

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	Energy Efficient Deep Learning Inference Embedded on FPGA for Sleep Apnea Detection. Journal of Signal Processing Systems, 2022, 94, 609-619.	2.1	8
2	Implantable Aptamer-Graphene Microtransistors for Real-Time Monitoring of Neurochemical Release in Vivo. Nano Letters, 2022, 22, 3668-3677.	9.1	21
3	SABiNN: FPGA Implementation of Shift Accumulate Binary Neural Network Model for Real-Time Automatic Detection of Sleep Apnea. , 2022, , .		1
4	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
5	Modeling Emerging Semiconductor Devices for Circuit Simulation. , 2020, , .		0
6	Machine Learning Based Hardware Model for a Biomedical System for Prediction of Respiratory Failure. , 2020, , .		7
7	Semiconductor Device Modeling and Simulation for Electronic Circuit Design. , 2020, , .		1
8	Smart Infant-Monitoring System with Machine Learning Model to Detect Physiological Activities and Ambient Conditions. , 2020, , .		7
9	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
10	MPPT integrated DC-DC boost converter for RF energy harvester. IET Circuits, Devices and Systems, 2020, 14, 1086-1091.	1.4	6
11	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
12	DC-DC Boost Converter Design with Maximum Power Point Tracker (MPPT) used in RF- Energy Harvester. , 2019, , .		6
13	Design of a charge amplifier for a low-power respiration monitoring system. IET Circuits, Devices and Systems, 2019, 13, 499-503.	1.4	2
14	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
15	Highly Linear Amperometric Glucose Detection System Realized in Deep Submicron CMOS Technology. , 2019, , .		1
16	Deep Submicron EGFET Based on Transistor Association Technique for Chemical Sensing. Sensors, 2019, 19, 1063.	3.8	21
17	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
18	Multivariate Cubic Spline: A Versatile DC Modeling Technique Suitable for Different Deep Submicron Transistors. , 2019, , .		1

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19	A compact model and TCAD simulation for GaN-gate injection transistor (GIT). Solid-State Electronics, 2019, 151, 52-59.	1.4	7
20	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
21	Macromodel of G4FET Enabling Fast and Reliable SPICE Simulation for Innovative Circuit Applications. Selected Topics in Electronics and Systems, 2019, , 17-36.	0.2	0
22	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
23	Modeling of SOI four-gate transistor (G4FET) using multidimensional spline interpolation method. Microelectronics Journal, 2018, 76, 33-42.	2.0	15
24	Multivariate Regression Polynomial: A Versatile and Efficient Method for DC Modeling of Different Transistors (MOSFET, MESFET, HBT, HEMT and G4FET). International Journal of High Speed Electronics and Systems, 2018, 27, 1840016.	0.7	1
25	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
26	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
27	A MOS-JFET Macromodel of SOI Four-Gate Transistors (G ⁴ FET) to Aid Innovative Circuit Design. , 2018, , .		2
28	EGFET-Based Sensors for Bioanalytical Applications: A Review. Sensors, 2018, 18, 4042.	3.8	104
29	Instrumentation of a pyroelectric transducer based respiration monitoring system with wireless telemetry. , 2018, , .		11
30	A Low-Power Wireless Piezoelectric Sensor-Based Respiration Monitoring System Realized in CMOS Process. IEEE Sensors Journal, 2017, 17, 1858-1864.	4.7	78
31	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
32	A low-power CMOS energy harvesting circuit for wearable sensors using piezoelectric transducers. , 2017, , .		0
33	A Low-Power Low-Data Rate Impulse Radio Ultra-Wideband (IR-UWB) Transmitter. , 2017, , .		0
34	Carbon Nanotubes, Nanofibers and Nanospikes for Electrochemical Sensing: A Review. International Journal of High Speed Electronics and Systems, 2017, 26, 1740008.	0.7	12
35	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
36	Powering wearable sensors with a low-power CMOS piezoelectric energy harvesting circuit. , 2017, , .		11

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37	Applications of sensing technology for smart cities. , 2017, , .		9
38	Medical Devices for Pediatric Apnea Monitoring and Therapy: Past and New Trends. IEEE Reviews in Biomedical Engineering, 2017, 10, 199-212.	18.0	23
39	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
40	A novel charge sensitive pre-amplifier structure for biological temperature readout applications. , 2017, , .		1
41	PVDF Sensor Stimulated by Infrared Radiation for Temperature Monitoring in Microfluidic Devices. Sensors, 2017, 17, 850.	3.8	26
42	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
43	A monolithic low-power highly linear pH measurement circuit with wide input detection range and easy calibration. , 2017, , .		3
44	Carbon Nanotubes, Nanofibers and Nanospikes for Electrochemical Sensing: A Review. , 2017, , .		0
45	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
46	A low power pulse position modulation based ultra-wideband transmitter for implantable sensors. , 2016, , .		3
47	A low power wireless breathing monitoring system using piezoelectric transducer. , 2016, , .		9
48	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
49	Vertically Aligned Carbon Nanofibers as a Cell Impedance Sensor. IEEE Nanotechnology Magazine, 2016, 15, 856-861.	2.0	9
50	Impulse radio ultra-wideband (IR-UWB) transmitter for low power low data rate biomedical sensor applications. , 2016, , .		8
51	Cell impedance sensing system based on vertically aligned carbon nanofibers. , 2015, , .		2
52	Reconfigurable analog-to-digital converter for implantable bioimpedance monitoring. , 2015, , .		2
53	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
54	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

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55	Simulation and Modeling of Single Photon Avalanche Diodes. International Journal of High Speed Electronics and Systems, 2015, 24, 1520006.	0.7	0
56	A low power wireless apnea detection system based on pyroelectric sensor. , 2015, , .		9
57	A Highly Miniaturized Low-Power CMOS-Based pH Monitoring Platform. IEEE Sensors Journal, 2015, 15, 895-901.	4.7	9
58	Vertically Aligned Carbon Nanofiber based Biosensor Platform for Glucose Sensor. International Journal of High Speed Electronics and Systems, 2014, 23, 1450006.	0.7	14
59	Hassle-Free Vitals: BioWireleSS for a Patient-Centric Health-Care Paradigm. IEEE Microwave Magazine, 2014, 15, S25-S33.	0.8	16
60	An energy-efficient reconfigurable analog-to-digital converter for orthopedic implants. Analog Integrated Circuits and Signal Processing, 2014, 78, 233-243.	1.4	3
61	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
62	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
63	Pyroelectric Sensor for Temperature Monitoring of Biological Fluids in Microchannel Devices. IEEE Sensors Journal, 2014, 14, 2725-2730.	4.7	24
64	Optimization of perimeter gated SPADs in a standard CMOS process. , 2014, , .		6
65	Low-power signal processing methodologies for implantable biosensing platforms. , 2013, , .		0
66	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
67	A miniaturized transcutaneous system for continuous glucose monitoring. Biomedical Microdevices, 2013, 15, 151-160.	2.8	34
68	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
69	A low power auto-reconfigurable pipelined ADC for implantable biomedical applications. , 2013, , .		7
70	A robust VACNF platform for electrochemical biosensor. , 2013, , .		3
71	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
72	Fabrication and characterization of vertically aligned carbon nanofibers as a biosensor platform for hypoglycemia. , 2012, , .		0

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73	A 200°C Universal Gate Driver Integrated Circuit for Extreme Environment Applications. IEEE Transactions on Power Electronics, 2012, 27, 4153-4162.	7.9	48
74	A high-temperature, high-voltage, fast response linear voltage regulator. Analog Integrated Circuits and Signal Processing, 2012, 72, 405-417.	1.4	2
75	Simple oscillators-based readout circuit for low-power biomedical implant system. Analog Integrated Circuits and Signal Processing, 2012, 72, 383-393.	1.4	4
76	Integrated MOSFET-Embedded-Cantilever-Based Biosensor Characteristic for Detection of Anthrax Simulant. IEEE Electron Device Letters, 2011, 32, 408-410.	3.9	19
77	Label free detection of human MIG using AlGaIn/GaN high electron mobility transistor. , 2011, , .		3
78	Isolated Photosystem I Reaction Centers on a Functionalized Gated High Electron Mobility Transistor. IEEE Transactions on Nanobioscience, 2011, 10, 201-208.	3.3	1
79	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
80	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
81	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
82	A Mediator Free Amperometric Bimzymatic Glucose Biosensor Using Vertically Aligned Carbon Nanofibers (VACNFs). IEEE Sensors Journal, 2011, 11, 2798-2804.	4.7	22
83	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
84	A Calibration Circuit for Reconfigurable Smart ADC for Biomedical Signal Processing. , 2010, , .		1
85	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
86	Power-oscillator based high efficiency inductive power-link for transcutaneous power transmission. , 2010, , .		24
87	A Sub-1MHz; A Low-Power FSK Modulator for Biomedical Sensor Circuits. , 2010, , .		3
88	Microcantilever Array Pressure Measurement System for Biomedical Instrumentation. IEEE Sensors Journal, 2010, 10, 321-330.	4.7	8
89	7.4: Dose control circuits for digitally addressable VACNF based maskless lithography. , 2010, , .		0
90	A highly selective mediator less glucose detector employing vertically aligned carbon nanofiber (VACNF). , 2010, , .		2

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91	A vertically aligned carbon nanofiber (VACNF) based amperometric glucose sensor. , 2009, , .		6
92	AlGaIn/GaN ChemFET devices as biosensors for detection and characterization of photosystem I reaction centers. , 2009, , .		0
93	Power-Efficient Body-Coupled Self-Cascade LC Oscillator for Low-Power Injection-Locked Transmitter Applications. , 2009, , .		2
94	Modeling of floating gate AlGaIn/GaN heterostructure-transistor based sensor. , 2009, , .		1
95	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
96	A reagentless enzymatic amperometric biosensor using vertically aligned carbon nanofibers (VACNF). Sensors and Actuators B: Chemical, 2008, 133, 53-59.	7.8	28
97	A wideband Injection Locked Frequency Divider based on a process and temperature compensated ring oscillator. , 2008, , .		1
98	Towards fully integrated high temperature wireless sensors using GaN-based HEMT devices. , 2008, , .		3
99	Micro-cantilever Array Pressure Measurement System for Biomedical Instrumentation. , 2007, , .		2
100	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
101	A low power sensor signal processing circuit for implantable biosensor applications. Smart Materials and Structures, 2007, 16, 525-530.	3.5	30
102	Integration of Vertically Aligned Carbon Nano Fibers with CMOS Integrated Circuits for Sensor Applications. , 2006, , .		0
103	AlGaIn/GaN self-aligned MODFET with metal oxide gate for millimeter wave application. Microelectronics Journal, 2006, 37, 579-582.	2.0	9
104	A low-power RF integrated circuit for implantable sensors. Analog Integrated Circuits and Signal Processing, 2006, 47, 355-363.	1.4	5
105	Dose control circuit for digital electrostatic electron-beam array lithography. Analog Integrated Circuits and Signal Processing, 2006, 48, 143-150.	1.4	3
106	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
107	Effects of temperature variation (300-600 K) in MOSFET modeling in 6H-silicon carbide. Solid-State Electronics, 2004, 48, 125-132.	1.4	39
108	Temperature dependency of MOSFET device characteristics in 4H- and 6H-silicon carbide (SiC). Solid-State Electronics, 2004, 48, 1877-1881.	1.4	28

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109	Minimizing Phase Noise Variation in CMOS Ring Oscillators. Analog Integrated Circuits and Signal Processing, 2003, 34, 259-263.	1.4	4