Fabio Pareschi

List of Publications by Year
in descending order

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106	1,577	471371	345118
papers	citations	17 h-index	36 g-index

108	108	108	1260
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	From Chaos to Pseudorandomness: A Case Study on the 2-D Coupled Map Lattice. IEEE Transactions on Cybernetics, 2023, 53, 1324-1334.	6.2	12
2	Compressed Sensing by Phase Change Memories: Coping with Encoder non-Linearities. , 2021, , .		4
3	Stability and Mismatch Robustness of a Leakage Current Cancellation Technique. , 2021, , .		0
4	A Comparison between Class-E DC-DC Design Methodologies for Wireless Power Transfer. , 2021, , .		0
5	An architecture for ultra-low-voltage ultra-low-power compressed sensing-based acquisition systems. , 2021, , .		0
6	Compressed Sensing Inspired Neural Decoder for Undersampled MRI with Self-Assessment. , 2021, , .		0
7	An MCU Implementation of PCA/PSA Streaming Algorithms for EEG Features Extraction. , 2021, , .		1
8	Class-E Isolated DCâ€“DC Converter With High-Rate and Cost-Effective Bidirectional Data Channel. IEEE Transactions on Power Electronics, 2020, 35, 5304-5318.	5.4	3
9	Low-Power Fixed-Point Compressed Sensing Decoder with Support Oracle. , 2020, , .		2
10	A Wireless Power Transfer System for Biomedical Implants based on an isolated Class-E DC-DC Converter with Power Regulation Capability. , 2020, , .		2
11	A Methodology for Practical Design and Optimization of Class-E DC-DC Resonant Converters. IEEE Access, 2020, 8, 205568-205589.	2.6	3
12	Through-The-Barrier Communications in Isolated Class-E Converters Embedding a Low-K Transformer. , 2020, , .		1
13	A fully CMOS true random number generator based on hidden attractor hyperchaotic system. Nonlinear Dynamics, 2020, 102, 2887-2904.	2.7	14
14	Adapted Compressed Sensing: A Game Worth Playing. IEEE Circuits and Systems Magazine, 2020, 20, 40-60.	2.6	11
15	A passive and low-complexity Compressed Sensing architecture based on a charge-redistribution SAR ADC. The Integration VLSI Journal, 2020, 75, 40-51.	1.3	3
16	Deep Neural Oracles for Short-window Optimized Compressed Sensing of Biosignals. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 1-1.	2.7	14
17	Subspace Energy Monitoring for Anomaly Detection @Sensor or @Edge. IEEE Internet of Things Journal, 2020, 7, 7575-7589.	5.5	13
18	A 65nm Continuous-Time Sigma-Delta Modulator With Limited OTA DC Gain Compensation. IEEE Access, 2020, 8, 36464-36475.	2.6	7

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19	Geometric constraints in sensing matrix design for compressed sensing. Signal Processing, 2020, 171, 107498.	2.1	2
20	Low-power ECG acquisition by Compressed Sensing with Deep Neural Oracles. , 2020, , .		4
21	Deep Neural Oracle With Support Identification in the Compressed Domain. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2020, 10, 458-468.	2.7	6
22	A Practical Architecture for SAR-based ADCs with Embedded Compressed Sensing Capabilities. , 2019, , .		1
23	Frequency-Domain Characterization of Power Inductors for Class-E Resonant Converters. , 2019, , .		1
24	A High-level Implementation Framework for Non-Recurrent Artificial Neural Networks on FPGA. , 2019, , .		1
25	Rakeness-Based Compressed Sensing of Atrial Electrograms for the Diagnosis of Atrial Fibrillation. , 2019, , .		1
26	An Energy-Efficient Multi-Sensor Compressed Sensing System Employing Time-Mode Signal Processing Techniques. , 2019, , .		4
27	A Unified Design Theory for Class-E Resonant DCâ€“DC Converter Topologies. IEEE Access, 2019, 7, 83825-83838.	2.6	11
28	Tuning a Resonant DC/DC Converter on the Second Harmonic for Improving Performance: A Case Study. , 2019, , .		1
29	Chained Compressed Sensing for Iot Node Security. , 2019, , .		1
30	Chained Compressed Sensing: A Blockchain-Inspired Approach for Low-Cost Security in IoT Sensing. IEEE Internet of Things Journal, 2019, 6, 6465-6475.	5.5	17
31	Impact of Dead Times on Radiated Emissions of Integrated and Discrete DC-DC Converter. , 2019, , .		1
32	Guest Editorial Special Issue on the 2017 IEEE International Symposium on Circuits and Systems (ISCAS) Tj ETQq0 0 0 rgBT /Overlock 10	3.5	0
33	Resource Redistribution in Internet of Things applications by Compressed Sensing: A Survey. , 2018, , .		0
34	Rakeness-Based Compressed Sensing of Multiple-Graph Signals for IoT Applications. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 682-686.	2.2	8
35	Adaptive Matrix Design for Boosting Compressed Sensing. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 1016-1027.	3.5	9
36	On the Security of a Class of Diffusion Mechanisms for Image Encryption. IEEE Transactions on Cybernetics, 2018, 48, 1163-1175.	6.2	92

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37	Low-Cost Security of IoT Sensor Nodes With Rakeness-Based Compressed Sensing: Statistical and Known-Plaintext Attacks. IEEE Transactions on Information Forensics and Security, 2018, 13, 327-340.	4.5	28
38	Impact of the Spread-Spectrum Technique on the Higher-Order Harmonics and Radiated Emissions of a Synchronous Buck Converter. , 2018, , .		0
39	Disturbance Rejection With Rakeness-based Compressed Sensing: Method and Application to Baseline/Powerline Mitigation in ECGs. , 2018, , .		1
40	Rakeness-based Compressed Sensing of Surface ElectroMyoGraphy for Improved Hand Movement Recognition in the Compressed Domain. , 2018, , .		2
41	Projected-Gradient-Descent in Rakeness-Based Compressed Sensing with Disturbance Rejection. , 2018, , .		0
42	Exploiting the Security Aspects of Compressive Sampling. Security and Communication Networks, 2018, 2018, 1-1.	1.0	0
43	Administering Quality-Energy Trade-Off in IoT Sensing Applications by Means of Adapted Compressed Sensing. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 895-907.	2.7	5
44	Rakeness-Based Compressed Sensing and Hub Spreading to Administer Short/Long-Range Communication Tradeoff in IoT Settings. IEEE Internet of Things Journal, 2018, 5, 2220-2233.	5.5	5
45	Architectures for Compressed Sensing. , 2018, , 139-167.		0
46	Analog-to-Information Conversion. , 2018, , 169-210.		1
47	Low-Complexity Biosignal Compression Using Compressed Sensing. , 2018, , 211-254.		1
48	Security at the Analog-to-Information Interface Using Compressed Sensing. , 2018, , 255-319.		0
49	From Universal to Adapted Acquisition: Rake That Signal!. , 2018, , 57-82.		0
50	Adapted Compressed Sensing for Effective Hardware Implementations. , 2018, , .		14
51	Rakeness-Based Design of Low-Complexity Compressed Sensing. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 1201-1213.	3.5	47
52	Energy Analysis of Decoders for Rakeness-Based Compressed Sensing of ECG Signals. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 1278-1289.	2.7	27
53	Zeroing for HW-efficient compressed sensing architectures targeting data compression in wireless sensor networks. Microprocessors and Microsystems, 2017, 48, 69-79.	1.8	16
54	Sparse sensing matrix based compressed sensing in low-power ECG sensor nodes. , 2017, , .		3

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55	Low-complexity greedy algorithm in compressed sensing for the adapted decoding of ECGs. , 2017, , .		1
56	Countering the false myth of democracy: Boosting compressed sensing performance with maximum-energy approach. , 2017, , .		1
57	Rakeness and beyond in zero-complexity digital compressed sensing: A down-to-bits case study. , 2016, , .		0
58	Application of compressed sensing to ECG signals: Decoder-side benefits of the rakeness approach. , 2016, , .		2
59	Low-power EEG monitor based on compressed sensing with compressed domain noise rejection. , 2016, , .		6
60	Design of buck DC-DC converters from the linear quadratic regulator approach. , 2016, , .		1
61	Implicit notch filtering in compressed sensing by spectral shaping of sensing matrix. , 2016, , .		1
62	Low cost mobile EEG for characterization of cortical auditory responses. , 2016, , .		8
63	Security analysis of rakeness-based compressed sensing. , 2016, , .		3
64	Hardware-Algorithms Co-Design and Implementation of an Analog-to-Information Converter for Biosignals Based on Compressed Sensing. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 149-162.	2.7	85
65	An Analytical Approach for the Design of Class-E Resonant DCâ€“DC Converters. IEEE Transactions on Power Electronics, 2016, 31, 7701-7713.	5.4	42
66	Long-Term ECG monitoring with zeroing Compressed Sensing approach. , 2015, , .		2
67	A new semi-analytic approach for class-E resonant DC-DC converter design. , 2015, , .		3
68	Application of spread-spectrum techniques to class-E DC/DC converters: some preliminary results. , 2015, , .		2
69	Average recovery performances of non-perfectly informed compressed sensing: With applications to multiclass encryption. , 2015, , .		3
70	EMI Reduction via Spread Spectrum in DC/DC Converters: State of the Art, Optimization, and Tradeoffs. IEEE Access, 2015, 3, 2857-2874.	2.6	107
71	Low-Complexity Multiclass Encryption by Compressed Sensing. IEEE Transactions on Signal Processing, 2015, , 1-1.	3.2	90
72	A Case Study in Low-Complexity ECG Signal Encoding: How Compressing is Compressed Sensing?. IEEE Signal Processing Letters, 2015, 22, 1743-1747.	2.1	33

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73	Ripple-based power-line communication in switching DC-DC converters exploiting switching frequency modulation. , 2015, , .		8
74	A Soft-Defined Pulse Width Modulation Approachâ€"Part I: Principles. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 2280-2289.	3.5	1
75	A Soft-Defined Pulse Width Modulation Approachâ€"Part II: System Modeling. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 2290-2300.	3.5	1
76	A first implementation of a semi-analytically designed class-E resonant DC-DC converter. , 2015, , .		3
77	On Known-Plaintext Attacks to a Compressed Sensing-Based Encryption: A Quantitative Analysis. IEEE Transactions on Information Forensics and Security, 2015, 10, 2182-2195.	4.5	75
78	Leakage compensation in analog random modulation pre-integration architectures for biosignal acquisition. , 2014, , .		2
79	Short-term Optimized Spread Spectrum Clock Generator for EMI Reduction in Switching DC/DC Converters. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 3044-3053.	3.5	27
80	Practical Optimization of EMI Reduction in Spread Spectrum Clock Generators With Application to Switching DC/DC Converters. IEEE Transactions on Power Electronics, 2014, 29, 4646-4657.	5.4	84
81	A two-class information concealing system based on compressed sensing. , 2013, , .		27
82	Correlation tuning in compressive sensing based on rakeness: A case study. , 2013, , .		5
83	On the usage of resonate and fire dynamics in the complex oscillationâ€based test approach. International Journal of Circuit Theory and Applications, 2013, 41, 1290-1317.	1.3	3
84	A rakeness-based design flow for Analog-to-Information conversion by Compressive Sensing. , 2013, , .		25
85	Coping with saturating projection stages in RMPI-based Compressive Sensing. , 2012, , .		7
86	A Pragmatic Look at Some Compressive Sensing Architectures With Saturation and Quantization. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2012, 2, 443-459.	2.7	100
87	On Statistical Tests for Randomness Included in the NIST SP800-22 Test Suite and Based on the Binomial Distribution. IEEE Transactions on Information Forensics and Security, 2012, 7, 491-505.	4.5	117
88	A spread spectrum clock generator based on a short-term optimized chaotic map. , 2011, , .		2
89	Spectral shaping of spreading sequences as a mean to address the trade-off between narrowband and multi-access interferences in UWB systems. Nonlinear Theory and Its Applications IEICE, 2011, 2, 386-399.	0.4	1
90	A Pseudorandom Number Generator Based on Time-Variant Recursion of Accumulators. IEEE Transactions on Circuits and Systems II: Express Briefs, 2011, 58, 580-584.	2.2	10

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91	Resonate and fire dynamics in Complex Oscillation Based Test of analog filters. , 2011, , .		3
92	Complex Oscillation-Based Test and Its Application to Analog Filters. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 956-969.	3.5	22
93	A 3-GHz Serial ATA Spread-Spectrum Clock Generator Employing a Chaotic PAM Modulation. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 2577-2587.	3.5	37
94	STATISTICAL TESTING OF A CHAOS BASED CMOS TRUE-RANDOM NUMBER GENERATOR. Journal of Circuits, Systems and Computers, 2010, 19, 897-910.	1.0	4
95	Implementation and Testing of High-Speed CMOS True Random Number Generators Based on Chaotic Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 3124-3137.	3.5	122
96	Power analysis of a chaos-based Random Number Generator for cryptographic security. , 2009, , .		12
97	Circuits and Systems for the Synthesis of Chaotic Signals in Engineering Applications. Studies in Computational Intelligence, 2009, , 173-196.	0.7	1
98	Implementation of Low EMI Spread Spectrum Clock Generators Exploiting a Chaos-Based Jitter. Studies in Computational Intelligence, 2009, , 145-171.	0.7	1
99	A 3 GHz Spread Spectrum Clock Generator for SATA applications using chaotic PAM modulation. , 2008, , .		5
100	On the approximation errors in the frequency test included in the NIST SP800-22 statistical test suite. , 2008, , .		1
101	Second-level testing revisited and applications to NIST SP800-22. , 2007, , .		1
102	Second-level NIST Randomness Tests for Improving Test Reliability. , 2007, , .		25
103	A Fast Chaos-based True Random Number Generator for Cryptographic Applications. , 2006, , .		46
104	PERIODICITY AS CONDITION TO NOISE ROBUSTNESS FOR CHAOTIC MAPS WITH PIECEWISE CONSTANT INVARIANT DENSITY. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 3391-3400.	0.7	1
105	A Macro-Model for the Efficient Simulation of an ADC-based RNG. , 0, , .		1
106	Chaos-based high-EMC spread-spectrum clock generator. , 0, , .		7