

Ehsan Afshari

List of Publications by Year in descending order

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papers

2,746
citations

236612

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182168

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66
all docs

66
docs citations

66
times ranked

1926
citing authors

#	ARTICLE	IF	CITATIONS
1	High Power Terahertz and Millimeter-Wave Oscillator Design: A Systematic Approach. IEEE Journal of Solid-State Circuits, 2011, 46, 583-597.	3.5	322
2	Active Terahertz Imaging Using Schottky Diodes in CMOS: Array and 860-GHz Pixel. IEEE Journal of Solid-State Circuits, 2013, 48, 2296-2308.	3.5	237
3	Nonlinear transmission lines for pulse shaping in silicon. IEEE Journal of Solid-State Circuits, 2005, 40, 744-752.	3.5	171
4	A CMOS High-Power Broadband 260-GHz Radiator Array for Spectroscopy. IEEE Journal of Solid-State Circuits, 2013, 48, 3090-3104.	3.5	163
5	A Novel CMOS High-Power Terahertz VCO Based on Coupled Oscillators: Theory and Implementation. IEEE Journal of Solid-State Circuits, 2012, 47, 3032-3042.	3.5	157
6	A SiGe Terahertz Heterodyne Imaging Transmitter With 3.3 mW Radiated Power and Fully-Integrated Phase-Locked Loop. IEEE Journal of Solid-State Circuits, 2015, 50, 2935-2947.	3.5	126
7	A High-Power and Scalable 2-D Phased Array for Terahertz CMOS Integrated Systems. IEEE Journal of Solid-State Circuits, 2015, 50, 597-609.	3.5	99
8	Delay-Line-Based Analog-to-Digital Converters. IEEE Transactions on Circuits and Systems II: Express Briefs, 2009, 56, 464-468.	2.2	96
9	A Distributed Dual-Band LC Oscillator Based on Mode Switching. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 99-107.	2.9	94
10	A Fully Integrated 320 GHz Coherent Imaging Transceiver in 130 nm SiGe BiCMOS. IEEE Journal of Solid-State Circuits, 2016, 51, 2596-2609.	3.5	72
11	A High-Resolution 220-GHz Ultra-Wideband Fully Integrated ISAR Imaging System. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 429-442.	2.9	71
12	A Broadband mm-Wave and Terahertz Traveling-Wave Frequency Multiplier on CMOS. IEEE Journal of Solid-State Circuits, 2011, 46, 2966-2976.	3.5	69
13	A 0.92-THz SiGe Power Radiator Based on a Nonlinear Theory for Harmonic Generation. IEEE Journal of Solid-State Circuits, 2017, 52, 406-422.	3.5	66
14	A 170-GHz Fully Integrated Single-Chip FMCW Imaging Radar with 3-D Imaging Capability. IEEE Journal of Solid-State Circuits, 2017, 52, 2721-2734.	3.5	64
15	A Miniature 2 mW 4 bit 1.2 GS/s Delay-Line-Based ADC in 65 nm CMOS. IEEE Journal of Solid-State Circuits, 2011, 46, 2312-2325.	3.5	56
16	A 10-Gb/s Inductorless Transimpedance Amplifier. IEEE Transactions on Circuits and Systems II: Express Briefs, 2010, 57, 926-930.	2.2	52
17	Extremely wideband signal shaping using one- and two-dimensional nonuniform nonlinear transmission lines. Journal of Applied Physics, 2006, 99, 054901.	1.1	48
18	Electrical funnel: A broadband signal combining method. , 2006, , .		47

#	ARTICLE	IF	CITATIONS
19	A Low-Phase-Noise Multi-Phase Oscillator Based on Left-Handed LC-Ring. IEEE Journal of Solid-State Circuits, 2010, 45, 1822-1833.	3.5	44
20	A High-Power Broadband Passive Terahertz Frequency Doubler in CMOS. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 1150-1160.	2.9	39
21	A 105-GHz VCO With 9.5% Tuning Range and 2.8-mW Peak Output Power in a 65-nm Bulk CMOS Process. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 753-762.	2.9	39
22	A High-Speed Efficient 220-GHz Spatial-Orthogonal ASK Transmitter in 130-nm SiGe BiCMOS. IEEE Journal of Solid-State Circuits, 2017, 52, 2321-2334.	3.5	32
23	Terahertz electronics: Application of wave propagation and nonlinear processes. Applied Physics Reviews, 2020, 7, .	5.5	32
24	A 173 GHz Amplifier With a 18.5 dB Power Gain in a 130 nm SiGe Process: A Systematic Design of High-Gain Amplifiers Above $f_{\max}/2$. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 201-214.	2.9	30
25	Efficient Microwave and Millimeter-Wave Frequency Multipliers Using Nonlinear Transmission Lines in CMOS Technology. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 2889-2896.	2.9	27
26	Applications of Artificial Intelligence on the Modeling and Optimization for Analog and Mixed-Signal Circuits: A Review. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 2418-2431.	3.5	27
27	Low-Noise Parametric Resonant Amplifier. IEEE Transactions on Circuits and Systems I: Regular Papers, 2011, 58, 479-492.	3.5	26
28	280GHz and 860GHz image sensors using Schottky-barrier diodes in 0.13 μ m digital CMOS. , 2012, , .		26
29	An Efficient High-Power Fundamental Oscillator Above $f_{\max}/2$: A Systematic Design. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 4176-4189.	2.9	25
30	Ultrafast analog Fourier transform using 2-D LC lattice. IEEE Transactions on Circuits and Systems I: Regular Papers, 2008, 55, 2332-2343.	3.5	24
31	Low-Power Negative Inductance Integrated Circuits for GHz Applications. IEEE Microwave and Wireless Components Letters, 2015, 25, 118-120.	2.0	23
32	On the Design of a High-Performance mm-Wave VCO With Switchable Triple-Coupled Transformer. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 4450-4464.	2.9	23
33	Distributed Parametric Resonator: A Passive CMOS Frequency Divider. IEEE Journal of Solid-State Circuits, 2010, 45, 1834-1844.	3.5	22
34	A 53-67 GHz Low-Noise Mixer-First Receiver Front-End in 65-nm CMOS. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 2051-2063.	3.5	21
35	Delay Coupled Oscillators for Frequency Tuning of Solid-State Terahertz Sources. Physical Review Letters, 2012, 108, 234101.	2.9	20
36	Electrical Prism: A High Quality Factor Filter for Millimeter-Wave and Terahertz Frequencies. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 2790-2799.	2.9	17

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37	A broadband 480-GHz passive frequency doubler in 65-nm bulk CMOS with 0.23mW output power. , 2012, , .		16
38	On Probability of Support Recovery for Orthogonal Matching Pursuit Using Mutual Coherence. IEEE Signal Processing Letters, 2017, 24, 1646-1650.	2.1	16
39	A Wide-Tuning-Range Low-Phase-Noise mm-Wave CMOS VCO With Switchable Transformer-Based Tank. IEEE Solid-State Circuits Letters, 2018, 1, 82-85.	1.3	14
40	A 91-GHz Fundamental VCO With 6.1% DC-to-RF Efficiency and 4.5 dBm Output Power in 0.13- μm CMOS. IEEE Solid-State Circuits Letters, 2018, 1, 102-105.	1.3	14
41	A Fully On-Chip Frequency-Stabilization Mechanism for Terahertz Sources Eliminating Frequency Reference and Dividers. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 2523-2536.	2.9	14
42	A 220-GHz Energy-Efficient High-Data-Rate Wireless ASK Transmitter Array. IEEE Journal of Solid-State Circuits, 2022, 57, 1623-1634.	3.5	12
43	A Nonlinear Lattice for High-Amplitude Picosecond Pulse Generation in CMOS. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 370-380.	2.9	11
44	Filling the Gap With Sand: When CMOS Reaches THz. IEEE Solid-State Circuits Magazine, 2019, 11, 33-42.	0.5	11
45	A System of Two Coupled Oscillators With a Continuously Controllable Phase Shift. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 1531-1543.	3.5	11
46	A Transimpedance-to-Noise Optimized Analog Front-End With High PSRR for Pulsed ToF Lidar Receivers. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 3642-3655.	3.5	11
47	A 1mW 4b 1GS/s delay-line based analog-to-digital converter. , 2009, , .		10
48	A 105GHz VCO with 9.5% tuning range and 2.8mW peak output power using coupled colpitts oscillators in 65nm bulk CMOS. , 2013, , .		10
49	A 60-GHz CMOS Down-Conversion Mixer with High Conversion Gain and Low Noise Figure. , 2018, , .		8
50	A CMOS Noise-Squeezing Amplifier. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 329-339.	2.9	7
51	Radiation-efficient 60 GHz on-chip dipole antenna realised by reactive impedance metasurface. IET Microwaves, Antennas and Propagation, 2013, 7, 98-104.	0.7	7
52	Smart Detector Cell: A Scalable All-Spin Circuit for Low Power Non-Boolean Pattern Recognition. IEEE Nanotechnology Magazine, 2016, 15, 356-366.	1.1	7
53	Towards efficient high power mm-wave and terahertz sources in silicon: One decade of progress. , 2017, , .		7
54	A Novel Approach to Secure Communication in Physical Layer via Coupled Dynamical Systems. , 2018, , .		7

#	ARTICLE	IF	CITATIONS
55	Reflection-Based Short Pulse Generation in CMOS. IEEE Solid-State Circuits Letters, 2020, 3, 318-321.	1.3	7
56	Design of broadband mm-wave and THz frequency doublers. , 2016, , .		6
57	Nonboolean Pattern Recognition Using Chains of Coupled CMOS Oscillators as Discriminant Circuits. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2017, 3, 1-9.	1.1	6
58	An 88-GHz Compact Fundamental Oscillator With 19.4% DC-to-RF Efficiency and 7.5-dBm Output Power in 130-nm SiGe BiCMOS. IEEE Solid-State Circuits Letters, 2018, 1, 106-109.	1.3	6
59	An Energy Efficient Fully Integrated 20Gbps OOK Wireless Transmitter at 220GHz. , 2021, , .		5
60	An ultra-fast frequency shift mechanism for high data-rate sub-THz wireless communications in CMOS. Applied Physics Letters, 2021, 118, .	1.5	5
61	2-D Electrical Interferometer: A Novel High-Speed Quantizer. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 2549-2561.	2.9	4
62	Electrical Prism: a high quality factor filter for mm wave and terahertz frequencies. , 2008, , .		2
63	Picosecond pulse generation on CMOS: Design beyond transistor limits. , 2009, , .		2
64	A low conversion loss passive frequency doubler. , 2011, , .		2
65	Bandwidth enhancement of passive filters at mm-wave frequencies using effective negative group index (NGI) structures. , 2010, , .		1
66	An 8GHz, 0.45dB NF CMOS LNA employing noise squeezing. , 2011, , .		0