Chris Van Hoof

List of Publications by Year
in descending order

298 papers	8,987 citations	53794 45 h-index	58581 82 g-index
313 all docs	313 docs citations	313 times ranked	8041 citing authors

#	Article	IF	Citations
1	A Compact, Low-Power Analog Front-End With Event-Driven Input Biasing for High-Density Neural Recording in 22-nm FDSOI. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 804-808.	3.0	10
2	Characterizing and Modeling Smoking Behavior Using Automatic Smoking Event Detection and Mobile Surveys in Naturalistic Environments: Observational Study. JMIR MHealth and UHealth, 2022, 10, e28159.	3.7	2
3	A Backside-Illuminated Charge-Focusing Silicon SPAD With Enhanced Near-Infrared Sensitivity. IEEE Transactions on Electron Devices, 2022, 69, 1129-1136.	3.0	11
4	A 256-Channel Actively-Multiplexed ÂµECoG Implant with Column-Parallel Incremental $DeltaSigma$ ADCs Employing Bulk-DACs in 22-nm FDSOI Technology. , 2022, , .		4
5	Measuring Health-Related Quality of Life With Multimodal Data: Viewpoint. Journal of Medical Internet Research, 2022, 24, e35951.	4.3	3
6	Wearable Multiple Modality Bio-Signal Recording and Processing on Chip: A Review. IEEE Sensors Journal, 2021, 21, 1108-1123.	4.7	24
7	Assessing the signal quality of electrocardiograms from varied acquisition sources: A generic machine learning pipeline for model generation. Computers in Biology and Medicine, 2021, 130, 104164.	7.0	12
8	F3: Silicon Technologies in the Fight Against Pandemics - From Point of Care to Computational Epidemiology. , 2021, , .		0
9	Session 28 Overview: Biomedical Systems. , 2021, , .		0
10	A 108 dB DR Î”â^'â^'M Front-End With 720 mV_{pp} Input Range and >Â±300 mV Offset Removal for Multi-Parameter Biopotential Recording. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 199-209.	4.0	18
11	Artefact Detection in Impedance Pneumography Signals: A Machine Learning Approach. Sensors, 2021, 21, 2613.	3.8	9
12	Wearable Bioimpedance Monitoring: Viewpoint for Application in Chronic Conditions. JMIR Biomedical Engineering, 2021, 6, e22911.	1.2	12
13	A Near-Infrared Enhanced Silicon Single-Photon Avalanche Diode With a Spherically Uniform Electric Field Peak. IEEE Electron Device Letters, 2021, 42, 879-882.	3.9	21
14	Twenty-Four-Hour Heart Rate Is a Trait but Not State Marker for Depression in a Pilot Randomized Controlled Trial With a Single Infusion of Ketamine. Frontiers in Psychiatry, 2021, 12, 696170.	2.6	5
15	Performance and limitation estimation of a three-tap gated imaging sensor in wide field time-gated fluorescence lifetime imaging systems. Applied Optics, 2021, 60, 7446.	1.8	1
16	Pulse Arrival Time Segmentation Into Cardiac and Vascular Intervals â€“ Implications for Pulse Wave Velocity and Blood Pressure Estimation. IEEE Transactions on Biomedical Engineering, 2021, 68, 2810-2820.	4.2	21
17	Technical aspects of cardiorespiratory estimation using subspace projections and cross entropy. Physiological Measurement, 2021, 42, 115008.	2.1	2
18	Enabling Robust Radar-Based Localization and Vital Signs Monitoring in Multipath Propagation Environments. IEEE Transactions on Biomedical Engineering, 2021, 68, 3228-3240.	4.2	37

#	Article	IF	Citations
19	Supervised SVM Transfer Learning for Modality-Specific Artefact Detection in ECG. Sensors, 2021, 21, 662.	3.8	2
20	A 134 DB Dynamic Range Noise Shaping Slope Light-to-Digital Converter for Wearable Chest PPG Applications. IEEE Transactions on Biomedical Circuits and Systems, 2021, 15, 1224-1235.	4.0	9
21	LSTM-only Model for Low-complexity HR Estimation from Wrist PPG. , 2021, 2021, 1068-1071.		3
22	Towards personalized fluid monitoring in haemodialysis patients: thoracic bioimpedance signal shows strong correlation with fluid changes, a cohort study. BMC Nephrology, 2020, 21, 264.	1.8	12
23	Reveal Temporal Patterns of Smoking Behavior in Real Life Using Data Acquired through Automatic Tracking Systems. , 2020, 2020, 6005-6008.		0
24	Miniaturized Electronic Circuit Design Challenges for Ingestible Devices. Journal of Microelectromechanical Systems, 2020, 29, 645-652.	2.5	16
25	An Artificial Iris ASIC with High Voltage Liquid Crystal Driver, 10 nA Light Range Detector and 40 nA Blink Detector for LCD Flicker Removal. , 2020, , .		2
26	Short-Term Exercise Progression of Cardiovascular Patients throughout Cardiac Rehabilitation: An Observational Study. Journal of Clinical Medicine, 2020, 9, 3160.	2.4	2
27	An Artificial Iris ASIC With High Voltage Liquid Crystal Driver, 10-nA Light Range Detector and 40-nA Blink Detector for LCD Flicker Removal. IEEE Solid-State Circuits Letters, 2020, 3, 506-509.	2.0	7
28	A 119dB Dynamic Range Charge Counting Light-to-Digital Converter For Wearable PPG/NIRS Monitoring Applications. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 800-810.	4.0	30
29	Binary CorNET: Accelerator for HR Estimation From Wrist-PPG. IEEE Transactions on Biomedical Circuits and Systems, 2020, 14, 715-726.	4.0	27
30	A 50Î¼W Fully Differential Interface Amplifier With a Current Steering Class AB Output Stage for PPG and NIRS Recordings. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 1564-1568.	3.0	7
31	Wearable Monitoring and Interpretable Machine Learning Can Objectively Track Progression in Patients during Cardiac Rehabilitation. Sensors, 2020, 20, 3601.	3.8	22
32	Color lens-free imaging using multi-wavelength illumination based phase retrieval. Optics Express, 2020, 28, 33002.	3.4	10
33	The Added Value of In-Hospital Tracking of the Efficacy of Decongestion Therapy and Prognostic Value of a Wearable Thoracic Impedance Sensor in Acutely Decompensated Heart Failure With Volume Overload: Prospective Cohort Study. JMIR Cardio, 2020, 4, e12141.	1.7	17
34	Using Biosensors and Digital Biomarkers to Assess Response to Cardiac Rehabilitation: Observational Study. Journal of Medical Internet Research, 2020, 22, e17326.	4.3	13
35	Relationship Between Chronic Stress and Heart Rate Over Time Modulated by Gender in a Cohort of Office Workers: Cross-Sectional Study Using Wearable Technologies. Journal of Medical Internet Research, 2020, 22, e18253.	4.3	13
36	Thin-film interference filters illuminated by tilted apertures. Applied Optics, 2020, 59, A112.	1.8	3

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37	A 196Î¼W, Reconfigurable Light-to-Digital Converter with 119dB Dynamic Range, for Wearable PPG/NIRS Sensors. , 2019, , .		12
38	A Wearable Wrist-Band with Compressive Sensing based Ultra-Low Power Photoplethysmography Readout Circuit. , 2019, , .		8
39	Toward Quantifying the Psychopathology of Eating Disorders From the Autonomic Nervous System Perspective: A Methodological Approach. Frontiers in Neuroscience, 2019, 13, 606.	2.8	3
40	Digital Linear Discrete FMCW Radar for Healthcare Applications. , 2019, , .		12
41	A 5-Channel Unipolar Fetal-ECG Readout IC for Patch-Based Fetal Monitoring. IEEE Solid-State Circuits Letters, 2019, 2, 71-74.	2.0	7
42	Physiological Driver Monitoring Using Capacitively Coupled and Radar Sensors. Applied Sciences (Switzerland), 2019, 9, 3994.	2.5	21
43	Artefact detection and quality assessment of ambulatory ECG signals. Computer Methods and Programs in Biomedicine, 2019, 182, 105050.	4.7	38
44	A Bio-Impedance Readout IC With Digital-Assisted Baseline Cancellation for Two-Electrode Measurement. IEEE Journal of Solid-State Circuits, 2019, 54, 2969-2979.	5.4	35
45	A 769 Î¼W Battery-Powered Single-Chip SoC With BLE for Multi-Modal Vital Sign Monitoring Health Patches. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 1506-1517.	4.0	87
46	Introduction to Compressive Sampling (CS). Analog Circuits and Signal Processing Series, 2019, , 33-53.	0.3	1
47	Challenges and Opportunities in Wearable Biomedical Interfaces. Analog Circuits and Signal Processing Series, 2019, , 1-9.	0.3	0
48	A 400 GÎ© Input-Impedance Active Electrode for Non-Contact Capacitively Coupled ECG Acquisition With Large Linear-Input-Range and High CM-Interference-Tolerance. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 376-386.	4.0	46
49	Vital-sign monitoring and spatial tracking of multiple people using a contactless radar-based sensor. Nature Electronics, 2019, 2, 252-262.	26.0	190
50	Heart Rate Estimation From Wrist-Worn Photoplethysmography: A Review. IEEE Sensors Journal, 2019, 19, 6560-6570.	4.7	157
51	22.1 A 769Î¼W Battery-Powered Single-Chip SoC With BLE for Multi-Modal Vital Sign Health Patches. , 2019, , .		9
52	22.5 A Bio-Impedance Readout IC With Digital-Assisted Baseline Cancellation for 2-Electrode Measurement. , 2019, , .		8
53	Motion Artifact Reduction for Wrist-Worn Photoplethysmograph Sensors Based on Different Wavelengths. Sensors, 2019, 19, 673.	3.8	89
54	Ambulatory Smoking Habits Investigation based on Physiology and Context (ASSIST) using wearable sensors and mobile phones: protocol for an observational study. BMJ Open, 2019, 9, e028284.	1.9	6

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55	Spectral Shift Correction for Fabry-Perot Based Spectral Cameras. , 2019, , .		1
56	Investigation of Heart Rate Changes before and during/after Smoking Events in Free Living Conditions. , 2019, , .		0
57	Nightingale V2: Low-power Compact-sized Multi-Sensor Platform for Wearable Health Monitoring. , 2019, 2019, 1290-1293.		8
58	Bioimpedance Method for Human Body Hydration Assessment. , 2019, 2019, 6036-6039.		4
59	BioTranslator: Inferring R-Peaks from Ambulatory Wrist-Worn PPG Signal. , 2019, 2019, 4241-4245.		5
60	Real-time HR Estimation from wrist PPG using Binary LSTMs. , 2019, , .		9
61	Capacitive multi-electrode array with real-time electrode selection for unobtrusive ECG & BIOZ monitoring. , 2019, 2019, 5621-5624.		14
62	A 5-Channel Unipolar Fetal-ECG Readout IC for Patch-Based Fetal Monitoring. , 2019, , .		1
63	CorNET: Deep Learning Framework for PPG-Based Heart Rate Estimation and Biometric Identification in Ambulant Environment. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 282-291.	4.0	188
64	Compressed Domain Feature Extraction. Analog Circuits and Signal Processing Series, 2019, , 55-67.	0.3	0
65	A Low-Power Compressive Sampling (CS) Photoplethysmogram (PPG) Readout with Embedded Feature Extraction. Analog Circuits and Signal Processing Series, 2019, , 69-94.	0.3	0
66	Into the Wild: The Challenges of Physiological Stress Detection in Laboratory and Ambulatory Settings. IEEE Journal of Biomedical and Health Informatics, 2019, 23, 463-473.	6.3	63
67	Vignetted-aperture correction for spectral cameras with integrated thin-film Fabryâ€“Perot filters. Applied Optics, 2019, 58, 1789.	1.8	10
68	Accelerometer-based Sleep/Wake Detection in an Ambulatory Environment. , 2019, , .		1
69	Adaptive Sampling for Ultra-Low-Power Electrocardiogram (ECG) Readouts. Analog Circuits and Signal Processing Series, 2019, , 11-31.	0.3	2
70	Electron transport response de-embedding for high-speed image sensors. , 2019, , .		0
71	Exit pupil localization to correct spectral shift in thin-film Fabry-Perot spectral cameras. OSA Continuum, 2019, 2, 2217.	1.8	1
72	P64 Carotid Artery Tracking with Automated Wall Position Resets Yields Robust Distension Waveforms in Long-term Ultrasonic Recordings. Artery Research, 2019, 25, S106-S107.	0.6	1

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73	Review of Bio-Amplifier Architectures. Analog Circuits and Signal Processing Series, 2018, , 11-21.	0.3	2
74	A Digital Active Electrode System. Analog Circuits and Signal Processing Series, 2018, , 93-114.	0.3	0
75	An Eight-Channel Active Electrode System. Analog Circuits and Signal Processing Series, 2018, , 49-68.	0.3	0
76	A Direct Phase-Tracking Doppler Radar Using Wavelet Independent Component Analysis for Non-Contact Respiratory and Heart Rate Monitoring. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 632-643.	4.0	71
77	A 36 Î¼W 1.1 mm² Reconfigurable Analog Front-End for Cardiovascular and Respiratory Signals Recording. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 774-783.	4.0	34
78	Current Noise of Chopper Amplifiers. Analog Circuits and Signal Processing Series, 2018, , 69-92.	0.3	0
79	Sensor Fusion of Capacitively Coupled ECG and Continuous-Wave Doppler Radar for Improved Unobtrusive Heart Rate Measurements. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 316-328.	3.6	12
80	An Active Electrode Readout Circuit. Analog Circuits and Signal Processing Series, 2018, , 23-47.	0.3	0
81	A silicon-based neural probe with densely-packed low-impedance titanium nitride microelectrodes for ultrahigh-resolution in vivo recordings. Biosensors and Bioelectronics, 2018, 106, 86-92.	10.1	61
82	Unsupervised heart-rate estimation in wearables with Liquid states and a probabilistic readout. Neural Networks, 2018, 99, 134-147.	5.9	55
83	Direct on-chip DNA synthesis using electrochemically modified gold electrodes as solid support. Japanese Journal of Applied Physics, 2018, 57, 04FM01.	1.5	3
84	A 665Î¼W silicon photomultiplier-based NIRS/EEG/EIT monitoring asic for wearable functional brain imaging. , 2018, , .		6
85	An Ultra-low Power, Robust Photoplethysmographic Readout Exploiting Compressive Sampling, Artifact Reduction, and Sensor Fusion. , 2018, , 145-163.		3
86	Time-Based Biomedical Readout in Ultra-Low-Voltage, Small-Scale CMOS Technology. , 2018, , 311-333.		0
87	Advances in Biomedical Sensor Systems for Wearable Health. , 2018, , 121-143.		2
88	A 400GÎ© Input-Impedance, 220MV<inf>pp</inf> Linear-Input-Range, 2.8V<inf>pp</inf> CM-Interference-Tolerant Active Electrode for Non-Contact Capacitively Coupled ECG Acquisition. , 2018, , .		5
89	A Data Driven Empirical Iterative Algorithm for GSR Signal Pre-Processing. , 2018, , .		12
90	A 665 Î¼W Silicon Photomultiplier-Based NIRS/EEG/EIT Monitoring ASIC for Wearable Functional Brain Imaging. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 1267-1277.	4.0	44

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91	Large-scale wearable data reveal digital phenotypes for daily-life stress detection. Npj Digital Medicine, 2018, 1, 67.	10.9	145
92	Finite aperture correction for spectral cameras with integrated thin-film Fabryâ€“Perot filters. Applied Optics, 2018, 57, 7539.	1.8	21
93	Evaluation of a Multichannel Non-Contact ECG System and Signal Quality Algorithms for Sleep Apnea Detection and Monitoring. Sensors, 2018, 18, 577.	3.8	45
94	Comparing taskâ€induced psychophysiological responses between persons with stressâ€related complaints and healthy controls: A methodological pilot study. Health Science Reports, 2018, 1, e60.	1.5	5
95	Measurement and Analysis of Input-Signal Dependent Flicker Noise Modulation in Chopper Stabilized Instrumentation Amplifier. IEEE Solid-State Circuits Letters, 2018, 1, 90-93.	2.0	16
96	A 0.6V 3.8Î¼W ECG/bio-impedance monitoring IC for disposable health patch in 40nm CMOS. , 2018, , .		9
97	BiometricNet: Deep Learning based Biometric Identification using Wrist-Worn PPG. , 2018, , .		41
98	An Energy-Efficient and Reconfigurable Sensor IC for Bio-Impedance Spectroscopy and ECG Recording. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 616-626.	3.6	13
99	Unsupervised Learning for Mental Stress Detection. , 2018, , .		15
100	Active Electrodes for Wearable EEG Acquisition: Review and Electronics Design Methodology. IEEE Reviews in Biomedical Engineering, 2017, 10, 187-198.	18.0	118
101	A Neural Probe With Up to 966 Electrodes and Up to 384 Configurable Channels in 0.13 mum SOI CMOS. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 510-522.	4.0	151
102	Wearable sensors: can they benefit patients with chronic kidney disease?. Expert Review of Medical Devices, 2017, 14, 505-519.	2.8	41
103	A 172 muW Compressively Sampled Photoplethysmographic (PPG) Readout ASIC With Heart Rate Estimation Directly From Compressively Sampled Data. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 487-496.	4.0	48
104	Frequency-Tracking CW Doppler Radar Solving Small-Angle Approximation and Null Point Issues in Non-Contact Vital Signs Monitoring. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 671-680.	4.0	49
105	A bio-impedance readout IC with frequency sweeping from 1k-to-1MHz for electrical impedance tomography. , 2017, , .		19
106	Relation between estimated cardiorespiratory fitness and running performance in free-living: An analysis of HRV4Training data. , 2017, , .		10
107	A 0.6-V, 0.015-mm², Time-Based ECG Readout for Ambulatory Applications in 40-nm CMOS. IEEE Journal of Solid-State Circuits, 2017, 52, 298-308.	5.4	44
108	An Ultra-Low-Power Electrostatic Energy Harvester Interface. , 2017, , 343-352.		0

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109	A 36Î¼W reconfigurable analog front-end IC for multimodal vital signs monitoring. , 2017, , .		4
110	Digital IF phase-tracking doppler radar for accurate displacement measurements and vital signs monitoring. , 2017, , .		5
111	Intraneural active probe for bidirectional peripheral nerve interface. , 2017, , .		11
112	Time Multiplexed Active Neural Probe with 1356 Parallel Recording Sites. Sensors, 2017, 17, 2388.	3.8	141
113	The Double Layer Methodology and the Validation of Eigenbehavior Techniques Applied to Lifestyle Modeling. BioMed Research International, 2017, 2017, 1-15.	1.9	0
114	Development of Gated Pinned Avalanche Photodiode Pixels for High-Speed Low-Light Imaging. Sensors, 2016, 16, 1294.	3.8	6
115	Comparison of Machine Learning Techniques for Psychophysiological Stress Detection. Communications in Computer and Information Science, 2016, , 13-22.	0.5	28
116	A 17nA, 47.2dB dynamic range, adaptive sampling controller for online data rate reduction in low power ECG systems. , 2016, , .		2
117	SU8 etch mask for patterning PDMS and its application to flexible fluidic microactuators. Microsystems and Nanoengineering, 2016, 2, 16045.	7.0	27
118	28.5 A 0.6V 0.015mm2 time-based biomedical readout for ambulatory applications in 40nm CMOS. , 2016, , .		3
119	A Multi(bio)sensor Acquisition System With Integrated Processor, Power Management, $8 imes 8$ LED Drivers, and Simultaneously Synchronized ECG, BIO-Z, GSR, and Two PPG Readouts. IEEE Journal of Solid-State Circuits, 2016, 51, 2584-2595.	5.4	80
120	Multiplexed site-specific electrode functionalization for multitarget biosensors. Bioelectrochemistry, 2016, 112, 61-66.	4.6	13
121	Time multiplexed active neural probe with 678 parallel recording sites. , 2016, , .		34
122	Health-care improvements in a financially constrained environment. Lancet, The, 2016, 387, 646-647.	13.7	20
123	22.7 A 966-electrode neural probe with 384 configurable channels in 0.13Âµm SOI CMOS. , 2016, , .		46
124	A Monte Carlo simulator for noise analysis of avalanche photodiode pixels in low-light image sensing. Proceedings of SPIE, 2016, , .	0.8	0
125	22.4 A 172ÂµW compressive sampling photoplethysmographic readout with embedded direct heart-rate and variability extraction from compressively sampled data. , 2016, , .		24
126	28.4 A battery-powered efficient multi-sensor acquisition system with simultaneous ECG, BIO-Z, GSR, and PPG. , 2016, , .		29

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127	Silicon for prevention, cure and care: A technology toolbox of wearables at the dawn of a new health system. , 2015, , .		0
128	A novel feature extraction algorithm for on the sensor node processing of compressive sampled photoplethysmography signals. , 2015, , .		10
129	Co-design of a MEMS-CMOS autonomous switched oscillator. , 2015, , .		0
130	Congestive heart failure patient monitoring using wearable Bio-impedance sensor technology. , 2015, 2015, 438-41.		21
131	A low power configurable bio-impedance spectroscopy (BIS) ASIC with simultaneous ECG and respiration recording functionality. , 2015, , .		26
132	A 345 ÂµW Multi-Sensor Biomedical SoC With Bio-Impedance, 3-Channel ECG, Motion Artifact Reduction, and Integrated DSP. IEEE Journal of Solid-State Circuits, 2015, 50, 230-244.	5.4	256
133	Wearable Sensors for Healthier Pregnancies. Proceedings of the IEEE, 2015, 103, 179-191.	21.3	31
134	20.8 A 500nW batteryless integrated electrostatic energy harvester interface based on a DC-DC converter with 60V maximum input voltage and operating from 1μW available power, including MPPT and cold start. , 2015, , .		15
135	A 15-Channel Digital Active Electrode System for Multi-Parameter Biopotential Measurement. IEEE Journal of Solid-State Circuits, 2015, 50, 2090-2100.	5.4	92
136	Computationally-efficient compressive sampling for low-power pulseoximeter system. , 2014, , .		12
137	A 680 nA ECG Acquisition IC for Leadless Pacemaker Applications. IEEE Transactions on Biomedical Circuits and Systems, 2014, 8, 779-786.	4.0	34
138	Power Management for Vibrational Energy Harvesters. Advances in Science and Technology, 2014, 96, 108-116.	0.2	0
139	Soft, Comfortable Polymer Dry Electrodes for High Quality ECG and EEG Recording. Sensors, 2014, 14, 23758-23780.	3.8	177
140	A Wearable 8-Channel Active-Electrode EEG/ETI Acquisition System for Body Area Networks. IEEE Journal of Solid-State Circuits, 2014, 49, 2005-2016.	5.4	102
141	24.7 A 60nV/√Hz 15-channel digital active electrode system for portable biopotential signal acquisition. , 2014, , .		15
142	24.4 A 680nA fully integrated implantable ECG-acquisition IC with analog feature extraction. , 2014, , .		17
143	Self-calibration of walking speed estimations using smartphone sensors. , 2014, , .		13
144	A Configurable and Low-Power Mixed Signal SoC for Portable ECG Monitoring Applications. IEEE Transactions on Biomedical Circuits and Systems, 2014, 8, 257-267.	4.0	214

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145	18.3 A multi-parameter signal-acquisition SoC for connected personal health applications. , 2014, , .		49
146	Measurement and Analysis of Current Noise in Chopper Amplifiers. IEEE Journal of Solid-State Circuits, 2013, 48, 1575-1584.	5.4	70
147	A 155 /spl mu/W 88-dB DR Discrete-Time /spl Delta/ /spl Sigma/ Modulator for Digital Hearing Aids Exploiting a Summing SAR ADC Quantizer. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 573-582.	4.0	17
148	Fabrication process for tall, sharp, hollow, high aspect ratio polymer microneedles on a platform. Journal of Micromechanics and Microengineering, 2013, 23, 075023.	2.6	16
149	A 1-V 99-to-75dB SNDR, 256Hz–16kHz bandwidth, 8.6-to-39µW reconfigurable SC ΔΣ Modulator for autonomous biomedical applications. , 2013, , .		4
150	Motion artifact reduction in EEG recordings using multi-channel contact impedance measurements. , 2013, , .		17
151	Charge Retention in a Patterned ${m SiO}_{2}/{m Si}_{3}{m N}_{4}$ Electret. IEEE Sensors Journal, 2013, 13, 3369-3376.	4.7	6
152	Addressing the Healthcare Cost Dilemma by Managing Health instead of Managing Illness - An Opportunity for Wearable Wireless Sensors. , 2013, , .		0
153	Design, fabrication and testing of wafer-level thin film vacuum packages for MEMS based on nanoporous alumina membranes. Sensors and Actuators A: Physical, 2013, 189, 218-232.	4.1	8
154	Biologically Inspired CMOS Image Sensor for Fast Motion and Polarization Detection. IEEE Sensors Journal, 2013, 13, 1065-1073.	4.7	53
155	A 20µW intra-cardiac signal-processing IC with 82dB bio-impedance measurement dynamic range and analog feature extraction for ventricular fibrillation detection. , 2013, , .		9
156	A self-biased 5-to-60V input voltage and 25-to-1600µW integrated DC-DC buck converter with fully analog MPPT algorithm reaching up to 88% end-to-end efficiency. , 2013, , .		22
157	A High Voltage Self-Biased Integrated DC-DC Buck Converter With Fully Analog MPPT Algorithm for Electrostatic Energy Harvesters. IEEE Journal of Solid-State Circuits, 2013, 48, 3002-3010.	5.4	35
158	A 13 <formula formulatype="inline"><tex Notation="TeX">$mu {m A}$</tex></formula> Analog Signal Processing IC for Accurate Recognition of Multiple Intra-Cardiac Signals. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 785-795.	4.0	65
159	Ion-pair reversed-phase chromatography of short double-stranded deoxyribonucleic acid in silicon micro-pillar array columns: Retention model and applications. Journal of Chromatography A, 2013, 1294, 1-9.	3.7	20
160	24-channel dual-band wireless neural recorder with activity-dependent power consumption. , 2013, , .		11
161	A third-order complementary metalâ€“oxideâ€“semiconductor sigma-delta modulator operating between 4.2 K and 300 K. Review of Scientific Instruments, 2012, 83, 024708.	1.3	5
162	Silicon Based System for Single-Nucleotide-Polymorphism Detection: Chip Fabrication and Thermal Characterization of Polymerase Chain Reaction Microchamber. Japanese Journal of Applied Physics, 2012, 51, 04DL01.	1.5	15

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163	Real time digitally assisted analog motion artifact reduction in ambulatory ECG monitoring system. , 2012, 2012, 2096-9.		8
164	Multilayer Inorganic Electrets with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow><mml:mtext>SiO</mml:mtext></mml:mr mathvariant="bold">2</mml:mn></mml:msub></mml:mrow></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Si</mml:mtext></mml:mrow mathvariant="bold">3</mml:mn></mml:msub><mml:msub><mml:mtext>N</mml:mtext><mml:mn mathvariant="bold">4</mml:mn></mml:msub></mml:mrow></mml:math> for Charge Storage. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 1253-1260.	0.5	6
165	Charge injection and storage in single-layer and multilayer inorganic electrets based on SiO₂and Si₃N₄. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 1253-1260.	2.9	19
166	A Power-Optimal Design Methodology for High-Resolution Low-Bandwidth SC $DeltaSigma$ Modulators. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 2896-2904.	4.7	13
167	A 700µW 8-channel EEG/contact-impedance acquisition system for dry-electrodes. , 2012, , .		10
168	A 160 <formula formulatype="inline"><tex Notation="TeX">$mu{m A}$</tex></formula> Biopotential Acquisition IC With Fully Integrated IA and Motion Artifact Suppression. IEEE Transactions on Biomedical Circuits and Systems, 2012, 6, 552-561.	4.0	126
169	Power-Efficient Oscillator-Based Readout Circuit for Multichannel Resonant Volatile Sensors. IEEE Transactions on Biomedical Circuits and Systems, 2012, 6, 542-551.	4.0	16
170	Measurement and analysis of input current noise in chopper amplifiers. , 2012, , .		6
171	Novel miniaturized packaging for implantable electronic devices. , 2012, , .		1
172	A 155µW 88-dB DR discrete-time ΔΣ modulator for digital hearing aid applications. , 2012, , .		1
173	First Demonstration of Hybrid CMOS Imagers With Simultaneous Very Low Crosstalk and High-Broadband Quantum Efficiency. IEEE Transactions on Electron Devices, 2012, 59, 2723-2726.	3.0	2
174	Correlation Between Electrode-Tissue Impedance and Motion Artifact in Biopotential Recordings. IEEE Sensors Journal, 2012, 12, 3373-3383.	4.7	55
175	Elution behavior of short ds<scp>DNA</scp> strands in silicon micropillar array columns in ion pair reversedâ€phase chromatography mode. Electrophoresis, 2012, 33, 3205-3212.	2.4	3
176	SiGe MEMS at processing temperatures below 250 Â°C. Sensors and Actuators A: Physical, 2012, 188, 230-239.	4.1	5
177	Motion artifact removal using cascade adaptive filtering for ambulatory ECG monitoring system. , 2012, , .		6
178	Highâ€Damping Carbon Nanotube Hinged Micromirrors. Small, 2012, 8, 2006-2010.	10.0	10
179	Power-efficient readout circuit for miniaturized electronic nose. , 2012, , .		17
180	Bioelectronics for sustainable healthcare. , 2012, , .		0

#	Article	IF	Citations
181	A 160μA biopotential acquisition ASIC with fully integrated IA and motion-artifact suppression. , 2012, , .		11
182	Design and Characterization of a Biocompatible Packaging Concept for Implantable Electronic Devices. Journal of Microelectronics and Electronic Packaging, 2012, 9, 43-50.	0.7	3
183	AlGaN-on-Si-Based 10-$muhbox{m}$ Pixel-to-Pixel Pitch Hybrid Imagers for the EUV Range. IEEE Electron Device Letters, 2011, 32, 1561-1563.	3.9	15
184	A 160μW 8-channel active electrode system for EEG monitoring. , 2011, , .		34
185	Hierarchical Carbon Nanowire Microarchitectures Made by Plasma-Assisted Pyrolysis of Photoresist. ACS Nano, 2011, 5, 6593-6600.	14.6	55
186	Built-in Self-Limitation of Masked Aluminum Anodization using Photoresist. Procedia Engineering, 2011, 25, 1633-1636.	1.2	1
187	Challenges for Capillary Self-Assembly of Microsystems. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2011, 1, 133-149.	2.5	23
188	5μW-to-10mW input power range inductive boost converter for indoor photovoltaic energy harvesting with integrated maximum power point tracking algorithm. , 2011, , .		56
189	Motion artifact reduction in ambulatory ECG monitoring. , 2011, , .		22
190	A 30 muW Analog Signal Processor ASIC for Portable Biopotential Signal Monitoring. IEEE Journal of Solid-State Circuits, 2011, 46, 209-223.	5.4	246
191	A $160~mu {m W}$ 8-Channel Active Electrode System for EEG Monitoring. IEEE Transactions on Biomedical Circuits and Systems, 2011, 5, 555-567.	4.0	187
192	Integrated Polarization-Analyzing CMOS Image Sensor for Detecting the Incoming Light Ray Direction. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 2759-2767.	4.7	18
193	Integrated Polarization Analyzing CMOS Image Sensor for Material Classification. IEEE Sensors Journal, 2011, 11, 1692-1703.	4.7	78
194	Two-Dimensional Multi-Channel Neural Probes With Electronic Depth Control. IEEE Transactions on Biomedical Circuits and Systems, 2011, 5, 403-412.	4.0	51
195	Backside illuminated AlGaNâ€onâ€Si UV detectors integrated by high density flipâ€chip bonding. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2476-2478.	0.8	4
196	Development of cost-effective biocompatible packaging for microelectronic devices. , 2011, 2011, 7674-7.		2
197	Extreme ultraviolet detection using AlGaN-on-Si inverted Schottky photodiodes. Applied Physics Letters, 2011, 98, .	3.3	24
198	Ultra-Thin Chip Package (UTCP) and stretchable circuit technologies for wearable ECG system. , 2011, 2011, 6886-9.		18

#	Article	IF	Citations
199	A biologically inspired CMOS image sensor for polarization and fast motion detection. , 2011, , .		5
200	Contact Resistivity of Laser Annealed SiGe for MEMS Structural Layers Deposited at 210Â°C. Materials Research Society Symposia Proceedings, 2011, 1299, 1.	0.1	1
201	A mixed signal ECG processing platform with an adaptive sampling ADC for portable monitoring applications. , 2011, 2011, 2196-9.		7
202	Design of widely tunable Mexican hat wavelet filter for cardiac signal analysis. , 2011, , .		0
203	Enhanced broadband (11-15 Ã‚µm) QWIP FPAs for space applications. Proceedings of SPIE, 2010, , .	0.8	3
204	Integrated polarization-analyzing CMOS image sensor for detecting incoming light ray direction. , 2010, , .		11
205	Hybrid Thermoelectricâ€“Photovoltaic Generators in Wireless Electroencephalography Diadem and Electrocardiography Shirt. Journal of Electronic Materials, 2010, 39, 1674-1680.	2.2	34
206	Scaling the Suspended-Gate FET: Impact of Dielectric Charging and Roughness. IEEE Transactions on Electron Devices, 2010, 57, 804-813.	3.0	12
207	Pseudo-Two-Dimensional Model for Double-Gate Tunnel FETs Considering the Junctions Depletion Regions. IEEE Transactions on Electron Devices, 2010, 57, 827-834.	3.0	223
208	ECG Signal Compression and Classification Algorithm With Quad Level Vector for ECG Holter System. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 93-100.	3.2	121
209	Biologically inspired autonomous agent navigation using an integrated polarization analyzing CMOS image sensor. Procedia Engineering, 2010, 5, 673-676.	1.2	26
210	Integrated polarization analyzing CMOS Image sensor for autonomus navigation using polarized light. , 2010, , .		18
211	An IC-centric biocompatible chip encapsulation fabrication process. , 2010, , .		2
212	Integrated polarization-analyzing CMOS image sensor. , 2010, , .		11
213	Shaping interconnect technology for an interconnected society. , 2010, , .		0
214	A cryogenic analog to digital converter operating from 300 K down to 4.4 K. Review of Scientific Instruments, 2010, 81, 024702.	1.3	29
215	Early results on wrist based heart rate monitoring using mechanical transducers. , 2010, 2010, 4407-10.		7
216	A high aspect ratio SU-8 fabrication technique for hollow microneedles for transdermal drug delivery and blood extraction. Journal of Micromechanics and Microengineering, 2010, 20, 064006.	2.6	70

#	Article	IF	Citations
217	Ultra low power wireless ECG system with beat detection and real time impedance measurement. , 2010, , .		14
218	A low-power, wireless, 8-channel EEG monitoring headset. , 2010, 2010, 4197-200.		54
219	A 30µW Analog Signal Processor ASIC for biomedical signal monitoring. , 2010, , .		28
220	A 2.4µA continuous-time electrode-skin impedance measurement circuit for motion artifact monitoring in ECG acquisition systems. , 2010, , .		19
221	Selective laser annealing for improved SiGe MEMS structural layers at 210°C. , 2010, , .		2
222	Agent-based modeling of mems fluidic self-assembly. , 2010, , .		3
223	Renewable energy microsystems integrated in maintenance-free wearable and textile-based devices: The capabilities and challenges. , 2010, , .		11
224	A low power ECG signal processor for ambulatory arrhythmia monitoring system. , 2010, , .		28
225	A 0.5mW high dynamic range fast CMOS charge preamplifier. , 2010, , .		1
226	Thermomechanical design and modeling of porous alumina-based thin film packages for MEMS. , 2010, , .		4
227	10 µm pixel-to-pixel pitch hybrid backside illuminated AlGaN-on-Si imagers for solar blind EUV radiation detection. , 2010, , .		8
228	Two-dimensional multi-channel neural probes with electronic depth control. , 2010, , .		6
229	A biologically inspired collision detection algorithm using differential optic flow imaging. , 2010, , .		2
230	An Integrated Circuit for Wireless Ambulatory Arrhythmia Monitoring Systems. , 2009, 2009, 5409-12.		6
231	Laser-Induced Crystallization of SiGe MEMS Structural Layers Deposited at Temperatures Below 250Â°C. Materials Research Society Symposia Proceedings, 2009, 1153, 1.	0.1	3
232	Ultra-low-power biopotential interfaces and their applications in wearable and implantable systems. Microelectronics Journal, 2009, 40, 1313-1321.	2.0	64
233	Saw-tooth vernier ratchets for electrostatic inchworm actuators. Sensors and Actuators A: Physical, 2009, 156, 66-71.	4.1	11
234	Realization of a wearable miniaturized thermoelectric generator for human body applications. Sensors and Actuators A: Physical, 2009, 156, 95-102.	4.1	222

#	Article	IF	Citations
235	Thermoelectric and Hybrid Generators in Wearable Devices and Clothes. , 2009, , .		27
236	P300 Detection Based on Feature Extraction in On-line Brain-Computer Interface. Lecture Notes in Computer Science, 2009, , 339-346.	1.3	16
237	Harvesting energy from the motion of human limbs: the design and analysis of an impact-based piezoelectric generator. Smart Materials and Structures, 2009, 18, 035001.	3.5	218
238	Potential and challenges of body area networks for personal health. , 2009, 2009, 6569-72.		24
239	Is there a sweet spot for energy harvesting?. , 2009, , .		4
240	An 8-Bit Flash Analog-to-Digital Converter in Standard CMOS Technology Functional From 4.2 K to 300 K. IEEE Journal of Solid-State Circuits, 2009, 44, 2019-2025.	5.4	20
241	Capacitive Power Management Circuit for Micropower Thermoelectric Generators With a 1.4 muA Controller. IEEE Journal of Solid-State Circuits, 2009, 44, 2824-2833.	5.4	100
242	Characterization and optimization of polycrystalline Si_{70%}Ge_{30%}for surface micromachined thermopiles in human body applications. Journal of Micromechanics and Microengineering, 2009, 19, 094011.	2.6	23
243	Introduction to Biopotential Acquisition. Analog Circuits and Signal Processing Series, 2009, , 5-19.	0.3	2
244	Biopotential Readout Front-End ASICs. Analog Circuits and Signal Processing Series, 2009, , 39-78.	0.3	0
245	A Complete Biopotential Acquisition ASIC. Analog Circuits and Signal Processing Series, 2009, , 79-134.	0.3	0
246	Wireless Biopotential Acquisition Systems. Analog Circuits and Signal Processing Series, 2009, , 135-145.	0.3	1
247	24-Channel EEG Readout Front-End ASIC. Analog Circuits and Signal Processing Series, 2009, , 21-37.	0.3	0
248	Wearable Autonomous Wireless Electro-encephalography System Fully Powered by Human Body Heat. , 2008, , .		31
249	Capacitive Power-Management Circuit for Micropower Thermoelectric Generators with a 2.1Â¿W Controller. Digest of Technical Papers - IEEE International Solid-State Circuits Conference, 2008, , .	0.0	8
250	A 200 Î¼W Eight-Channel EEG Acquisition ASIC for Ambulatory EEG Systems. IEEE Journal of Solid-State Circuits, 2008, 43, 3025-3038.	5.4	199
251	Process technology for the fabrication of a Chip-in-Wire style packaging. , 2008, , .		2
252	Influence of Extreme Thinning on 130-nm Standard CMOS Devices for 3-D Integration. IEEE Electron Device Letters, 2008, 29, 322-324.	3.9	16

#	Article	IF	Citations
253	A 200Î¼W Eight-Channel Acquisition ASIC for Ambulatory EEG Systems. , 2008, , .		41
254	Characterization of interconnects resulting from capillary die-to-substrate self-assembly. , 2008, , .		6
255	Reduction of Electrical Crosstalk in Hybrid Backside Illuminated CMOS Imagers using Deep Trench Isolation. , 2008, , .		8
256	The NeuroProbes project: A concept for electronic depth control. , 2008, 2008, 1857.		18
257	TD: Electronics for Life Sciences. , 2008, , .		0
258	Wireless Vestibular Evoked Myogenic Potentials System. IEEE Sensors Journal, 2008, 8, 1941-1947.	4.7	1
259	Human++: From technology to emerging health monitoring concepts. , 2008, , .		48
260	The Photodetector Array Camera and Spectrometer (PACS) for the Herschel Space Observatory. Proceedings of SPIE, 2008, , .	0.8	35
261	Development of a Si:As blocked impurity band detector for far IR detection. Proceedings of SPIE, 2007, , .	0.8	5
262	A Cryogenic ADC operating Down to 4.2K. , 2007, , .		14
263	TD: Proximity Data and Power Transmission. , 2007, , .		1
264	Leveling of Microvias by Electroplating for Wafer Level Packaging. ECS Transactions, 2007, 6, 123-133.	0.5	12
265	A 60 muW 60 nV/$surd$Hz Readout Front-End for Portable Biopotential Acquisition Systems. IEEE Journal of Solid-State Circuits, 2007, 42, 1100-1110.	5.4	308
266	Ultra-Low-Power Interface Chip for Autonomous Capacitive Sensor Systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2007, 54, 130-140.	0.1	96
267	Thermoelectric Converters of Human Warmth for Self-Powered Wireless Sensor Nodes. IEEE Sensors Journal, 2007, 7, 650-657.	4.7	323
268	Optimization of a piezoelectric unimorph for shock and impact energy harvesting. Smart Materials and Structures, 2007, 16, 1125-1135.	3.5	69
269	Ultra-low power biopotential interfaces and their application in wearable and implantable systems. , 2007, , .		2
270	Flight Qualification and Circuit Development of Sensor Front-End Electronics for PACS/Hershel at Liquid Helium Temperature. Journal of Microelectronics and Electronic Packaging, 2007, 4, 130-135.	0.7	2

#	Article	IF	Citations
271	High performance Hybrid and Monolithic Backside Thinned CMOS Imagers realized using a new integration process. , 2006, , .		18
272	Human++: Emerging Technology for Body Area Networks. , 2006, , .		44
273	Body-Heat Powered Autonomous Pulse Oximeter. , 2006, , .		46
274	Development of vertical and tapered via etch for 3D through wafer interconnect technology. , 2006, , .		23
275	Low-noise low-power readout electronics circuit development in standard CMOS technology for 4 K applications. , 2006, , .		9
276	The photodetector array camera and spectrometer (PACS) for the Herschel Space Observatory. , 2006, 6265, 69.		12
277	Alumina Porous Membranes Obtained by One-Step Anodizing Process in H2SO4 for MEMS Packaging. ECS Transactions, 2006, 3, 75-83.	0.5	1
278	Low-Power Low-Noise 8-Channel EEG Front-End ASIC for Ambulatory Acquisition Systems. , 2006, , .		23
279	Prostate-specific antigen immunosensing based on mixed self-assembled monolayers, camel antibodies and colloidal gold enhanced sandwich assays. Biosensors and Bioelectronics, 2005, 21, 483-490.	10.1	209
280	Metal induced crystallization of SiGe at 370Â°C for monolithically integrated MEMS applications. Materials Research Society Symposia Proceedings, 2004, 808, 12.	0.1	4
281	PHYSICS: The Best Materials for Tiny, Clever Sensors. Science, 2004, 306, 986-987.	12.6	17
282	High-density hybrid interconnect methodologies. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 531, 202-208.	1.6	21
283	High-density hybrid interconnect technologies. , 2004, , .		0
284	Development of imaging arrays for solar UV observations based on wide band gap materials. , 2004, , .		11
285	A low-noise low-power readout electronics circuit at 4 K in standard CMOS technology for PACS/Herschel. , 2004, 5498, 622.		4
286	Effect of deposition parameters on the stress gradient of CVD and PECVD poly-SiGe for MEMS applications. , 2004, , .		10
287	The photodetector array camera and spectrometer (PACS) for the Herschel Space Observatory. , 2004, , .		8
288	Extended-wavelength InGaAs on GaAs hybrid image sensors. , 2003, , .		5

#	Article	IF	Citations
289	Extended wavelength InGaAs on GaAs using InAlAs buffer for back-side-illuminated short-wave infrared detectors. Applied Physics Letters, 2003, 82, 2838-2840.	3.3	31
290	Polycrystalline SiGe technology for uncooled microbolometer arrays. , 2003, , .		2
291	Poly-SiGe, a superb material for MEMS. Materials Research Society Symposia Proceedings, 2003, 782, 1.	0.1	19
292	The LEDA512 integrated circuit anode array for the analog recording of mass spectra. International Journal of Mass Spectrometry, 2002, 215, 77-87.	1.5	21
293	Characteristics of InAs0.8Sb0.2photodetectors on GaAs substrates. Semiconductor Science and Technology, 2001, 16, 992-996.	2.0	14
294	A complementary metalâ€“oxideâ€“semiconductor anode array chip with two rows of 512 anodes and dual integrated analog read-out circuitry. Review of Scientific Instruments, 2000, 71, 4300.	1.3	5
295	InSb infrared pâ€“iâ€“n photodetectors grown on GaAs coated Si substrates by molecular beam epitaxy. Solid-State Electronics, 1998, 42, 1039-1044.	1.4	10
296	Sequential hole tunneling inn-type AlAs/GaAs resonant-tunneling structures from time-resolved photoluminescence. Physical Review B, 1992, 46, 6982-6989.	3.2	16
297	Exciton dynamics in GaAs/AlGaAs multiple quantum wells investigated by picosecond reflectivity and luminescence measurements. Journal of Luminescence, 1992, 53, 431-434.	3.1	0
298	Structural And Compositional Characterization Of Semiconductor Multilayers By Modulation Spectroscopies.. Proceedings of SPIE, 1989, , .	0.8	0