Ehsan Afshari

List of Publications by Year in Descending Order

63 papers	1,925 citations	22 h-index	43 g-index
66 ext. papers	2,416 ext. citations	4 avg, IF	5.35 L-index

#	Paper	IF	Citations
63	A 220-GHz Energy-Efficient High-Data-Rate Wireless ASK Transmitter Array. *IEEE Journal of Solid-State Circuits*, **2021**, 1-1	5.5	2
62	An Energy Efficient Fully Integrated 20Gbps OOK Wireless Transmitter at 220GHz **2021**,		2
61	An ultra-fast frequency shift mechanism for high data-rate sub-THz wireless communications in CMOS. *Applied Physics Letters*, **2021**, 118, 242103	3.4	3
60	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	3.9	6
59	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	3.9	5
58	Reflection-Based Short Pulse Generation in CMOS. *IEEE Solid-State Circuits Letters*, **2020**, 3, 318-321	2	4
57	Terahertz electronics: Application of wave propagation and nonlinear processes. *Applied Physics Reviews*, **2020**, 7, 021302	17.3	17
56	. *IEEE Solid-State Circuits Magazine*, **2019**, 11, 33-42	1.5	6
55	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	4.1	10
54	. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2019**, 66, 2051-2063	3.9	11
53	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	4.1	14
52	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	3.9	6
51	. *IEEE Transactions on Microwave Theory and Techniques*, **2019**, 67, 429-442	4.1	38
50	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	4.1	15
49	A 91-GHz Fundamental VCO With 6.1% DC-to-RF Efficiency and 4.5 dBm Output Power in 0.13-mu m CMOS. *IEEE Solid-State Circuits Letters*, **2018**, 1, 102-105	2	7
48	A Novel Approach to Secure Communication in Physical Layer via Coupled Dynamical Systems **2018**,		3
47	A 60-GHz CMOS Down-Conversion Mixer with High Conversion Gain and Low Noise Figure **2018**,		5

46	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	2	5
45	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	2	11
44	. *IEEE Journal of Solid-State Circuits*, **2017**, 52, 406-422	5.5	38
43	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	2.4	5
42	Towards efficient high power mm-wave and terahertz sources in silicon: One decade of progress **2017**,		4
41	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	5.5	21
40	An Efficient High-Power Fundamental Oscillator Above $f_{max }/2$: A Systematic Design. *IEEE Transactions on Microwave Theory and Techniques*, **2017**, 65, 4176-4189	4.1	14
39	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	5.5	41
38	On Probability of Support Recovery for Orthogonal Matching Pursuit Using Mutual Coherence. *IEEE Signal Processing Letters*, **2017**, 24, 1646-1650	3.2	10
37	A Fully Integrated 320 GHz Coherent Imaging Transceiver in 130 nm SiGe BiCMOS. *IEEE Journal of Solid-State Circuits*, **2016**, 51, 2596-2609	5.5	42
36	Design of broadband mm-wave and THz frequency doublers **2016**,		5
35	Smart Detector Cell: A Scalable All-Spin Circuit for Low Power Non-Boolean Pattern Recognition. *IEEE Nanotechnology Magazine*, **2016**, 15, 356-366	2.6	5
34	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	5.5	91
33	. *IEEE Transactions on Microwave Theory and Techniques*, **2015**, 63, 2889-2896	4.1	18
32	A High-Power and Scalable 2-D Phased Array for Terahertz CMOS Integrated Systems. *IEEE Journal of Solid-State Circuits*, **2015**, 50, 597-609	5.5	64
31	Low-Power Negative Inductance Integrated Circuits for GHz Applications. *IEEE Microwave and Wireless Components Letters*, **2015**, 25, 118-120	2.6	16
30	. *IEEE Transactions on Microwave Theory and Techniques*, **2014**, 62, 753-762	4.1	26
29	Active Terahertz Imaging Using Schottky Diodes in CMOS: Array and 860-GHz Pixel. *IEEE Journal of Solid-State Circuits*, **2013**, 48, 2296-2308	5.5	170

28	A High-Power Broadband Passive Terahertz Frequency Doubler in CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2013**, 61, 1150-1160	4.1	30
27	A 105GHz VCO with 9.5% tuning range and 2.8mW peak output power using coupled colpitts oscillators in 65nm bulk CMOS **2013**,		4
26	A CMOS High-Power Broadband 260-GHz Radiator Array for Spectroscopy. *IEEE Journal of Solid-State Circuits*, **2013**, 48, 3090-3104	5.5	125
25	Radiation-efficient 60 GHz on-chip dipole antenna realised by reactive impedance metasurface. *IET Microwaves, Antennas and Propagation*, **2013**, 7, 98-104	1.6	5
24	A Nonlinear Lattice for High-Amplitude Picosecond Pulse Generation in CMOS. *IEEE Transactions on Microwave Theory and Techniques*, **2012**, 60, 370-380	4.1	11
23	A CMOS Noise-Squeezing Amplifier. *IEEE Transactions on Microwave Theory and Techniques*, **2012**, 60, 329-339	4.1	5
22	A broadband 480-GHz passive frequency doubler in 65-nm bulk CMOS with 0.23mW output power **2012**,		11
21	A Novel CMOS High-Power Terahertz VCO Based on Coupled Oscillators: Theory and Implementation. *IEEE Journal of Solid-State Circuits*, **2012**, 47, 3032-3042	5.5	106
20	Delay coupled oscillators for frequency tuning of solid-state terahertz sources. *Physical Review Letters*, **2012**, 108, 234101	7.4	18
19	280GHz and 860GHz image sensors using Schottky-barrier diodes in 0.13μm digital CMOS **2012**,		16
18	Low-Noise Parametric Resonant Amplifier. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2011**, 58, 479-492	3.9	23
17	High Power Terahertz and Millimeter-Wave Oscillator Design: A Systematic Approach. *IEEE Journal of Solid-State Circuits*, **2011**, 46, 583-597	5.5	249
16	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	5.5	45
15	A Distributed Dual-Band LC Oscillator Based on Mode Switching. *IEEE Transactions on Microwave Theory and Techniques*, **2011**, 59, 99-107	4.1	51
14	A Broadband mm-Wave and Terahertz Traveling-Wave Frequency Multiplier on CMOS. *IEEE Journal of Solid-State Circuits*, **2011**, 46, 2966-2976	5.5	56
13	A low conversion loss passive frequency doubler **2011**,		2
12	A 10-Gb/s Inductorless Transimpedance Amplifier. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2010**, 57, 926-930	3.5	40
11	A Low-Phase-Noise Multi-Phase Oscillator Based on Left-Handed LC-Ring. *IEEE Journal of Solid-State Circuits*, **2010**, 45, 1822-1833	5.5	34

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10	Distributed Parametric Resonator: A Passive CMOS Frequency Divider. *IEEE Journal of Solid-State Circuits*, **2010**, 45, 1834-1844	5.5	20
9	2-D Electrical Interferometer: A Novel High-Speed Quantizer. *IEEE Transactions on Microwave Theory and Techniques*, **2010**, 58, 2549-2561	4.1	3
8	Picosecond pulse generation on CMOS: Design beyond transistor limits **2009**,		2
7	Electrical Prism: A High Quality Factor Filter for Millimeter-Wave and Terahertz Frequencies. *IEEE Transactions on Microwave Theory and Techniques*, **2009**, 57, 2790-2799	4.1	14
6	Delay-Line-Based Analog-to-Digital Converters. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2009**, 56, 464-468	3.5	69
5	Ultrafast analog Fourier transform using 2-D LC lattice. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2008**, 55, 2332-2343	3.9	18
4	Electrical Prism: a high quality factor filter for mm wave and terahertz frequencies **2008**,		1
3	Electrical funnel: A broadband signal combining method **2006**,		42
2	Extremely wideband signal shaping using one- and two-dimensional nonuniform nonlinear transmission lines. *Journal of Applied Physics*, **2006**, 99, 054901	2.5	42
1	Nonlinear transmission lines for pulse shaping in silicon. *IEEE Journal of Solid-State Circuits*, **2005**, 40, 744-752	5.5	137