

Mikko Valkama

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Mixture of Experts Approach for Piecewise Modeling and Linearization of RF Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 380-391.	2.9	11
2	Radar Scheme With Raised Reflector for NLOS Vehicle Detection. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 9037-9045.	4.7	7
3	Channel Parameter Estimation and TX Positioning With Multi-Beam Fusion in 5G mmWave Networks. IEEE Transactions on Wireless Communications, 2022, 21, 3192-3207.	6.1	11
4	Inverse Covariance Matrix Estimation for Low-Complexity Closed-Loop DPD Systems: Methods and Performance. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 1474-1489.	2.9	2
5	Millimeter-Wave Mobile Sensing and Environment Mapping: Models, Algorithms and Validation. IEEE Transactions on Vehicular Technology, 2022, 71, 3900-3916.	3.9	22
6	Phase Noise Resilient Three-Level Continuous-Phase Modulation for DFT-Spread OFDM. IEEE Open Journal of the Communications Society, 2022, 3, 282-300.	4.4	0
7	A Computationally Efficient EK-PMBM Filter for Bistatic mmWave Radio SLAM. IEEE Journal on Selected Areas in Communications, 2022, 40, 2179-2192.	9.7	12
8	Air-Induced PIM Cancellation in FDD MIMO Transceivers. IEEE Microwave and Wireless Components Letters, 2022, 32, 780-783.	2.0	4
9	Delta-Sigma Modulator-Embedded Digital Predistortion for 5G Transmitter Linearization. IEEE Transactions on Communications, 2022, 70, 5558-5571.	4.9	0
10	The χ^2 / Inverse Gamma and χ^2 / Inverse Gamma Composite Fading Models: Fundamental Statistics and Empirical Validation. IEEE Transactions on Communications, 2021, 69, 5514-5530.	4.9	33
11	In-Band Full-Duplex Radar-Communication System. IEEE Systems Journal, 2021, 15, 1086-1097.	2.9	18
12	Novel Wake-up Scheme for Energy-Efficient Low-Latency Mobile Devices in 5G Networks. IEEE Transactions on Mobile Computing, 2021, 20, 1511-1528.	3.9	9
13	Kernelized-Likelihood Ratio Tests for Binary Phase-Shift Keying Signal Detection. IEEE Transactions on Cognitive Communications and Networking, 2021, 7, 541-552.	4.9	3
14	Enhanced Uplink Coverage for 5G NR: Frequency-Domain Spectral Shaping With Spectral Extension. IEEE Open Journal of the Communications Society, 2021, 2, 1188-1204.	4.4	17
15	Frequency-Domain Signal Processing for Spectrally-Enhanced CP-OFDM Waveforms in 5G New Radio. IEEE Transactions on Wireless Communications, 2021, 20, 6867-6883.	6.1	9
16	Convergent Communication, Sensing and Localization in 6G Systems: An Overview of Technologies, Opportunities and Challenges. IEEE Access, 2021, 9, 26902-26925.	2.6	224
17	Novel Tone Reservation Method for DFT-s-OFDM. IEEE Wireless Communications Letters, 2021, 10, 2130-2134.	3.2	4
18	Direct Lightweight Temporal Compression for Wearable Sensor Data. , 2021, 5, 1-4.		8

#	ARTICLE	IF	CITATIONS
19	Frequency-Domain Digital Predistortion for OFDM. IEEE Microwave and Wireless Components Letters, 2021, 31, 816-818.	2.0	12
20	Millimeter-Wave Radar Scheme With Passive Reflector for Uncontrolled Blind Urban Intersection. IEEE Transactions on Vehicular Technology, 2021, 70, 7335-7346.	3.9	14
21	Gradient-Adaptive Spline-Interpolated LUT Methods for Low-Complexity Digital Predistortion. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 336-349.	3.5	26
22	Radio Frequency Fingerprint Identification for Narrowband Systems, Modelling and Classification. IEEE Transactions on Information Forensics and Security, 2021, 16, 3974-3987.	4.5	62
23	Cascaded Spline-Based Models for Complex Nonlinear Systems: Methods and Applications. IEEE Transactions on Signal Processing, 2021, 69, 370-384.	3.2	14
24	Closed-Loop Sign Algorithms for Low-Complexity Digital Predistortion: Methods and Performance. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 1048-1062.	2.9	5
25	Optimized Waveforms for 5G-6G Communication With Sensing: Theory, Simulations and Experiments. IEEE Transactions on Wireless Communications, 2021, 20, 8301-8315.	6.1	65
26	Security Improvement for Energy Harvesting Based Overlay Cognitive Networks With Jamming-Assisted Full-Duplex Destinations. IEEE Transactions on Vehicular Technology, 2021, 70, 12232-12237.	3.9	14
27	Multiplierless Filtered-OFDM Transmitter for Narrowband IoT Devices. IEEE Internet of Things Journal, 2020, 7, 846-862.	5.5	16
28	PAPR Reduction With Mixed-Numerology OFDM. IEEE Wireless Communications Letters, 2020, 9, 21-25.	3.2	10
29	Analysis of Self-Interference Cancellation Under Phase Noise, CFO, and IQ Imbalance in GFDM Full-Duplex Transceivers. IEEE Transactions on Vehicular Technology, 2020, 69, 700-713.	3.9	20
30	Characterization and Performance Improvement of Cooperative Wireless Networks With Nonlinear Power Amplifier at Relay. IEEE Transactions on Vehicular Technology, 2020, 69, 3244-3255.	3.9	7
31	A Class-D Tri-Phasing CMOS Power Amplifier With an Extended Marchand-Balun Power Combiner. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 1022-1034.	2.9	4
32	Impact of Channel Non-Reciprocity in Cell-Free Massive MIMO. IEEE Wireless Communications Letters, 2020, 9, 344-348.	3.2	19
33	Handling Spontaneous Traffic Variations in 5G+ via Offloading Onto mmWave-Capable UAV "Bridges". IEEE Transactions on Vehicular Technology, 2020, 69, 10070-10084.	3.9	11
34	Neural-Network-Based Digital Predistortion for Active Antenna Arrays Under Load Modulation. IEEE Microwave and Wireless Components Letters, 2020, 30, 843-846.	2.0	22
35	Deep Learning-Based Cell-Level and Beam-Level Mobility Management System. Sensors, 2020, 20, 7124.	2.1	5
36	A 2-5.5 GHz Beamsteering Receiver IC With 4-Element Vivaldi Antenna Array. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 3852-3860.	2.9	3

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37	Piecewise Digital Predistortion for mmWave Active Antenna Arrays: Algorithms and Measurements. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 4000-4017.	2.9	47
38	SDR Prototype for Clipped and Fast-Convolution Filtered OFDM for 5G New Radio Uplink. IEEE Access, 2020, 8, 89946-89963.	2.6	10
39	Wake-Up Scheduling for Energy-Efficient Mobile Devices. IEEE Transactions on Wireless Communications, 2020, 19, 6020-6036.	6.1	11
40	Passive Intermodulation in Simultaneous Transmit-Receive Systems: Modeling and Digital Cancellation Methods. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 3633-3652.	2.9	21
41	Digital Predistortion for Multiuser Hybrid MIMO at mmWaves. IEEE Transactions on Signal Processing, 2020, 68, 3603-3618.	3.2	36
42	Positioning-Aided 3D Beamforming for Enhanced Communications in mmWave Mobile Networks. IEEE Access, 2020, 8, 55513-55525.	2.6	16
43	Generalized Fast-Convolution-Based Filtered-OFDM: Techniques and Application to 5G New Radio. IEEE Transactions on Signal Processing, 2020, 68, 1213-1228.	3.2	18
44	Wake-Up Radio Based Access in 5G Under Delay Constraints: Modeling and Optimization. IEEE Transactions on Communications, 2020, 68, 1044-1057.	4.9	18
45	Networking and Positioning Co-Design in Multi-Connectivity Industrial mmW Systems. IEEE Transactions on Vehicular Technology, 2020, 69, 15842-15856.	3.9	8
46	Beamformed Radio Link Capacity Under Positioning Uncertainty. IEEE Transactions on Vehicular Technology, 2020, 69, 16235-16240.	3.9	4
47	Improprity-Based Multiantenna Spectrum Sensing With I/Q Imbalanced Radios. IEEE Transactions on Vehicular Technology, 2019, 68, 8693-8706.	3.9	11
48	Full-Duplex OFDM Radar With LTE and 5G NR Waveforms: Challenges, Solutions, and Measurements. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 4042-4054.	2.9	160
49	On Antenna Array Out-of-Band Emissions. IEEE Wireless Communications Letters, 2019, 8, 1653-1656.	3.2	16
50	Pre-Grant Signaling for Energy-Efficient 5G and Beyond Mobile Devices: Method and Analysis. IEEE Transactions on Green Communications and Networking, 2019, 3, 418-432.	3.5	12
51	Frequency-Selective PAPR Reduction for OFDM. IEEE Transactions on Vehicular Technology, 2019, 68, 6167-6171.	3.9	20
52	A 1.5-1.9-GHz All-Digital Tri-Phasing Transmitter With an Integrated Multilevel Class-D Power Amplifier Achieving 100-MHz RF Bandwidth. IEEE Journal of Solid-State Circuits, 2019, 54, 1517-1527.	3.5	25
53	MADS: A Framework for Design and Implementation of Adaptive Digital Predistortion Systems. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2019, 9, 712-722.	2.7	2
54	Pilot Allocation and Computationally Efficient Non-Iterative Estimation of Phase Noise in OFDM. IEEE Wireless Communications Letters, 2019, 8, 640-643.	3.2	19

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55	Digital Predistortion for Hybrid MIMO Transmitters. IEEE Journal on Selected Topics in Signal Processing, 2018, 12, 445-454.	7.3	91
56	Estimation and Mitigation of Channel Non-Reciprocity in Massive MIMO. IEEE Transactions on Signal Processing, 2018, 66, 2711-2723.	3.2	18
57	Adaptive Nonlinear RF Cancellation for Improved Isolation in Simultaneous Transmit-Receive Systems. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 2299-2312.	2.9	66
58	Performance Analysis of Multi-User Massive MIMO Downlink Under Channel Non-Reciprocity and Imperfect CSI. IEEE Transactions on Communications, 2018, 66, 2456-2471.	4.9	61
59	Tri-Phasing Modulation for Efficient and Wideband Radio Transmitters. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 3085-3098.	3.5	4
60	Transmit Power Optimization and Feasibility Analysis of Self-Backhauling Full-Duplex Radio Access Systems. IEEE Transactions on Wireless Communications, 2018, 17, 4219-4236.	6.1	15
61	A High-Speed DSP Engine for First-Order Hold Digital Phase Modulation in 28-nm CMOS. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 1959-1963.	2.2	1
62	M2M Communication Assessment in Energy-Harvesting and Wake-Up Radio Assisted Scenarios Using Practical Components. Sensors, 2018, 18, 3992.	2.1	5
63	The Fisher-Snedecor F Distribution: A Simple and Accurate Composite Fading Model. IEEE Communications Letters, 2017, 21, 1661-1664.	2.5	165
64	Full-Duplex Regenerative Relaying and Energy-Efficiency Optimization Over Generalized Asymmetric Fading Channels. IEEE Transactions on Wireless Communications, 2017, 16, 3232-3251.	6.1	15
65	Joint Device Positioning and Clock Synchronization in 5G Ultra-Dense Networks. IEEE Transactions on Wireless Communications, 2017, 16, 2866-2881.	6.1	156
66	Energy Efficiency Maximization of Full-Duplex Two-Way Relay With Non-Ideal Power Amplifiers and Non-Negligible Circuit Power. IEEE Transactions on Wireless Communications, 2017, 16, 6264-6278.	6.1	37
67	Experimental Results of Novel DoA Estimation Algorithms for Compact Reconfigurable Antennas. International Journal of Antennas and Propagation, 2017, 2017, 1-13.	0.7	3
68	Robust Statistical Approaches for RSS-Based Floor Detection in Indoor Localization. Sensors, 2016, 16, 793.	2.1	8
69	Error Rate and Power Allocation Analysis of Regenerative Networks Over Generalized Fading Channels. IEEE Transactions on Communications, 2016, 64, 1751-1768.	4.9	15
70	Digital Interpolating Phase Modulator for Wideband Outphasing Transmitters. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 705-715.	3.5	26
71	Analysis and Augmented Spatial Processing for Uplink OFDMA MU-MIMO Receiver With Transceiver I/Q Imbalance and External Interference. IEEE Transactions on Wireless Communications, 2016, 15, 3422-3439.	6.1	32
72	Techno-Economical Comparison of Dynamic DAS and Legacy Macrocellular Densification. International Journal of Wireless Information Networks, 2015, 22, 312-326.	1.8	4

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73	Spectrum Sensing Under RF Non-Linearities: Performance Analysis and DSP-Enhanced Receivers. IEEE Transactions on Signal Processing, 2015, 63, 1950-1964.	3.2	27
74	Digital Mitigation of Transmitter-Induced Receiver Desensitization in Carrier Aggregation FDD Transceivers. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 3608-3623.	2.9	20
75	Digital correction of frequency response mismatches in 2-channel time-interleaved ADCs using adaptive I/Q signal processing. Analog Integrated Circuits and Signal Processing, 2015, 82, 543-555.	0.9	7
76	Parameterized Sets of Dataflow Modes And Their Application to Implementation of Cognitive Radio Systems. Journal of Signal Processing Systems, 2015, 80, 3-18.	1.4	12
77	Sectorized Antenna-based DoA Estimation and Localization: Advanced Algorithms and Measurements. IEEE Journal on Selected Areas in Communications, 2015, 33, 2272-2286.	9.7	33
78	Frequency Response Mismatch Analysis in Time-Interleaved Analog I/Q Processing and ADCs. IEEE Transactions on Circuits and Systems II: Express Briefs, 2015, 62, 608-612.	2.2	7
79	Analysis, Blind Identification, and Correction of Frequency Response Mismatch in Two-Channel Time-Interleaved ADCs. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 1721-1734.	2.9	31
80	Entropy and Channel Capacity under Optimum Power and Rate Adaptation over Generalized Fading Conditions. IEEE Signal Processing Letters, 2015, 22, 2162-2166.	2.1	10
81	Frequency Response Mismatches in 4-channel Time-Interleaved ADCs: Analysis, Blind Identification, and Correction. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 2268-2279.	3.5	56
82	Covariance-based OFDM spectrum sensing with sub-Nyquist samples. Signal Processing, 2015, 109, 261-268.	2.1	14
83	Analytic Expressions and Bounds for Special Functions and Applications in Communication Theory. IEEE Transactions on Information Theory, 2014, 60, 7798-7823.	1.5	45
84	Performance Analysis of Primary User RSS/DoA Estimation and Localization in Cognitive Radio Networks Using Sectorized Antennas. IEEE Wireless Communications Letters, 2014, 3, 237-240.	3.2	10
85	Analysis of Oscillator Phase-Noise Effects on Self-Interference Cancellation in Full-Duplex OFDM Radio Transceivers. IEEE Transactions on Wireless Communications, 2014, 13, 2977-2990.	6.1	138
86	Radio Interface Evolution Towards 5G and Enhanced Local Area Communications. IEEE Access, 2014, 2, 1005-1029.	2.6	50
87	Erratum to "Performance Analysis of Primary User RSS/DoA Estimation and Localization in Cognitive Radio Networks Using Sectorized Antennas" [Apr 14 237-240]. IEEE Wireless Communications Letters, 2014, 3, 445-445.	3.2	1
88	Analysis and Rate Optimization of OFDM-Based Cognitive Radio Networks Under Power Amplifier Nonlinearity. IEEE Transactions on Communications, 2014, 62, 3410-3419.	4.9	15
89	Full-Duplex Transceiver System Calculations: Analysis of ADC and Linearity Challenges. IEEE Transactions on Wireless Communications, 2014, 13, 3821-3836.	6.1	281
90	Multi-channel energy detection under phase noise: analysis and mitigation. Mobile Networks and Applications, 2014, 19, 473-486.	2.2	14

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91	Energy Detection under IQ Imbalance with Single- and Multi-Channel Direct-Conversion Receiver: Analysis and Mitigation. IEEE Journal on Selected Areas in Communications, 2014, 32, 411-424.	9.7	54
92	Widely linear digital self-interference cancellation in direct-conversion full-duplex transceiver. IEEE Journal on Selected Areas in Communications, 2014, 32, 1674-1687.	9.7	291
93	Mutual Information Analysis of OFDM Radio Link Under Phase Noise, IQ Imbalance and Frequency-Selective Fading Channel. IEEE Transactions on Wireless Communications, 2013, 12, 3048-3059.	6.1	29
94	Frequency-Agile Multiband Quadrature Sigma-Delta Modulator for Cognitive Radio: Analysis, Design and Digital Post-Processing. IEEE Journal on Selected Areas in Communications, 2013, 31, 2222-2236.	9.7	9
95	A Novel Adaptive Calibration Scheme for Frequency-Selective I/Q Imbalance in Broadband Direct-Conversion Transmitters. IEEE Transactions on Circuits and Systems II: Express Briefs, 2013, 60, 61-65.	2.2	24
96	Widely-linear beamforming and RF impairment suppression in massive antenna arrays. Journal of Communications and Networks, 2013, 15, 383-397.	1.8	50
97	Enhanced VoIP Support in OFDMA-based Packet Radio Networks. Wireless Personal Communications, 2012, 66, 343-366.	1.8	12
98	System- and circuit-level optimization of PLL designs for DVB-T/H receivers. Analog Integrated Circuits and Signal Processing, 2012, 73, 185-200.	0.9	9
99	Characterization of OFDM Radio Link Under PLL-Based Oscillator Phase Noise and Multipath Fading Channel. IEEE Transactions on Communications, 2012, 60, 1479-1485.	4.9	23
100	Quadrature I/Q Modulators for Cognitive Radio: I/Q Imbalance Analysis and Complex Multiband Principle. Circuits, Systems, and Signal Processing, 2011, 30, 775-797.	1.2	6
101	Joint Mitigation of Power Amplifier and I/Q Modulator Impairments in Broadband Direct-Conversion Transmitters. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 730-739.	2.9	150
102	Modeling and mitigation of nonlinear distortion in wideband A/D converters for cognitive radio receivers. International Journal of Microwave and Wireless Technologies, 2010, 2, 183-192.	1.5	13
103	Analysis and mitigation of phase noise and sampling jitter in OFDM radio receivers. International Journal of Microwave and Wireless Technologies, 2010, 2, 193-202.	1.5	21
104	Recursive learning-based joint digital predistorter for power amplifier and I/Q modulator impairments. International Journal of Microwave and Wireless Technologies, 2010, 2, 173-182.	1.5	16
105	Smart Front-End Signal Processing for Advanced Wireless Receivers. IEEE Journal on Selected Topics in Signal Processing, 2009, 3, 472-487.	7.3	19
106	On the Connection of I/Q Imbalance and Channel Equalization in Direct-Conversion Transceivers. IEEE Transactions on Vehicular Technology, 2008, 57, 1630-1636.	3.9	33
107	Circularity-Based I/Q Imbalance Compensation in Wideband Direct-Conversion Receivers. IEEE Transactions on Vehicular Technology, 2008, 57, 2099-2113.	3.9	221
108	Digital Compensation of I/Q Imbalance Effects in Space-Time Coded Transmit Diversity Systems. IEEE Transactions on Signal Processing, 2008, 56, 2496-2508.	3.2	63

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109	Frequency-Selective I/Q Mismatch Calibration of Wideband Direct-Conversion Transmitters. IEEE Transactions on Circuits and Systems II: Express Briefs, 2008, 55, 359-363.	2.2	131
110	Advanced digital signal processing techniques for compensation of nonlinear distortion in wideband multicarrier radio receivers. IEEE Transactions on Microwave Theory and Techniques, 2006, 54, 2356-2366.	2.9	92
111	Blind signal estimation in conjugate signal models with application to I/Q imbalance compensation. IEEE Signal Processing Letters, 2005, 12, 733-736.	2.1	86
112	Signal processing challenges for applying software radio principles in future wireless terminals: an overview. International Journal of Communication Systems, 2002, 15, 741-769.	1.6	37
113	Advanced methods for I/Q imbalance compensation in communication receivers. IEEE Transactions on Signal Processing, 2001, 49, 2335-2344.	3.2	374