

Mikko Valkama

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

112
papers

2,827
citations

26
h-index

50
g-index

113
ext. papers

3,744
ext. citations

5.1
avg, IF

5.48
L-index

#	Paper	IF	Citations
112	Millimeter-wave Mobile Sensing and Environment Mapping: Models, Algorithms and Validation. <i>IEEE Transactions on Vehicular Technology</i> , 2022 , 1-1	6.8	4
111	Phase Noise Resilient Three-Level Continuous-Phase Modulation for DFT-Spread OFDM. <i>IEEE Open Journal of the Communications Society</i> , 2022 , 1-1	6.7	
110	A Computationally Efficient EK-PMBM Filter for Bistatic mmWave Radio SLAM. <i>IEEE Journal on Selected Areas in Communications</i> , 2022 , 1-1	14.2	3
109	Air-Induced PIM Cancellation in FDD MIMO Transceivers. <i>IEEE Microwave and Wireless Components Letters</i> , 2022 , 1-4	2.6	1
108	Inverse Covariance Matrix Estimation for Low-Complexity Closed-Loop DPD Systems: Methods and Performance. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2021 , 1-1	4.1	1
107	Channel Parameter Estimation and TX Positioning with Multi-Beam Fusion in 5G mmWave Networks. <i>IEEE Transactions on Wireless Communications</i> , 2021 , 1-1	9.6	1
106	Security Improvement for Energy Harvesting Based Overlay Cognitive Networks With Jamming-Assisted Full-Duplex Destinations. <i>IEEE Transactions on Vehicular Technology</i> , 2021 , 70, 12232-12237	6.8	1
105	Frequency-Domain Digital Predistortion for OFDM. <i>IEEE Microwave and Wireless Components Letters</i> , 2021 , 31, 816-818	2.6	5
104	In-Band Full-Duplex Radar-Communication System. <i>IEEE Systems Journal</i> , 2021 , 15, 1086-1097	4.3	7
103	Novel Wake-up Scheme for Energy-Efficient Low-Latency Mobile Devices in 5G Networks. <i>IEEE Transactions on Mobile Computing</i> , 2021 , 20, 1511-1528	4.6	5
102	Kernelized-Likelihood Ratio Tests for Binary Phase-Shift Keying Signal Detection. <i>IEEE Transactions on Cognitive Communications and Networking</i> , 2021 , 7, 541-552	6.6	1
101	Enhanced Uplink Coverage for 5G NR: Frequency-Domain Spectral Shaping With Spectral Extension. <i>IEEE Open Journal of the Communications Society</i> , 2021 , 2, 1188-1204	6.7	4
100	Mixture of Experts Approach for Piecewise Modeling and Linearization of RF Power Amplifiers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2021 , 1-1	4.1	5
99	Frequency-Domain Signal Processing for Spectrally-Enhanced CP-OFDM Waveforms in 5G New Radio. <i>IEEE Transactions on Wireless Communications</i> , 2021 , 1-1	9.6	1
98	. <i>IEEE Access</i> , 2021 , 9, 26902-26925	3.5	60
97	Novel Tone Reservation Method for DFT-s-OFDM. <i>IEEE Wireless Communications Letters</i> , 2021 , 1-1	5.9	
96	Direct Lightweight Temporal Compression for Wearable Sensor Data 2021 , 5, 1-4		2

95	Millimeter-Wave Radar Scheme With Passive Reflector for Uncontrolled Blind Urban Intersection. <i>IEEE Transactions on Vehicular Technology</i> , 2021 , 70, 7335-7346	6.8	4
94	Gradient-Adaptive Spline-Interpolated LUT Methods for Low-Complexity Digital Predistortion. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 68, 336-349	3.9	11
93	Radio Frequency Fingerprint Identification for Narrowband Systems, Modelling and Classification. <i>IEEE Transactions on Information Forensics and Security</i> , 2021 , 16, 3974-3987	8	10
92	Cascaded Spline-Based Models for Complex Nonlinear Systems: Methods and Applications. <i>IEEE Transactions on Signal Processing</i> , 2021 , 69, 370-384	4.8	7
91	Radar Scheme With Raised Reflector for NLOS Vehicle Detection. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2021 , 1-9	6.1	2
90	Closed-Loop Sign Algorithms for Low-Complexity Digital Predistortion: Methods and Performance. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2021 , 69, 1048-1062	4.1	4
89	Optimized Waveforms for 5G _B G Communication with Sensing: Theory, Simulations and Experiments. <i>IEEE Transactions on Wireless Communications</i> , 2021 , 1-1	9.6	10
88	A 28.5 GHz Beamsteering Receiver IC With 4-Element Vivaldi Antenna Array. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2020 , 68, 3852-3860	4.1	1
87	Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2020 , 68, 4000-4017	4.1	27
86	SDR Prototype for Clipped and Fast-Convolution Filtered OFDM for 5G New Radio Uplink. <i>IEEE Access</i> , 2020 , 8, 89946-89963	3.5	7
85	Wake-Up Scheduling for Energy-Efficient Mobile Devices. <i>IEEE Transactions on Wireless Communications</i> , 2020 , 19, 6020-6036	9.6	3
84	Passive Intermodulation in Simultaneous Transmit/Receive Systems: Modeling and Digital Cancellation Methods. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2020 , 68, 3633-3652	4.1	10
83	. <i>IEEE Transactions on Signal Processing</i> , 2020 , 68, 3603-3618	4.8	20
82	Positioning-Aided 3D Beamforming for Enhanced Communications in mmWave Mobile Networks. <i>IEEE Access</i> , 2020 , 8, 55513-55525	3.5	9
81	Generalized Fast-Convolution-Based Filtered-OFDM: Techniques and Application to 5G New Radio. <i>IEEE Transactions on Signal Processing</i> , 2020 , 68, 1213-1228	4.8	12
80	Wake-Up Radio Based Access in 5G Under Delay Constraints: Modeling and Optimization. <i>IEEE Transactions on Communications</i> , 2020 , 68, 1044-1057	6.9	11
79	Networking and Positioning Co-Design in Multi-Connectivity Industrial mmW Systems. <i>IEEE Transactions on Vehicular Technology</i> , 2020 , 69, 15842-15856	6.8	0
78	Beamformed Radio Link Capacity Under Positioning Uncertainty. <i>IEEE Transactions on Vehicular Technology</i> , 2020 , 69, 16235-16240	6.8	2

77	PAPR Reduction With Mixed-Numerology OFDM. <i>IEEE Wireless Communications Letters</i> , 2020 , 9, 21-25	5.9	4
76	Analysis of Self-Interference Cancellation Under Phase Noise, CFO, and IQ Imbalance in GFDM Full-Duplex Transceivers. <i>IEEE Transactions on Vehicular Technology</i> , 2020 , 69, 700-713	6.8	12
75	Characterization and Performance Improvement of Cooperative Wireless Networks With Nonlinear Power Amplifier at Relay. <i>IEEE Transactions on Vehicular Technology</i> , 2020 , 69, 3244-3255	6.8	3
74	A Class-D Tri-Phasing CMOS Power Amplifier With an Extended Marchand-Balun Power Combiner. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2020 , 68, 1022-1034	4.1	2
73	Impact of Channel Non-Reciprocity in Cell-Free Massive MIMO. <i>IEEE Wireless Communications Letters</i> , 2020 , 9, 344-348	5.9	9
72	Handling Spontaneous Traffic Variations in 5G+ via Offloading Onto mmWave-Capable UAV Bridges. <i>IEEE Transactions on Vehicular Technology</i> , 2020 , 69, 10070-10084	6.8	5
71	Neural-Network-Based Digital Predistortion for Active Antenna Arrays Under Load Modulation. <i>IEEE Microwave and Wireless Components Letters</i> , 2020 , 30, 843-846	2.6	13
70	Deep Learning-Based Cell-Level and Beam-Level Mobility Management System. <i>Sensors</i> , 2020 , 20,	3.8	2
69	Multiplierless Filtered-OFDM Transmitter for Narrowband IoT Devices. <i>IEEE Internet of Things Journal</i> , 2020 , 7, 846-862	10.7	6
68	Full-Duplex OFDM Radar With LTE and 5G NR Waveforms: Challenges, Solutions, and Measurements. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2019 , 67, 4042-4054	4.1	65
67	On Antenna Array Out-of-Band Emissions. <i>IEEE Wireless Communications Letters</i> , 2019 , 8, 1653-1656	5.9	9
66	Pre-Grant Signaling for Energy-Efficient 5G and Beyond Mobile Devices: Method and Analysis. <i>IEEE Transactions on Green Communications and Networking</i> , 2019 , 3, 418-432	4	11
65	Frequency-Selective PAPR Reduction for OFDM. <i>IEEE Transactions on Vehicular Technology</i> , 2019 , 68, 6167-6171	6.8	10
64	A 1.5–1.9-GHz All-Digital Tri-Phasing Transmitter With an Integrated Multilevel Class-D Power Amplifier Achieving 100-MHz RF Bandwidth. <i>IEEE Journal of Solid-State Circuits</i> , 2019 , 54, 1517-1527	5.5	12
63	Improperity-Based Multiantenna Spectrum Sensing With I/Q Imbalanced Radios. <i>IEEE Transactions on Vehicular Technology</i> , 2019 , 68, 8693-8706	6.8	8
62	MADS: A Framework for Design and Implementation of Adaptive Digital Predistortion Systems. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2019 , 9, 712-722	5.2	2
61	Pilot Allocation and Computationally Efficient Non-Iterative Estimation of Phase Noise in OFDM. <i>IEEE Wireless Communications Letters</i> , 2019 , 8, 640-643	5.9	4
60	The Γ/Γ Inverse Gamma and Γ/Γ Inverse Gamma Composite Fading Models: Fundamental Statistics and Empirical Validation. <i>IEEE Transactions on Communications</i> , 2019 , 1-1	6.9	22

59	Digital Predistortion for Hybrid MIMO Transmitters. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2018 , 12, 445-454	7.5	59
58	Estimation and Mitigation of Channel Non-Reciprocity in Massive MIMO. <i>IEEE Transactions on Signal Processing</i> , 2018 , 66, 2711-2723	4.8	12
57	Adaptive Nonlinear RF Cancellation for Improved Isolation in Simultaneous Transmit/Receive Systems. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2018 , 66, 2299-2312	4.1	52
56	Performance Analysis of Multi-User Massive MIMO Downlink Under Channel Non-Reciprocity and Imperfect CSI. <i>IEEE Transactions on Communications</i> , 2018 , 66, 2456-2471	6.9	41
55	Tri-Phasing Modulation for Efficient and Wideband Radio Transmitters. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2018 , 65, 3085-3098	3.9	3
54	Transmit Power Optimization and Feasibility Analysis of Self-Backhauling Full-Duplex Radio Access Systems. <i>IEEE Transactions on Wireless Communications</i> , 2018 , 17, 4219-4236	9.6	10
53	A High-Speed DSP Engine for First-Order Hold Digital Phase Modulation in 28-nm CMOS. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2018 , 65, 1959-1963	3.5	1
52	M2M Communication Assessment in Energy-Harvesting and Wake-Up Radio Assisted Scenarios Using Practical Components. <i>Sensors</i> , 2018 , 18,	3.8	4
51	The Fisher-Bnedecor \mathcal{F} Distribution: A Simple and Accurate Composite Fading Model. <i>IEEE Communications Letters</i> , 2017 , 21, 1661-1664	3.8	100
50	Full-Duplex Regenerative Relaying and Energy-Efficiency Optimization Over Generalized Asymmetric Fading Channels. <i>IEEE Transactions on Wireless Communications</i> , 2017 , 16, 3232-3251	9.6	11
49	Joint Device Positioning and Clock Synchronization in 5G Ultra-Dense Networks. <i>IEEE Transactions on Wireless Communications</i> , 2017 , 16, 2866-2881	9.6	101
48	Experimental Results of Novel DoA Estimation Algorithms for Compact Reconfigurable Antennas. <i>International Journal of Antennas and Propagation</i> , 2017 , 2017, 1-13	1.2	1
47	Energy Efficiency Maximization of Full-Duplex Two-Way Relay With Non-Ideal Power Amplifiers and Non-Negligible Circuit Power. <i>IEEE Transactions on Wireless Communications</i> , 2017 , 16, 6264-6278	9.6	27
46	Error Rate and Power Allocation Analysis of Regenerative Networks Over Generalized Fading Channels. <i>IEEE Transactions on Communications</i> , 2016 , 64, 1751-1768	6.9	13
45	Digital Interpolating Phase Modulator for Wideband Outphasing Transmitters. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2016 , 63, 705-715	3.9	16
44	Analysis and Augmented Spatial Processing for Uplink OFDMA MU-MIMO Receiver With Transceiver I/Q Imbalance and External Interference. <i>IEEE Transactions on Wireless Communications</i> , 2016 , 15, 3422-3439	9.6	25
43	Robust Statistical Approaches for RSS-Based Floor Detection in Indoor Localization. <i>Sensors</i> , 2016 , 16,	3.8	6
42	Digital correction of frequency response mismatches in 2-channel time-interleaved ADCs using adaptive I/Q signal processing. <i>Analog Integrated Circuits and Signal Processing</i> , 2015 , 82, 543-555	1.2	4

41	Parameterized Sets of Dataflow Modes And Their Application to Implementation of Cognitive Radio Systems. <i>Journal of Signal Processing Systems</i> , 2015 , 80, 3-18	1.4	10
40	. <i>IEEE Journal on Selected Areas in Communications</i> , 2015 , 33, 2272-2286	14.2	23
39	Frequency Response Mismatch Analysis in Time-Interleaved Analog I/Q Processing and ADCs. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2015 , 62, 608-612	3.5	7
38	Analysis, Blind Identification, and Correction of Frequency Response Mismatch in Two-Channel Time-Interleaved ADCs. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015 , 63, 1721-1734	4.1	21
37	Entropy and Channel Capacity under Optimum Power and Rate Adaptation over Generalized Fading Conditions. <i>IEEE Signal Processing Letters</i> , 2015 , 22, 2162-2166	3.2	10
36	Frequency Response Mismatches in 4-channel Time-Interleaved ADCs: Analysis, Blind Identification, and Correction. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2015 , 62, 2268-2279	3.9	36
35	Covariance-based OFDM spectrum sensing with sub-Nyquist samples. <i>Signal Processing</i> , 2015 , 109, 261-268	4.4	7
34	Techno-Economical Comparison of Dynamic DAS and Legacy Macrocellular Densification. <i>International Journal of Wireless Information Networks</i> , 2015 , 22, 312-326	1.9	2
33	Spectrum Sensing Under RF Non-Linearities: Performance Analysis and DSP-Enhanced Receivers. <i>IEEE Transactions on Signal Processing</i> , 2015 , 63, 1950-1964	4.8	18
32	Digital Mitigation of Transmitter-Induced Receiver Desensitization in Carrier Aggregation FDD Transceivers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2015 , 63, 3608-3623	4.1	16
31	Performance Analysis of Primary User RSS/DoA Estimation and Localization in Cognitive Radio Networks Using Sectorized Antennas. <i>IEEE Wireless Communications Letters</i> , 2014 , 3, 237-240	5.9	9
30	Analysis of Oscillator Phase-Noise Effects on Self-Interference Cancellation in Full-Duplex OFDM Radio Transceivers. <i>IEEE Transactions on Wireless Communications</i> , 2014 , 13, 2977-2990	9.6	112
29	. <i>IEEE Access</i> , 2014 , 2, 1005-1029	3.5	39
28	. <i>IEEE Wireless Communications Letters</i> , 2014 , 3, 445-445	5.9	1
27	Analysis and Rate Optimization of OFDM-Based Cognitive Radio Networks Under Power Amplifier Nonlinearity. <i>IEEE Transactions on Communications</i> , 2014 , 62, 3410-3419	6.9	14
26	Full-Duplex Transceiver System Calculations: Analysis of ADC and Linearity Challenges. <i>IEEE Transactions on Wireless Communications</i> , 2014 , 13, 3821-3836	9.6	195
25	Multi-channel energy detection under phase noise: analysis and mitigation. <i>Mobile Networks and Applications</i> , 2014 , 19, 473-486	2.9	11
24	Energy Detection under IQ Imbalance with Single- and Multi-Channel Direct-Conversion Receiver: Analysis and Mitigation. <i>IEEE Journal on Selected Areas in Communications</i> , 2014 , 32, 411-424	14.2	42

23	Widely linear digital self-interference cancellation in direct-conversion full-duplex transceiver. <i>IEEE Journal on Selected Areas in Communications</i> , 2014 , 32, 1674-1687	14.2	212
22	. <i>IEEE Transactions on Information Theory</i> , 2014 , 60, 7798-7823	2.8	39
21	Mutual Information Analysis of OFDM Radio Link Under Phase Noise, IQ Imbalance and Frequency-Selective Fading Channel. <i>IEEE Transactions on Wireless Communications</i> , 2013 , 12, 3048-3059	9.6	19
20	Frequency-Agile Multiband Quadrature Sigma-Delta Modulator for Cognitive Radio: Analysis, Design and Digital Post-Processing. <i>IEEE Journal on Selected Areas in Communications</i> , 2013 , 31, 2222-2236	14.2	7
19	A Novel Adaptive Calibration Scheme for Frequency-Selective I/Q Imbalance in Broadband Direct-Conversion Transmitters. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2013 , 60, 61-65	3.5	16
18	. <i>Journal of Communications and Networks</i> , 2013 , 15, 383-397	4.1	35
17	Characterization of OFDM Radio Link Under PLL-Based Oscillator Phase Noise and Multipath Fading Channel. <i>IEEE Transactions on Communications</i> , 2012 , 60, 1479-1485	6.9	21
16	Enhanced VoIP Support in OFDMA-based Packet Radio Networks. <i>Wireless Personal Communications</i> , 2012 , 66, 343-366	1.9	11
15	System- and circuit-level optimization of PLL designs for DVB-T/H receivers. <i>Analog Integrated Circuits and Signal Processing</i> , 2012 , 73, 185-200	1.2	7
14	Quadrature Modulators for Cognitive Radio I/Q Imbalance Analysis and Complex Multiband Principle. <i>Circuits, Systems, and Signal Processing</i> , 2011 , 30, 775-797	2.2	3
13	Modeling and mitigation of nonlinear distortion in wideband A/D converters for cognitive radio receivers. <i>International Journal of Microwave and Wireless Technologies</i> , 2010 , 2, 183-192	0.8	11
12	Analysis and mitigation of phase noise and sampling jitter in OFDM radio receivers. <i>International Journal of Microwave and Wireless Technologies</i> , 2010 , 2, 193-202	0.8	16
11	Recursive learning-based joint digital predistorter for power amplifier and I/Q modulator impairments. <i>International Journal of Microwave and Wireless Technologies</i> , 2010 , 2, 173-182	0.8	10
10	Joint Mitigation of Power Amplifier and I/Q Modulator Impairments in Broadband Direct-Conversion Transmitters. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2010 , 58, 730-739	4.1	120
9	Smart Front-End Signal Processing for Advanced Wireless Receivers. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2009 , 3, 472-487	7.5	14
8	On the Connection of I/Q Imbalance and Channel Equalization in Direct-Conversion Transceivers. <i>IEEE Transactions on Vehicular Technology</i> , 2008 , 57, 1630-1636	6.8	27
7	Circularity-Based I/Q Imbalance Compensation in Wideband Direct-Conversion Receivers. <i>IEEE Transactions on Vehicular Technology</i> , 2008 , 57, 2099-2113	6.8	157
6	. <i>IEEE Transactions on Signal Processing</i> , 2008 , 56, 2496-2508	4.8	52

5	Frequency-Selective I/Q Mismatch Calibration of Wideband Direct-Conversion Transmitters. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2008 , 55, 359-363	3.5	98
4	Advanced digital signal processing techniques for compensation of nonlinear distortion in wideband multicarrier radio receivers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2006 , 54, 2356-2366	4.1	67
3	Blind signal estimation in conjugate signal models with application to I/Q imbalance compensation. <i>IEEE Signal Processing Letters</i> , 2005 , 12, 733-736	3.2	67
2	Signal processing challenges for applying software radio principles in future wireless terminals: an overview. <i>International Journal of Communication Systems</i> , 2002 , 15, 741-769	1.7	31
1	Advanced methods for I/Q imbalance compensation in communication receivers. <i>IEEE Transactions on Signal Processing</i> , 2001 , 49, 2335-2344	4.8	278