circuits Letters*, vol. 5, pp. 304–307, 2022.

[J24] W. A. Qureshi, A. Salimath, E. Botti, F. Maloberti, and E. Bonizzoni, "An Incremental-$\Sigma\Delta$ ADC With 106-dB DR for Reconfigurable Class-D Audio Amplifiers," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 69, no. 3, pp. 929–933, 2022.

[J25] E. Moisello, P. Malcovati, and E. Bonizzoni, "Thermal sensors for contactless temperature measurements, occupancy detection, and automatic operation of appliances during the covid-19 pandemic: A review," *Micromachines*, vol. 12, no. 2, pp. 1–20, 2021.

[J26] N. Lupo, M. Bartolini, P. Pulici, S. Colli, M. Nessi, and E. Bonizzoni, "On the Linearity of BJT-Based Current-Mode DAC Drivers," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 68, no. 9, pp. 3138–3142, 2021.

[J27] F. Mao, Y. Lu, E. Bonizzoni, F. Boera, M. Huang, F. Maloberti, and R. P. Martins, "A Hybrid Single-Inductor Bipolar-Output DCC Converter With Floating Negative Output for AMOLED Displays," *IEEE Journal of Solid-State Circuits*, vol. 56, no. 9, pp. 2760–2769, 2021.

[J28] W.-L. Zeng, E. Bonizzoni, C.-W. U, C.-S. Lam, S.-W. Sin, U.-F. Chio, F. Maloberti, and R. P. Martins, "A SAR-ADC-Assisted DC-DC Buck Converter With Fast Transient Recovery," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 67, no. 9, pp. 1669–1673, 2020.

[J29] R. K. Siddharth, Y. Jaya Satyanarayana, Y. B. Nithin Kumar, M. H. Vasantha, and E. Bonizzoni, "A 1-v, 3-ghz strong-arm latch voltage comparator for high speed applications," *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 67, no. 12, pp. 2918–2922, 2020.

[J30] 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*, vol. 67, no. 8, pp. 1384–1388, 2019.

[J31] 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.

[J32] 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.

[J33] 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.

[J34] 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.

[J35] 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.

[J36] 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.

[J37] 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) Syestems*, vol. 26, no. 8, pp. 1452–1460, 2018.

[J38] 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.

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