Andrea De Marcellis

List of Publications by Year
in descending order

120	1,644	279798	345221
papers	citations	23 h-index	36 g-index

126	126	126	1164
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design of a metasurface-based dual-band Terahertz perfect absorber with very high <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml72" display="inline" overflow="scroll" altimg="si11.gif"><mml:mi>Q</mml:mi></mml:math>-factors for sensing applications. Optics Communications, 2018, 416, 152-159.	2.1	89
2	Low-voltage low-power integrated analog lock-in amplifier for gas sensor applications. Sensors and Actuators B: Chemical, 2010, 144, 400-406.	7.8	72
3	Integration of GMR Sensors with Different Technologies. Sensors, 2016, 16, 939.	3.8	70
4	Analog Circuits and Systems for Voltage-Mode and Current-Mode Sensor Interfacing Applications. Analog Circuits and Signal Processing Series, 2011, , .	0.3	68
5	The VCG-CCII: a novel building block and its application to capacitance multiplication. Analog Integrated Circuits and Signal Processing, 2009, 58, 55-59.	1.4	52
6	A CMOS Integrable Oscillator-Based Front End for High-Dynamic-Range Resistive Sensors. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 1596-1604.	4.7	51
7	A CCII-Based Low-Voltage Low-Power Read-Out Circuit for DC-Excited Resistive Gas Sensors. IEEE Sensors Journal, 2009, 9, 2035-2041.	4.7	51
8	A Fully-Analog Lock-In Amplifier With Automatic Phase Alignment for Accurate Measurements of ppb Gas Concentrations. IEEE Sensors Journal, 2012, 12, 1377-1383.	4.7	49
9	The influence of thermal and visible light activation modes on the NO 2 response of WO 3 nanofibers prepared by electrospinning. Sensors and Actuators B: Chemical, 2016, 229, 387-395.	7.8	48
10	A single-chip integrated interfacing circuit for wide-range resistive gas sensor arrays. Sensors and Actuators B: Chemical, 2009, 143, 218-225.	7.8	46
11	Novel Modified De-Sauty Autobalancing Bridge-Based Analog Interfaces for Wide-Range Capacitive Sensor Applications. IEEE Sensors Journal, 2014, 14, 1664-1672.	4.7	46
12	A New and Fast-Readout Interface for Resistive Chemical Sensors. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 1276-1283.	4.7	43
13	Uncalibrated Analog Bridge-Based Interface for Wide-Range Resistive Sensor Estimation. IEEE Sensors Journal, 2012, 12, 1413-1414.	4.7	41
14	A novel low-voltage low-power fully differential voltage and current gained CCII for floating impedance simulations. Microelectronics Journal, 2009, 40, 20-25.	2.0	40
15	Fast, Versatile, and Low-Cost Interface Circuit for Electrochemical and Resistive Gas Sensor. IEEE Sensors Journal, 2014, 14, 315-323.	4.7	33
16	Metasurface based on cross-shaped plasmonic nanoantennas as chemical sensor for surface-enhanced infrared absorption spectroscopy. Sensors and Actuators B: Chemical, 2019, 286, 600-607.	7.8	32
17	Preparation of nitrogen doped TiO2 nanofibers by near field electrospinning (NFES) technique for NO2 sensing. Sensors and Actuators B: Chemical, 2013, 179, 107-113.	7.8	31
18	Analog Wheatstone bridge-based automatic interface for grounded and floating wide-range resistive sensors. Sensors and Actuators B: Chemical, 2013, 187, 371-378.	7.8	30

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19	Uncalibrated integrable wide-range single-supply portable interface for resistance and parasitic capacitance determination. Sensors and Actuators B: Chemical, 2008, 132, 477-484.	7.8	29
20	Novel CMOS fully integrable interface for wide-range resistive sensor arrays with parasitic capacitance estimation. Sensors and Actuators B: Chemical, 2008, 130, 207-215.	7.8	29
21	A true random number generator architecture based on a reduced number of FPGA primitives. AEU - International Journal of Electronics and Communications, 2019, 105, 15-23.	2.9	28
22	One-Decade Frequency Range, In-Phase Auto-Aligned 1.8 V 2 mW Fully Analog CMOS Integrated Lock-In Amplifier for Small/Noisy Signal Detection. IEEE Sensors Journal, 2016, 16, 5690-5701.	4.7	27
23	Autonomous robot for cleaning photovoltaic panels in desert zones. Mechatronics, 2020, 68, 102372.	3.3	27
24	A CCIIâ€based wide frequency range square waveform generator. International Journal of Circuit Theory and Applications, 2013, 41, 1-13.	2.0	25
25	A CCIIâ€based nonâ€inverting Schmitt trigger and its application as astable multivibrator for capacitive sensor interfacing. International Journal of Circuit Theory and Applications, 2017, 45, 1060-1076.	2.0	24
26	Current-Mode High-Accuracy High-Precision CMOS Amplifiers. IEEE Transactions on Circuits and Systems II: Express Briefs, 2008, 55, 394-398.	3.0	22
27	Low Voltage Integrated Astable Multivibrator Based on a Single CCII. , 2007, , .		21
28	A novel 6-decades fully-analog uncalibrated Wheatstone bridge-based resistive sensor interface. Sensors and Actuators B: Chemical, 2013, 189, 130-140.	7.8	21
29	A CMOS integrated low-voltage low-power time-controlled interface for chemical resistive sensors. Sensors and Actuators B: Chemical, 2013, 179, 313-318.	7.8	20
30	A Novel Analog Autocalibrating Phase-Voltage Converter for Signal Phase-Shifting Detection. IEEE Sensors Journal, 2011, 11, 259-266.	4.7	19
31	Monolithic integration of Giant Magnetoresistance (GMR) devices onto standard processed CMOS dies. Microelectronics Journal, 2014, 45, 702-707.	2.0	18
32	Uncalibrated operational amplifierâ€based sensor interface for capacitive/resistive sensor applications. IET Circuits, Devices and Systems, 2015, 9, 249-255.	1.4	18
33	A Capacitance-to-Time Converter-Based Electronic Interface for Differential Capacitive Sensors. Electronics (Switzerland), 2019, 8, 80.	3.1	18
34	${m WO}_{3}$ Hydrogen Resistive Gas Sensor and Its Wide-Range Current-Mode Electronic Read-Out Circuit. IEEE Sensors Journal, 2013, 13, 2792-2798.	4.7	17
35	Design Optimisation of Plasmonic Metasurfaces for Mid-Infrared High-Sensitivity Chemical Sensing. Plasmonics, 2017, 12, 293-298.	3.4	17
36	NIC-based capacitance multipliers for low-frequency integrated active filter applications. , 2007, , .		16

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37	An Integrated Analog Lock-In Amplifier for Low-Voltage Low-Frequency Sensor Interface. , 2007, , .		16
38	A Pulsed Coding Technique Based on Optical UWB Modulation for High Data Rate Low Power Wireless Implantable Biotelemetry. Electronics (Switzerland), 2016, 5, 69.	3.1	16
39	Monolithic integration of GMR sensors for standard CMOS-IC current sensing. Solid-State Electronics, 2017, 135, 100-104.	1.4	16
40	A new single-chip analog lock-in amplifier with automatic phase and frequency tuning for physical/chemical noisy phenomena detection. , 2013, , .		14
41	Quasiâ€digital frontâ€ends for current measurement in integrated circuits with giant magnetoresistance technology. IET Circuits, Devices and Systems, 2014, 8, 291-300.	1.4	13
42	Current-Based Measurement Technique for High Sensitivity Detection of Resistive Bridges With External Balancing Through Control Voltages. IEEE Sensors Journal, 2017, 17, 404-411.	4.7	13
43	Uncalibrated automatic bridge-based CMOS integrated interfaces for wide-range resistive sensors portable applications. Microelectronics Journal, 2014, 45, 589-596.	2.0	12
44	Differential measurements of light power variations through Si photodiodes in a bridge configuration for high-sensitivity chemical/biological optical sensing. Sensors and Actuators B: Chemical, 2017, 246, 305-309.	7.8	12
45	Low-Cost Portable 1 MHz Lock-In Amplifier for Fast Measurements of Pulsed Signals in Sensing Applications. , 2017, 1, 1-4.		12
46	A rail-to-rail DC-enhanced adaptive biased fully differential OTA. , 2007, , .		11
47	A Fully Analog High Performances Automatic System for Phase Measurement of Electrical and Optical Signals. IEEE Transactions on Instrumentation and Measurement, 2015, 64, 1043-1054.	4.7	11
48	Analog automatic lock-in amplifier for very low gas concentration detection. Procedia Engineering, 2010, 5, 200-203.	1.2	10
49	A complementary metal oxide semiconductorâ€"integrable conditioning circuit for resistive chemical sensor management. Measurement Science and Technology, 2011, 22, 124001.	2.6	9
50	A novel current-based approach for very low variation detection of resistive sensors in wheatstone bridge configuration. , 2014, , .		9
51	A 250Mbps 24pJ/bit UWB-inspired optical communication system for bioimplants. , 2017, , .		9
52	A 300 Mbps 37 pJ/bit UWB-Based Transcutaneous Optical Biotelemetry Link. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 1-1.	4.0	9
53	High sensitivity, high resolution, uncalibrated phase read-out circuit for optoelectronic detection of chemical substances. Sensors and Actuators B: Chemical, 2013, 179, 328-335.	7.8	8
54	NO 2 Gas Response of WO 3 Nanofibers by Light and Thermal Activation. Procedia Engineering, 2015, 120, 791-794.	1.2	8

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55	An Ultra-Wideband-Inspired System-on-Chip for an Optical Bidirectional Transcutaneous Biotelemetry. , 2018, , .		8
56	Laser Transmission Spectroscopy Based on Tunable-Gain Dual-Channel Dual-Phase LIA for Biological Nanoparticles Characterization. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 177-187.	4.0	8
57	A novel general purpose current mode oscillating circuit for the read-out of capacitive sensors. , 2009, , .		7
58	A novel time-controlled interface circuit for resistive sensors. , 2011, , .		7
59	Electrical self-modulation of optical sensors for light power measurement in chemical applications by phase detection technique. Sensors and Actuators B: Chemical, 2014, 193, 375-383.	7.8	7
60	CCII-based interface for capacitive/resistive sensors. , 2011, , .		6
61	A novel LV LP CMOS internal topology of CCII+ and its application in current-mode integrated circuits. , 2009, , .		5
62	Magnetic Tunnel Junction (MTJ) sensors for integrated circuits (IC) electric current measurement. , 2013, , .		5
63	Very highâ€sensitivity tunable phase detection of light power variations using electrical modulation of Siâ€photodiode in photovoltaic regime. Electronics Letters, 2015, 51, 282-284.	1.0	5
64	A 1.8 V Low-Power Low-Noise High Tunable Gain TIA for CMOS Integrated Optoelectronic Biomedical Applications. Electronics (Switzerland), 2022, 11, 1271.	3.1	5
65	A New CMOS Integrable Oscillating Circuit for High-Value Wide-Range Resistive Sensors. , 2007, , .		4
66	A fully-differential Symmetrical OTA-based rail-to-rail Switched Buffer. , 2007, , .		4
67	Integrated CMOS resistance-to-period converter with parasitic capacitance evaluation. , 2009, , .		4
68	A Novel Uncalibrated Read-Out Circuit for Floating Capacitive and Grounded/Floating Resistive Sensors Measurement. Procedia Engineering, 2012, 47, 253-256.	1.2	4
69	Resistive Sensor Interfacing. Smart Sensors, Measurement and Instrumentation, 2013, , 71-102.	0.6	4
70	High-Sensitivity High-Resolution Optical Phase Shift Detection Technique Using a Si Photodiode Operating in Photovoltaic Mode. IEEE Sensors Journal, 2015, 15, 6898-6903.	4.7	4
71	High-Sensitivity Differential Interface for the Detection of Energy Variations of Nanosecond Laser Pulses for Spectroscopic Applications. IEEE Sensors Journal, 2018, , 1-1.	4.7	4
72	An Uncalibrated Wide-Range Single-Supply Integrable Front-End for Resistance and Capacitance Estimation. , 2007, , .		3

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73	On The Sensitivity Characteristics in Novel Automatic Wheatstone Bridge-Based Interfaces. Procedia Engineering, 2012, 47, 261-264.	1.2	3
74	Low-cost Discrete Off-the-shelf Components 1MHz Analogue Lock-in Amplifier for Fast Detection of Organic Compounds through Pulsed Lasers. Procedia Engineering, 2016, 168, 1714-1716.	1.2	3
75	Metamodelling technique for the efficient design optimisation of metasurfaces. Electronics Letters, 2016, 52, 1191-1192.	1.0	3
76	CCII-Based Voltage Amplifier Optimization for Reduced Relative Gain Error. Circuits, Systems, and Signal Processing, 2018, 37, 1315-1326.	2.0	3
77	FPGA-Based Tactile Sensory Feedback System with Optical Fiber Data Communication Link for Prosthetic Applications. , 2019, , .		3
78	CMOS Capacitance-to-Time Converter-Based Interface for Differential Capacitive Sensors. , 2020, , .		3
79	A Fully-Analogue Light-to-Frequency Converter Circuit for Optical Sensing Applications. IEEE Sensors Journal, 2022, 22, 16120-16130.	4.7	3
80	High-Accuracy, High-Precision DEM-CCII Amplifiers. , 2007, , .		2
81	A novel low-voltage low-power Second Generation Current Conveyor-based front-end for high-valued DC-excitated resistive sensors. , 2008, , .		2
82	A new interface for resistive chemical sensors with low measuring time. , 2009, , .		2
83	Quasi-digital conversion for resistive devices: Application in GMR-based IC current sensors. , 2013, , .		2
84	Giant Magnetoresistance (GMR) sensors for 0.35µm CMOS technology sub-mA current sensing. , 2014, , .		2
85	A new 0.35Î¼m CMOS electronic interface for wide range floating capacitive and grounded/floating resistive sensor applications. Microelectronics Journal, 2014, 45, 910-920.	2.0	2
86	Photodiode Bridge-Based Differential Readout Circuit for High-Sensitivity Measurements of Energy Variations of Laser Pulses for Optoelectronic Sensing Systems. , 2018, , .		2
87	A Current-Mode TransImpedance Amplifier for Capacitive Sensors. Proceedings (mdpi), 2018, 2, .	0.2	2
88	Portable Lock-In Amplifier-Based Optoelectronic Readout Circuit for High-Sensitivity Differential Measurements of Laser Pulse Energy Variations. Journal of Low Power Electronics, 2019, 15, 87-94.	0.6	2
89	Battery-Powered Autonomous Robot for Cleaning of Dusty Photovoltaic Panels in Desert Zones. Advances in Intelligent Systems and Computing, 2018, , 653-661.	0.6	2
90	A New Multilevel Pulsed Modulation Technique for Low Power High Data Rate Optical Biotelemetry. , 2021, , .		2

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91	A CMOS Integrable DDCCII-Based Readout System For Portable Potentiometric Sensors Array. , 2009, , .		1
92	Uncalibrated Current-Mode Oscillator For Resistive Gas Sensor Integrable Applications. , 2009, , .		1
93	Very high sensitivity electrically modulated Si-photodiode in photovoltaic-mode as phase-sensitive detector of light power. , 2014, , .		1
94	A New Optical UWB Modulation Technique for 250Mbps Wireless Link in Implantable Biotelemetry Systems. Procedia Engineering, 2016, 168, 1676-1680.	1.2	1
95	Metasurface-Based THz Dual-Band Absorber Sensor for the Measurement of Refractive Index Variations of Chemical and Biological Substances. Proceedings (mdpi), 2017, 1, .	0.2	1
96	Balanced Laser Transmission Spectroscopy Based on a Tunable Gain Double Channel LIA for Nanoparticles Detection in Biomedical Applications. , 2019, , .		1
97	Impulse-Based Asynchronous Serial Communication Protocol on Optical Fiber Link for AER Systems. , 2019, , .		1
98	The Current-Mode Approach in Sensor Interfaces Design. Analog Circuits and Signal Processing Series, 2011, , 155-179.	0.3	1
99	CCII-BASED OSCILLATOR FOR SENSOR INTERFACE. , 2008, , .		1
100	P2.9.6 Analog Wheatstone Bridge-Based Automatic Interface for Grounded and Floating Wide-Range Resistive Sensors. , 2012, , .		1
101	Non-Inverting CCII-based Astable Multivibrator and Its Application as Uncalibrated Wide-Range Capacitive Sensor Interface. Lecture Notes in Electrical Engineering, 2015, , 291-295.	0.4	1
102	A New, Fast Readout, Interface For High-value Resistive Chemical Sensors. , 2009, , .		0
103	Optical Measurements by Phase Shift Based Technique for High Sensitivity and High Resolution Detection of Chemical/Biological Substances. Procedia Engineering, 2015, 120, 1187-1190.	1.2	0
104	Optimisation of the Detection Sensitivity of Plasmonic Nanoantenna Based Sensors for Mid-infrared Spectroscopy. Procedia Engineering, 2015, 120, 1179-1182.	1.2	0
105	Current-Based High-Sensitivity Differential Detection of Light Power Using Si Photodiodes in Bridge Configuration for Chemical/Biological Optical Sensing. Procedia Engineering, 2016, 168, 1300-1303.	1.2	0
106	Bandwidth Optimisation and Frequency Tuning of Plasmonic Functionalised Metasurfaces for Optical Sensing of Chemical and Biological Substances. Procedia Engineering, 2016, 168, 1329-1333.	1.2	0
107	A 0.35Î¼m CMOS 200kHzâ€“2GHz Fully-Analogue Closed-Loop Circuit for Continuous-Time Clock Duty-Cycle Correction in Integrated Digital Systems. , 2018, , .		0
108	Selected Articles from the NGCAS 2018 Conference. Journal of Low Power Electronics, 2019, 15, 27-29.	0.6	0

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109	Live Demonstration: Tactile Sensory Feedback System based on UWB Optical Link for Prosthetics. , 2019, , .		0
110	A 0.35Î¼m CMOS UWB-Inspired Bidirectional Communication System-on-Chip for Transcutaneous Optical Biotelemetry Links. , 2019, , .		0
111	Fast-Response Paradigm of Si Photodiode Array to Increase the Effective Sensitive Area of Detectors in Wireless Optical Biotelemetry Links. , 2020, , .		0
112	UNCALIBRATED HIGH-DYNAMIC RANGE RESISTIVE SENSOR FRONT-END WITH PARALLEL CAPACITANCE ESTIMATION. , 2008, , .		0
113	A 77 HZ LOCK-IN AMPLIFIER FOR SENSOR APPLICATIONS. , 2008, , .		0
114	The Voltage-Mode Approach in Sensor Interfaces Design. , 2011, , 75-153.		0
115	Detection of Small and Noisy Signals in Sensor Interfacing: The Analog Lock-in Amplifier. , 2011, , 181-204.		0
116	A CCII-Based Oscillating Circuit as Resistive/Capacitive Humidity Sensor Interface. Lecture Notes in Electrical Engineering, 2012, , 293-299.	0.4	0
117	An Analog Automatic Lock-In Amplifier for the Accurate Detection of Very Low Gas Concentrations. Lecture Notes in Electrical Engineering, 2012, , 285-291.	0.4	0
118	Integrable Electronic Interface for Chemical Sensor Management. Lecture Notes in Electrical Engineering, 2014, , 475-479.	0.4	0
119	Automatic Analog Wheatstone Bridge for Wide-Range Resistive Sensor Interfacing Applications. Lecture Notes in Electrical Engineering, 2014, , 535-539.	0.4	0
120	A Novel Light-to-Frequency Converter Based Analog Front-End for Optical Sensing Applications. , 2021, , .		0