

Syed Kamrul Islam

List of Publications by Year in descending order

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109
papers

1,171
citations

430874

18
h-index

454955

30
g-index

110
all docs

110
docs citations

110
times ranked

1283
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-Voltage Bulk-Driven Operational Amplifier With Improved Transconductance. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 2084-2091.	5.4	126
2	EGFET-Based Sensors for Bioanalytical Applications: A Review. Sensors, 2018, 18, 4042.	3.8	104
3	A Low-Power Wireless Piezoelectric Sensor-Based Respiration Monitoring System Realized in CMOS Process. IEEE Sensors Journal, 2017, 17, 1858-1864.	4.7	78
4	A 200â€‰%âˆ°C Universal Gate Driver Integrated Circuit for Extreme Environment Applications. IEEE Transactions on Power Electronics, 2012, 27, 4153-4162.	7.9	48
5	Low-Power Low-Voltage Current Readout Circuit for Inductively Powered Implant System. IEEE Transactions on Biomedical Circuits and Systems, 2010, 4, 205-213.	4.0	44
6	Effects of temperature variation (300â€‰âˆ“600 K) in MOSFET modeling in 6Hâˆ“silicon carbide. Solid-State Electronics, 2004, 48, 125-132.	1.4	39
7	A miniaturized transcutaneous system for continuous glucose monitoring. Biomedical Microdevices, 2013, 15, 151-160.	2.8	34
8	A low power sensor signal processing circuit for implantable biosensor applications. Smart Materials and Structures, 2007, 16, 525-530.	3.5	30
9	A Glucose Biosensor Using CMOS Potentiostat and Vertically Aligned Carbon Nanofibers. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 807-816.	4.0	30
10	Temperature dependency of MOSFET device characteristics in 4H- and 6H-silicon carbide (SiC). Solid-State Electronics, 2004, 48, 1877-1881.	1.4	28
11	A reagentless enzymatic amperometric biosensor using vertically aligned carbon nanofibers (VACNF). Sensors and Actuators B: Chemical, 2008, 133, 53-59.	7.8	28
12	A Low-Power 1-V Potentiostat for Glucose Sensors. IEEE Transactions on Circuits and Systems II: Express Briefs, 2015, 62, 204-208.	3.0	27
13	PVDF Sensor Stimulated by Infrared Radiation for Temperature Monitoring in Microfluidic Devices. Sensors, 2017, 17, 850.	3.8	26
14	Power-oscillator based high efficiency inductive power-link for transcutaneous power transmission. , 2010, , .		24
15	Pyroelectric Sensor for Temperature Monitoring of Biological Fluids in Microchannel Devices. IEEE Sensors Journal, 2014, 14, 2725-2730.	4.7	24
16	Medical Devices for Pediatric Apnea Monitoring and Therapy: Past and New Trends. IEEE Reviews in Biomedical Engineering, 2017, 10, 199-212.	18.0	23
17	A Mediator Free Amperometric Bienzomatic Glucose Biosensor Using Vertically Aligned Carbon Nanofibers (VACNFs). IEEE Sensors Journal, 2011, 11, 2798-2804.	4.7	22
18	Deep Submicron EGFET Based on Transistor Association Technique for Chemical Sensing. Sensors, 2019, 19, 1063.	3.8	21

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19	Implantable Aptamer-Graphene Microtransistors for Real-Time Monitoring of Neurochemical Release in Vivo. Nano Letters, 2022, 22, 3668-3677.	9.1	21
20	Integrated MOSFET-Embedded-Cantilever-Based Biosensor Characteristic for Detection of Anthrax Simulant. IEEE Electron Device Letters, 2011, 32, 408-410.	3.9	19
21	Hassle-Free Vitals: BioWireleSS for a Patient-Centric Health-Care Paradigm. IEEE Microwave Magazine, 2014, 15, S25-S33.	0.8	16
22	Modeling of SOI four-gate transistor (G4FET) using multidimensional spline interpolation method. Microelectronics Journal, 2018, 76, 33-42.	2.0	15
23	Vertically Aligned Carbon Nanofiber based Biosensor Platform for Glucose Sensor. International Journal of High Speed Electronics and Systems, 2014, 23, 1450006.	0.7	14
24	Modeling of Enhancement-Mode GaN-GIT for High-Power and High-Temperature Application. IEEE Transactions on Electron Devices, 2020, 67, 588-594.	3.0	14
25	A Low-Power CMOS Piezoelectric Transducer Based Energy Harvesting Circuit for Wearable Sensors for Medical Applications. Journal of Low Power Electronics and Applications, 2017, 7, 33.	2.0	13
26	Carbon Nanotubes, Nanofibers and Nanospikes for Electrochemical Sensing: A Review. International Journal of High Speed Electronics and Systems, 2017, 26, 1740008.	0.7	12
27	Powering wearable sensors with a low-power CMOS piezoelectric energy harvesting circuit. , 2017, , .		11
28	Instrumentation of a pyroelectric transducer based respiration monitoring system with wireless telemetry. , 2018, , .		11
29	AlGaIn/GaN self-aligned MODFET with metal oxide gate for millimeter wave application. Microelectronics Journal, 2006, 37, 579-582.	2.0	9
30	A low power wireless apnea detection system based on pyroelectric sensor. , 2015, , .		9
31	A Highly Miniaturized Low-Power CMOS-Based pH Monitoring Platform. IEEE Sensors Journal, 2015, 15, 895-901.	4.7	9
32	A low power wireless breathing monitoring system using piezoelectric transducer. , 2016, , .		9
33	Vertically Aligned Carbon Nanofibers as a Cell Impedance Sensor. IEEE Nanotechnology Magazine, 2016, 15, 856-861.	2.0	9
34	Numerical modeling and implementation in circuit simulator of SOI four-gate transistor (G 4 FET) using multidimensional Lagrange and Bernstein polynomial. Microelectronics Journal, 2017, 65, 84-93.	2.0	9
35	Applications of sensing technology for smart cities. , 2017, , .		9
36	A Charge Sensitive Pre-Amplifier for Smart Point-of-Care Devices Employing Polymer-Based Lab-on-a-Chip. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 984-988.	3.0	9

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37	Microcantilever Array Pressure Measurement System for Biomedical Instrumentation. IEEE Sensors Journal, 2010, 10, 321-330.	4.7	8
38	Direct Label-Free Electrical Immunodetection of Transplant Rejection Protein Biomarker in Physiological Buffer Using Floating Gate AlGaIn/GaN High Electron Mobility Transistors. IEEE Transactions on Nanobioscience, 2014, 13, 138-145.	3.3	8
39	Impulse radio ultra-wideband (IR-UWB) transmitter for low power low data rate biomedical sensor applications. , 2016, , .		8
40	Energy Efficient Deep Learning Inference Embedded on FPGA for Sleep Apnea Detection. Journal of Signal Processing Systems, 2022, 94, 609-619.	2.1	8
41	A low power auto-reconfigurable pipelined ADC for implantable biomedical applications. , 2013, , .		7
42	Design of a pyroelectric charge amplifier and a piezoelectric energy harvester for a novel non-invasive wearable and self-powered respiratory monitoring system. , 2017, , .		7
43	A compact model and TCAD simulation for GaN-gate injection transistor (GIT). Solid-State Electronics, 2019, 151, 52-59.	1.4	7
44	Machine Learning Based Hardware Model for a Biomedical System for Prediction of Respiratory Failure. , 2020, , .		7
45	Smart Infant-Monitoring System with Machine Learning Model to Detect Physiological Activities and Ambient Conditions. , 2020, , .		7
46	A vertically aligned carbon nanofiber (VACNF) based amperometric glucose sensor. , 2009, , .		6
47	Optimization of perimeter gated SPADs in a standard CMOS process. , 2014, , .		6
48	DC-DC Boost Converter Design with Maximum Power Point Tracker (MPPT) used in RF- Energy Harvester. , 2019, , .		6
49	MPPT integrated DC-DC boost converter for RF energy harvester. IET Circuits, Devices and Systems, 2020, 14, 1086-1091.	1.4	6
50	A low-power RF integrated circuit for implantable sensors. Analog Integrated Circuits and Signal Processing, 2006, 47, 355-363.	1.4	5
51	A Divide-by-3 0.4-1.4 GHz Injection-Locked Frequency Divider Based on Relaxation Oscillator. IEEE Microwave and Wireless Components Letters, 2013, 23, 368-370.	3.2	5
52	A low power, highly stabilized three electrode potentiostat for biomedical implantable systems. Analog Integrated Circuits and Signal Processing, 2015, 83, 217-229.	1.4	5
53	Minimizing Phase Noise Variation in CMOS Ring Oscillators. Analog Integrated Circuits and Signal Processing, 2003, 34, 259-263.	1.4	4
54	Effect of Temperature Variation on the Characteristics of Microwave Power AlGaIn/GaN MODFET. Journal of Infrared, Millimeter and Terahertz Waves, 2005, 26, 1501-1512.	0.6	4

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55	Simple oscillators-based readout circuit for low-power biomedical implant system. Analog Integrated Circuits and Signal Processing, 2012, 72, 383-393.	1.4	4
56	Low-power low-data-rate IR-UWB transmitter for paediatric apnoea monitoring system. IET Circuits, Devices and Systems, 2019, 13, 494-498.	1.4	4
57	Dose control circuit for digital electrostatic electron-beam array lithography. Analog Integrated Circuits and Signal Processing, 2006, 48, 143-150.	1.4	3
58	Towards fully integrated high temperature wireless sensors using GaN-based HEMT devices. , 2008, , .		3
59	A Sub-1μA Low-Power FSK Modulator for Biomedical Sensor Circuits. , 2010, , .		3
60	Label free detection of human MIG using AlGaIn/GaN high electron mobility transistor. , 2011, , .		3
61	A Precision Dose Control Circuit for Maskless E-Beam Lithography With Massively Parallel Vertically Aligned Carbon Nanofibers. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 1132-1140.	4.7	3
62	A Finite Element Model of Self-Resonating Bimorph Microcantilever for Fast Temperature Cycling in A Pyroelectric Energy Harvester.. Materials Research Society Symposia Proceedings, 2011, 1325, 159.	0.1	3
63	A robust VACNF platform for electrochemical biosensor. , 2013, , .		3
64	An energy-efficient reconfigurable analog-to-digital converter for orthopedic implants. Analog Integrated Circuits and Signal Processing, 2014, 78, 233-243.	1.4	3
65	A low power pulse position modulation based ultra-wideband transmitter for implantable sensors. , 2016, , .		3
66	A monolithic low-power highly linear pH measurement circuit with wide input detection range and easy calibration. , 2017, , .		3
67	Macromodel of G^{4} FET Enabling Fast and Reliable SPICE Simulation for Innovative Circuit Applications. International Journal of High Speed Electronics and Systems, 2018, 27, 1840015.	0.7	3
68	A Monolithic Low-Power Highly Linear pH Measurement System With Power Conditioning System for Medical Application. IEEE Transactions on Instrumentation and Measurement, 2019, 68, 2871-2879.	4.7	3
69	Micro-cantilever Array Pressure Measurement System for Biomedical Instrumentation. , 2007, , .		2
70	Power-Efficient Body-Coupled Self-Cascode LC Oscillator for Low-Power Injection-Locked Transmitter Applications. , 2009, , .		2
71	A highly selective mediator less glucose detector employing vertically aligned carbon nanofiber (VACNF). , 2010, , .		2
72	A UNIVERSAL SOI-BASED HIGH TEMPERATURE GATE DRIVER INTEGRATED CIRCUIT FOR SiC POWER SWITCHES WITH ON-CHIP SHORT CIRCUIT PROTECTION. International Journal of High Speed Electronics and Systems, 2011, 20, 471-484.	0.7	2

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73	A high-temperature, high-voltage, fast response linear voltage regulator. Analog Integrated Circuits and Signal Processing, 2012, 72, 405-417.	1.4	2
74	Low-power sensor signal monitoring and impulse radio architecture for biomedical applications. Analog Integrated Circuits and Signal Processing, 2014, 78, 209-216.	1.4	2
75	Cell impedance sensing system based on vertically aligned carbon nanofibers. , 2015, , .		2
76	Reconfigurable analog-to-digital converter for implantable bioimpedance monitoring. , 2015, , .		2
77	A low-power, reconfigurable, pipelined ADC for implantable bioimpedance measurement system with vertically aligned carbon nanofibers (VACNF) electrodes. Analog Integrated Circuits and Signal Processing, 2016, 89, 139-149.	1.4	2
78	A Low-Power Low-Data Rate Impulse Radio Ultra-Wideband (IR-UWB) Transmitter. International Journal of High Speed Electronics and Systems, 2017, 26, 1740013.	0.7	2
79	A MOS-JFET Macromodel of SOI Four-Gate Transistors (G^{4} FET) to Aid Innovative Circuit Design. , 2018, , .		2
80	Design of a charge amplifier for a low-power respiration monitoring system. IET Circuits, Devices and Systems, 2019, 13, 499-503.	1.4	2
81	DC modelling of SOI four-gate transistor (G^{4} FET) for implementation in circuit simulator using multivariate regression polynomial. IET Circuits, Devices and Systems, 2019, 13, 12-20.	1.4	2
82	A fast programmable frequency divider with a wide dividing-ratio range and 50% duty-cycle. IEICE Electronics Express, 2007, 4, 672-678.	0.8	1
83	A wideband Injection Locked Frequency Divider based on a process and temperature compensated ring oscillator. , 2008, , .		1
84	Modeling of floating gate AlGaIn/GaN heterostructure-transistor based sensor. , 2009, , .		1
85	A Calibration Circuit for Reconfigurable Smart ADC for Biomedical Signal Processing. , 2010, , .		1
86	Isolated Photosystem I Reaction Centers on a Functionalized Gated High Electron Mobility Transistor. IEEE Transactions on Nanobioscience, 2011, 10, 201-208.	3.3	1
87	LOW-POWER BIOMEDICAL SIGNAL MONITORING SYSTEM FOR IMPLANTABLE SENSOR APPLICATIONS. International Journal of High Speed Electronics and Systems, 2011, 20, 115-128.	0.7	1
88	A 2.4-GHz frequency synthesizer based on process and temperature compensated ring ILFD. Analog Integrated Circuits and Signal Processing, 2013, 74, 163-173.	1.4	1
89	A novel charge sensitive pre-amplifier structure for biological temperature readout applications. , 2017, , .		1
90	Multivariate Regression Polynomial: A Versatile and Efficient Method for DC Modeling of Different Transistors (MOSFET, MESFET, HBT, HEMT and G ⁴ FET). International Journal of High Speed Electronics and Systems, 2018, 27, 1840016.	0.7	1

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91	Highly Linear Amperometric Glucose Detection System Realized in Deep Submicron CMOS Technology. , 2019, , .		1
92	Multivariate Cubic Spline: A Versatile DC Modeling Technique Suitable for Different Deep Submicron Transistors. , 2019, , .		1
93	Semiconductor Device Modeling and Simulation for Electronic Circuit Design. , 2020, , .		1
94	SABiNN: FPGA Implementation of Shift Accumulate Binary Neural Network Model for Real-Time Automatic Detection of Sleep Apnea. , 2022, , .		1
95	Integration of Vertically Aligned Carbon Nano Fibers with CMOS Integrated Circuits for Sensor Applications. , 2006, , .		0
96	AlGaIn/GaN ChemFET devices as biosensors for detection and characterization of photosystem I reaction centers. , 2009, , .		0
97	AN EFFICIENT NUMERICAL METHOD OF DC MODELING FOR POWER MOSFET, MESFET AND AlGaIn/GaN HEMT. Selected Topics in Electornics and Systems, 2009, , 67-82.	0.2	0
98	7.4: Dose control circuits for digitally addressable VACNF based maskless lithography. , 2010, , .		0
99	Fabrication and characterization of vertically aligned carbon nanofibers as a biosensor platform for hypoglycemia. , 2012, , .		0
100	Low-power signal processing methodologies for implantable biosensing platforms. , 2013, , .		0
101	Simulation and Modeling of Single Photon Avalanche Diodes. International Journal of High Speed Electronics and Systems, 2015, 24, 1520006.	0.7	0
102	A low-power CMOS energy harvesting circuit for wearable sensors using piezoelectric transducers. , 2017, , .		0
103	A Low-Power Low-Data Rate Impulse Radio Ultra-Wideband (IR-UWB) Transmitter. , 2017, , .		0
104	A SPICE Model for GaN-Gate Injection Transistor (GIT) at Room Temperature. International Journal of High Speed Electronics and Systems, 2018, 27, 1840017.	0.7	0
105	Modeling Emerging Semiconductor Devices for Circuit Simulation. , 2020, , .		0
106	Design of a Smart Maximum Power Point Tracker (MPPT) for RF Energy Harvester. Selected Topics in Electornics and Systems, 2021, , 41-51.	0.2	0
107	Carbon Nanotubes, Nanofibers and Nanospikes for Electrochemical Sensing: A Review. , 2017, , .		0
108	Macromodel of G4FET Enabling Fast and Reliable SPICE Simulation for Innovative Circuit Applications. Selected Topics in Electornics and Systems, 2019, , 17-36.	0.2	0

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109	Design of a Smart Maximum Power Point Tracker (MPPT) for RF Energy Harvester. International Journal of High Speed Electronics and Systems, 2020, 29, 2040006.	0.7	0