

Saurabh Sinha

List of Publications by Year in descending order

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157
papers

528
citations

840119

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h-index

839053

18
g-index

171
all docs

171
docs citations

171
times ranked

413
citing authors

#	ARTICLE	IF	CITATIONS
1	A Review of Industry 4.0 Manufacturing Process Security Risks. Applied Sciences (Switzerland), 2019, 9, 5105.	1.3	74
2	Emerging Transistor Technologies Capable of Terahertz Amplification: A Way to Re-Engineer Terahertz Radar Sensors. Sensors, 2019, 19, 2454.	2.1	38
3	An intelligent web-based voice chat bot. , 2009, , .		33
4	Through-the-Wall Radar Imaging: A Review. IETE Technical Review (Institution of Electronics and) Tj ETQq0 0 0 rgBT/Overlock, 10 Tf 50 6	2.1	32
5	Overlay Virtualized Wireless Sensor Networks for Application in Industrial Internet of Things: A Review. Sensors, 2018, 18, 3215.	2.1	26
6	Millimeter-Wave Power Amplifiers. Signals and Communication Technology, 2017, , .	0.4	20
7	Power Amplifiers for the S-, C-, X- and Ku-bands. Signals and Communication Technology, 2016, , .	0.4	16
8	Systems-Level Packaging for Millimeter-Wave Transceivers. Smart Sensors, Measurement and Instrumentation, 2019, , .	0.4	15
9	Millimeter-Wave Low Noise Amplifiers. Signals and Communication Technology, 2018, , .	0.4	15
10	Microsensing Networks for Sustainable Cities. Smart Sensors, Measurement and Instrumentation, 2016, , .	0.4	14
11	Last Mile Internet Access for Emerging Economies. Lecture Notes in Networks and Systems, 2019, , .	0.5	12
12	A Survey of Current Trends in Masterâ€™s Programs in Microelectronics. IEEE Transactions on Education, 2018, 61, 151-157.	2.0	9
13	Mobile Communication Networks: 5G and a Vision of 6G. Lecture Notes in Electrical Engineering, 2021, , .	0.3	8
14	A Review of 4IR/5IR Enabling Technologies and Their Linkage to Manufacturing Supply Chain. Technologies, 2021, 9, 77.	3.0	8
15	The wireless bandwidth crisis and the need for power-efficient bandwidth. , 2011, , .		7
16	Development, simulation and construction of cost-effective GTEM cells. , 2013, , .		7
17	A 50 GHz SiGe BiCMOS active bandpass filter. , 2017, , .		7
18	Analysis of a low noise amplifier with LC-ladder matching and capacitive shunt-shunt feedback. , 2009, , .		5

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19	IEEE-Based Implementation of Engineering Projects in Community Service. , 2011, , .		5
20	Decentralizing Emerging Markets to Prepare for Industry 4.0: Modernizing Policies and the Role of Higher Education. Lecture Notes in Electrical Engineering, 2020, , 111-153.	0.3	5
21	A LabVIEW courseware customized for pre-college learners. , 2007, , .		4
22	Impact of SiGe HBT parameters to the performance of LNAs for highly sensitive SKA receivers. , 2013, , .		4
23	Waveguide power combiner with adjustable amplitude and phase response. , 2013, , .		4
24	Analytical Approach to Design of Proportional-to-the-Absolute-Temperature Current Sources and Temperature Sensors Based on Heterojunction Bipolar Transistors. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 262-274.	1.4	4
25	Designing Linear PAs at Millimeter-Wave Frequencies Using Volterra Series Analysis. Canadian Journal of Electrical and Computer Engineering, 2015, 38, 232-237.	1.5	4
26	RF IC Performance Optimization by Synthesizing Optimum Inductors. , 2015, , 297-330.		4
27	Ubiquitous Computing: Distributing Mobile Computing to Build a Global Network of Things. Smart Sensors, Measurement and Instrumentation, 2016, , 201-235.	0.4	4
28	Leaky-Wave Antennas. Signals and Communication Technology, 2016, , 19-38.	0.4	4
29	Colonization by Algorithms in the Fourth Industrial Revolution. IEEE Access, 2022, 10, 11057-11064.	2.6	4
30	Mathematical Modelling of the LC-Ladder and Capacitive Shunt-Shunt Feedback LNA Topology. SAIEE Africa Research Journal, 2009, 100, 72-78.	1.1	3
31	Design flow for CMOS based Class-E and Class-F power amplifiers. , 2009, , .		3
32	Analysis of adaptive FIR filter pre-emphasis for high speed serial links. , 2009, , .		3
33	Noise optimization of a wideband capacitive shunt-shunt feedback LNA design suitable for software-defined radio. , 2009, , .		3
34	Switch-mode power amplifier design method. Microwave and Optical Technology Letters, 2011, 53, 2724-2728.	0.9	3
35	An electronic solution to automate the process of Grade-1 braille training. , 2013, , .		3
36	Dynamic range and sensitivity improvement in near-infrared detectors using silicon germanium bipolar complementary metal-oxide semiconductor technology. Optical Engineering, 2013, 52, 044001.	0.5	3

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37	Expanding wireless bandwidth in a power-efficient way: developing a viable mm-wave radio technology. , 2013, , .		3
38	Ultra-compact capacitively loaded evanescent half-mode SIW filters for LTE applications. International Journal of Microwave and Wireless Technologies, 2014, 6, 487-490.	1.5	3
39	Effect of lossy substrates on series impedance parameters of interconnects. , 2016, , .		3
40	Cantilever for RF applications: Model and technology. , 2017, , .		3
41	60â€GHz BiCMOS active bandpass filters. Microelectronics Journal, 2019, 90, 315-322.	1.1	3
42	6G Networks: Fusion of Communications, Sensing, Imaging, Localization and Other Verticals. Lecture Notes in Electrical Engineering, 2021, , 305-335.	0.3	3
43	A Paradigm Shift in Higher Education in the Context of the Fourth Industrial Revolution. IEEE Potentials, 2021, 40, 13-18.	0.2	3
44	6G: The Green Network. Lecture Notes in Electrical Engineering, 2021, , 189-220.	0.3	3
45	CMOS ECG, EEG and EMG Waveform Bio-Simulator. , 2006, , .		2
46	Design methodology for a CMOS based power amplifier deploying a passive inductor. , 2007, , .		2
47	A hardware implementation of an adaptive channel coding system. , 2007, , .		2
48	Phase noise analysis of a tail-current shaping technique employed on a BiCMOS voltage controlled oscillator. , 2010, , .		2
49	Wideband lowâ€noise amplifier design using the LCâ€ladder and capacitive shuntâ€shunt feedback topology. Microwave and Optical Technology Letters, 2011, 53, 2922-2931.	0.9	2
50	Phase noise analysis for a mmâ€wave VCO configuration. Microwave and Optical Technology Letters, 2013, 55, 290-295.	0.9	2
51	The tunnelling and electron injection reliabilities for FG transistors. Microelectronics International, 2014, 31, 108-115.	0.4	2
52	Linearity improvement analysis for power amplifiers at mmâ€wave frequencies. Microwave and Optical Technology Letters, 2014, 56, 743-748.	0.9	2
53	Increasing the bandwidth of a <sc>S</sc>i<sc>G</sc>e <sc>HBT</sc><sc>LNA</sc> with minimum impact on noise figure. Microwave and Optical Technology Letters, 2016, 58, 1937-1944.	0.9	2
54	Investigation of the effect of input matching network on 60 GHz low noise amplifier. , 2016, , .		2

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55	Microsensing Networks for Sustainable Cities: Pollution as a Key Driving Factor. Smart Sensors, Measurement and Instrumentation, 2016, , 1-27.	0.4	2
56	High-speed Cherry Hooper flash analog-to-digital converter. Microelectronics International, 2017, 34, 22-29.	0.4	2
57	A modified multiphase oscillator with improved phase noise performance. Microelectronics Journal, 2017, 62, 21-29.	1.1	2
58	A Review on Si, SiGe, GaN, SiC, InP and GaAs as Enabling Technologies in EW and Space. Signals and Communication Technology, 2017, , 301-329.	0.4	2
59	Scaling Education in Emerging Markets to Participate in Industry 4.0. , 2018, , .		2
60	Optimization of 4T Pixel Structure BiCMOS Detectors using y-parameter Representation. , 2020, , .		2
61	Visible Light Communications for 6G. Lecture Notes in Electrical Engineering, 2021, , 155-188.	0.3	2
62	Device Technologies and Circuits for 5G and 6G. Lecture Notes in Electrical Engineering, 2021, , 99-154.	0.3	2
63	Characterization of diode-connected heterojunction bipolar transistors for near-infrared detecting applications. Optical Engineering, 2018, 57, 1.	0.5	2
64	The Role of Millimeter-Wave and 5G in the Fourth Industrial Revolution. Lecture Notes in Electrical Engineering, 2021, , 1-48.	0.3	2
65	Getting Ready for Terahertz Electronics. Lecture Notes in Electrical Engineering, 2020, , 221-248.	0.3	2
66	A pipeline analogue to digital converter in 0.35 μm CMOS. , 2007, , .		1
67	Design flow for a SiGe BiCMOS based power amplifier. , 2009, , .		1
68	Modeling of antenna on package for the 60 GHz frequency band applications. , 2010, , .		1
69	Hybrid Renewable Energy Used to Power Computer Laboratory: A Project by University of Cape Town IEEE Student Branch. , 2011, , .		1
70	Reducing data dependent jitter utilising adaptive FIR pre-emphasis in 0.18 μm CMOS. Microelectronics Journal, 2011, 42, 1216-1224.	1.1	1
71	Pixel circuit optimization for imaging applications using integrated circuit technologies. , 2011, , .		1
72	Accreditation of academic programmes in computing in South Africa. , 2012, , .		1

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73	Local exploration strategies for a mobile robot in a highly dynamic environment. , 2012, , .		1
74	A 4.3ÂGHz BiCMOS VCO with multiple 360Â° variable phase outputs using the vector sum method. Analog Integrated Circuits and Signal Processing, 2012, 72, 375-381.	0.9	1
75	An EPICS-in-IEEE initiative: Learners of St Alban's College and students of the University of Pretoria seek earth observation solutions through air-quality microsensing. , 2013, , .		1
76	A frequency agile switched delay line slow-wave BiCMOS filter. , 2013, , .		1
77	A BiCMOS Lumped Element Model for a Millimeter-Wave Dipole Antenna. Microwave and Optical Technology Letters, 2013, 55, 2955-2965.	0.9	1
78	Sensitivity of narrow- and wideband LNA performance to individual transistor model parameters. International Journal of Electronics, 2013, 100, 36-47.	0.9	1
79	Thermal and flicker noise improvement in short-channel CMOS detectors. Proceedings of SPIE, 2014, , .	0.8	1
80	Population Growth in Developing Countries and Smart City Fundamentals. The Internet-of-Things and Wireless Sensor Networks. Smart Sensors, Measurement and Instrumentation, 2016, , 29-62.	0.4	1
81	Harvesting Energy from Ambient Sources: Wind Energy, Hydropower, Radiation and Mechanical Deformation. Smart Sensors, Measurement and Instrumentation, 2016, , 101-134.	0.4	1
82	Characterisation of diode-connected SiGe BiCMOS HBTs for space applications. Proceedings of SPIE, 2017, , .	0.8	1
83	Power Amplifiers for Millimeter-Wave Systems. Signals and Communication Technology, 2017, , 3-38.	0.4	1
84	The Future of Electronic Warfare: Potential Contributions by SiGe. Signals and Communication Technology, 2017, , 269-300.	0.4	1
85	Re-inventing postgraduate level teaching and learning in nanoelectronics. , 2017, , .		1
86	General Low-Noise Amplifiers. Signals and Communication Technology, 2018, , 151-173.	0.4	1
87	Fabless Semiconductor Implementation Model as an Enabling Factor for "Virtual Labs" in Online Postgraduate Degrees in Microelectronics. , 2018, , .		1
88	Methodologies for Design of Millimeter-Wave and Terahertz Integrated Circuits: An LNA Case Study. , 2020, , .		1
89	Futuristic Technological Aspects of 6G Networks. Lecture Notes in Electrical Engineering, 2021, , 221-248.	0.3	1
90	6G: The Intelligent Network. Lecture Notes in Electrical Engineering, 2021, , 249-279.	0.3	1

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91	Introduction to the World of Millimeter-Wave Systems. Signals and Communication Technology, 2016, , 1-18.	0.4	1
92	Printed and Planar Antennas. Signals and Communication Technology, 2016, , 39-60.	0.4	1
93	Radio frequency identification (RFID) based conference registration system. , 2007, , .		0
94	CMOS based decision directed costas carrier recovery loop (DDC-CRL) for a DSSS communication system. , 2007, , .		0
95	A 5 GHz BiCMOS I/Q VCO with 360°; variable phase outputs using the vector sum method. , 2008, , .		0
96	A 0.35 µm CMOS GPS receiver. , 2008, , .		0
97	Analogue CMOS DSSS CDLL synchronisation scheme employing complex spreading sequences. , 2008, , .		0
98	A low switching time transmitter for high speed adaptive pre-emphasis serial links. , 2009, , .		0
99	Limitations of a LC-ladder and capacitive feedback LNA and scaling to mm-wave frequencies. , 2009, , .		0
100	The design of a 5 GHz VCO with phase noise performance analysis using MOSFET-based current sources. , 2011, , .		0
101	System-level simulator of radio communication in the EHF band. , 2012, , .		0
102	Sensitivity of class-E power amplifier performance to individual transistor model parameters. , 2013, , .		0
103	Inactivating pathogenic micro-organisms through microwave sterilization technology. , 2013, , .		0
104	Entrepreneurship as an IEEE workforce development theme. , 2013, , .		0
105	An optimized multiphase oscillator with harmonic balance analysis for oscillation frequency and amplitude prediction. , 2013, , .		0
106	Direct synthesis procedure for subharmonic stub bandpass and bandstop filters. Microwave and Optical Technology Letters, 2013, 55, 995-998.	0.9	0
107	DLs Visits SSCS-South Africa in October: New Pretoria-Cape Town Chapter Is the Society's First on the African Continent [Footer]. IEEE Solid-State Circuits Magazine, 2013, 5, 104-104.	0.5	0
108	A temperature stabilized CMOS VCO. Analog Integrated Circuits and Signal Processing, 2014, 80, 13-21.	0.9	0

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109	Estimation of signal attenuation in the 60 GHz band with an analog BiCMOS passive filter. International Journal of Microwave and Wireless Technologies, 2015, 7, 645-653.	1.5	0
110	Noise reduction by pixel circuit optimization in 4-T pixel structure detectors using integrated circuit technologies. , 2015, , .		0
111	A 6-bit, 500-MS/s current-steering DAC in SiGe BiCMOS technology and considerations for SFDR performance. Microelectronics Journal, 2015, 46, 310-319.	1.1	0
112	A 2.5 GHz low phase noise silicon germanium heterojunction bipolar transistor ring oscillator. , 2016, , .		0
113	Comparison of Al and Cu interconnects using VHDL-AMS and SPICE modeling. , 2016, , .		0
114	Millimeter-Wave Circuits and Components. Signals and Communication Technology, 2016, , 107-131.	0.4	0
115	BiCMOS Colpitts oscillator for vector-sum interpolators. Microelectronics International, 2016, 33, 87-93.	0.4	0
116	Reflector and Lens Antennas. Signals and Communication Technology, 2016, , 85-106.	0.4	0
117	Modelling of Air and Water Pollution Sources. Smart Sensors, Measurement and Instrumentation, 2016, , 63-99.	0.4	0
118	Intelligent Automated Design Ideas for Inductor Synthesis. Signals and Communication Technology, 2016, , 199-234.	0.4	0
119	The Sub-systems of an Energy Harvesting Device: Focus on RFID Fundamentals. Smart Sensors, Measurement and Instrumentation, 2016, , 135-163.	0.4	0
120	Practical Considerations of Integrated and Discrete Power Amplifier Solutions. Signals and Communication Technology, 2016, , 309-329.	0.4	0
121	Continuous-Mode Power Amplifiers. Signals and Communication Technology, 2016, , 61-92.	0.4	0
122	Linearized differential current sensor in low-voltage CMOS. Microelectronics International, 2017, 34, 91-98.	0.4	0
123	Systems Aspects of Millimeter-Wave Power Amplifiers. Signals and Communication Technology, 2017, , 39-80.	0.4	0
124	Linear-Mode Millimeter-Wave Power Amplifiers. Signals and Communication Technology, 2017, , 125-162.	0.4	0
125	Performance Enhancement Techniques for Millimeter-Wave Power Amplifiers. Signals and Communication Technology, 2017, , 239-305.	0.4	0
126	Electronic Countermeasures and Directed Energy Weapons: Innovative Optoelectronics Versus Brute Force. Signals and Communication Technology, 2017, , 133-166.	0.4	0

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127	Electronic Warfare Laser Driver Principles: High-Powered Directed Energy Beam Generation. Signals and Communication Technology, 2017, , 67-100.	0.4	0
128	Electronic Warfare Optoelectronic Receiver Fundamentals: Applications and Research Opportunities. Signals and Communication Technology, 2017, , 101-131.	0.4	0
129	Frequency Response of Optoelectronic Receivers: The Motivation for Faster Transistors. Signals and Communication Technology, 2017, , 167-200.	0.4	0
130	SiGe for Radiation Hardening: Spearheading Electronic Warfare in Space. Signals and Communication Technology, 2017, , 201-233.	0.4	0
131	Charged Particle-Beam Acceleration and Lasers: Contextualizing Technologies that Shaped Electronic Warfare. Signals and Communication Technology, 2017, , 29-66.	0.4	0
132	Implementation of a 6 GHz MEMS Switch. , 2017, , .		0
133	Broadband Low-Noise Amplifiers. Signals and Communication Technology, 2018, , 175-203.	0.4	0
134	Advanced Low-Noise Amplifier Optimization Topics. Signals and Communication Technology, 2018, , 253-286.	0.4	0
135	Integrated Substrates: Millimeter-Wave Transistor Technologies. Smart Sensors, Measurement and Instrumentation, 2019, , 105-128.	0.4	0
136	Machine and Human is the New Workspace in Emerging Economies: A Phased Approach as the Strategic Framework to Reach Sustainable Economic System Readiness. , 2019, , .		0
137	The Past, Present and Future of Telecommunications Expansion: A Historical Perspective. Lecture Notes in Electrical Engineering, 2021, , 31-61.	0.3	0
138	5G and 6G Networks: Should There Be a Health Concern?. Lecture Notes in Electrical Engineering, 2021, , 281-304.	0.3	0
139	Full Power Amplifier System Design. Signals and Communication Technology, 2016, , 235-308.	0.4	0
140	Impedance Matching. Signals and Communication Technology, 2016, , 173-195.	0.4	0
141	Review of Telecommunication Aspects for Power Amplifier Design. Signals and Communication Technology, 2016, , 29-60.	0.4	0
142	Switch-Mode Power Amplifiers. Signals and Communication Technology, 2016, , 93-135.	0.4	0
143	Practical Applications of Millimeter-Wave Antennas. Signals and Communication Technology, 2016, , 133-155.	0.4	0
144	Active Integrated Antennas. Signals and Communication Technology, 2016, , 61-84.	0.4	0

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145	Geographic Information Systems and Remote Sensing. Smart Sensors, Measurement and Instrumentation, 2016, , 165-199.	0.4	0
146	Microwave Photonics: Complementing Light-Wave Technology with High-Speed Electronics. Signals and Communication Technology, 2017, , 235-267.	0.4	0
147	Characterization of Industrial GHG Emission Sources in Urban Planning. Green Energy and Technology, 2017, , 447-484.	0.4	0
148	Methodologies for Millimeter-Wave Circuit Design in Extreme Environments. Lecture Notes in Electrical Engineering, 2020, , 165-196.	0.3	0
149	Transceivers for the Fourth Industrial Revolution. Millimeter-Wave Frequency Mixers and Oscillators. Lecture Notes in Electrical Engineering, 2021, , 75-122.	0.3	0
150	Transceivers for the Fourth Industrial Revolution. Millimeter-Wave Low-Noise Amplifiers and Power Amplifiers. Lecture Notes in Electrical Engineering, 2021, , 123-164.	0.3	0
151	Integrated Low Noise Amplifier with Capacitive Shunt Feedback Impedance Matching for Radio Astronomy. Publications of the Astronomical Society of the Pacific, 2021, 133, 015001.	1.0	0
152	Device Scaling: Going from "Micro" to "Nano" Electronics. Lecture Notes in Electrical Engineering, 2020, , 1-40.	0.3	0
153	Millimeter-Wave Substrates and System-Level Approach in Millimeter-Wave Research and Design. Lecture Notes in Electrical Engineering, 2020, , 75-111.	0.3	0
154	Electronic Design Automation for Millimeter-Wave Research and Design. Lecture Notes in Electrical Engineering, 2020, , 41-73.	0.3	0
155	Methodologies for Millimeter-Wave Circuit Design. Lecture Notes in Electrical Engineering, 2020, , 113-164.	0.3	0
156	Further Device Scaling: From Nanoelectronics to Future Technologies. Lecture Notes in Electrical Engineering, 2020, , 197-220.	0.3	0
157	Steering and Rowing through a Crisis Pandemic Leadership in Higher Education. , 2022, , 13-31.		0