Mohamed Helaoui

List of Publications by Year
in descending order

110	2,405	236612	233125
papers	citations	25 h-index	45 g-index

112	112	112	1326
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	2-D Digital Predistortion (2-D-DPD) Architecture for Concurrent Dual-Band Transmitters. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 2547-2553.	2.9	242
2	Design and Linearization of Concurrent Dual-Band Doherty Power Amplifier With Frequency-Dependent Power Ranges. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 2537-2546.	2.9	147
3	Augmented Real-Valued Time-Delay Neural Network for Compensation of Distortions and Impairments in Wireless Transmitters. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 242-254.	7.2	114
4	A Novel Architecture of Delta-Sigma Modulator Enabling All-Digital Multiband Multistandard RF Transmitters Design. IEEE Transactions on Circuits and Systems II: Express Briefs, 2008, 55, 1129-1133.	2.2	99
5	A Transformer-Less Load-Modulated (TLLM) Architecture for Efficient Wideband Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 2863-2874.	2.9	85
6	Multiport Technology: The New Rise of an Old Concept. IEEE Microwave Magazine, 2014, 15, S34-S44.	0.7	69
7	Analyzing LINC Systems. IEEE Microwave Magazine, 2010, 11, 59-71.	0.7	64
8	Generalized Theory and Design Methodology of Wideband Doherty Amplifiers Applied to the Realization of an Octave-Bandwidth Prototype. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 3014-3023.	2.9	64
9	Transmitter Architecture for CA: Carrier Aggregation in LTE-Advanced Systems. IEEE Microwave Magazine, 2013, 14, 78-86.	0.7	62
10	Mitigation of Bandwidth Limitation in Wireless Doherty Amplifiers With Substantial Bandwidth Enhancement Using Digital Techniques. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 2875-2885.	2.9	55
11	A High-Performance Complexity Reduced Behavioral Model and Digital Predistorter for MIMO Systems With Crosstalk. IEEE Transactions on Communications, 2016, 64, 1996-2004.	4.9	55
12	Convolutional Neural Network for Behavioral Modeling and Predistortion of Wideband Power Amplifiers. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 3923-3937.	7.2	55
13	Accurate Power Efficiency Estimation of GHz Wireless Delta-Sigma Transmitters for Different Classes of Switching Mode Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 2812-2819.	2.9	52
14	Delta-sigma-based transmitters: Advantages and disadvantages. IEEE Microwave Magazine, 2013, 14, 68-78.	0.7	49
15	Optimizing Losses in Distributed Multiharmonic Matching Networks Applied to the Design of an RF GaN Power Amplifier With Higher Than 80% Power-Added Efficiency. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 314-322.	2.9	46
16	Broadband GaN Class-E Power Amplifier for Load Modulated Delta Sigma and 5G Transmitter Applications. IEEE Access, 2018, 6, 4709-4719.	2.6	45
17	Novel Modeling and Calibration Approach for Multiport Receivers Mitigating System Imperfections and Hardware Impairments. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 2644-2653.	2.9	43
18	Digitally Linearized Radio-Over Fiber Transmitter Architecture for Cloud Radio Access Networkâ€™s Downlink. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 3564-3574.	2.9	40

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19	Concurrent Dual-Band Six-Port Receiver for Multi-Standard and Software Defined Radio Applications. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 4252-4261.	2.9	39
20	Behavioral Modeling of MIMO Nonlinear Systems With Multivariable Polynomials. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 2994-3003.	2.9	38
21	ANN-Based Large-Signal Model of AlGaN/GaN HEMTs With Accurate Buffer-Related Trapping Effects Characterization. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 3090-3099.	2.9	38
22	A New Mode-Multiplexing LINC Architecture to Boost the Efficiency of WiMAX Up-Link Transmitters. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 248-253.	2.9	37
23	Systematic and Adaptive Characterization Approach for Behavior Modeling and Correction of Dynamic Nonlinear Transmitters. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 2203-2211.	2.4	36
24	Subsampling Feedback Loop Applicable to Concurrent Dual-Band Linearization Architecture. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 1990-1999.	2.9	36
25	Channel-Selective Multi-Cell Digital Predistorter for Multi-Carrier Transmitters. IEEE Transactions on Communications, 2012, 60, 2344-2352.	4.9	34
26	Class-Xâ€”Harmonically Tuned Power Amplifiers With Maximally Flat Waveforms Suitable for Over One-Octave Bandwidth Designs. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 1939-1950.	2.9	25
27	A Quad-Band Doherty Power Amplifier Based on T-Section Coupled Lines. IEEE Microwave and Wireless Components Letters, 2016, 26, 437-439.	2.0	23
28	Novel Design Space of Load Modulated Continuous Class-B/J Power Amplifier. IEEE Microwave and Wireless Components Letters, 2018, 28, 156-158.	2.0	23
29	Analytical Design Methodology of Outphasing Amplification Systems Using a New Simplified Chireix Combiner Model. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 1886-1895.	2.9	22
30	6â€“18 GHz GaAs pHEMT Broadband Power Amplifier Based on Dual-Frequency Selective Impedance Matching Technique. IEEE Access, 2019, 7, 66275-66280.	2.6	22
31	Augmented Convolutional Neural Network for Behavioral Modeling and Digital Predistortion of Concurrent Multiband Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 4142-4156.	2.9	22
32	Single-Bit Pseudoparallel Processing Low-Oversampling Deltaâ€“Sigma Modulator Suitable for SDR Wireless Transmitters. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2014, 22, 922-931.	2.1	19
33	A Reflection-Aware Unified Modeling and Linearization Approach for Power Amplifier Under Mismatch and Mutual Coupling. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 4147-4157.	2.9	19
34	Linearization of Power Amplifiers Using the Reverse MM-LINC Technique. IEEE Transactions on Circuits and Systems II: Express Briefs, 2010, 57, 6-10.	2.2	17
35	Current-Biasing of Power-Amplifier Transistors and Its Application for Ultra-Wideband High Efficiency at Power Back-Off. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 1257-1271.	2.9	17
36	Digitally Equalized Doherty RF Front-End Architecture for Broadband and Multistandard Wireless Transmitters. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 1978-1988.	2.9	16

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37	Analytical Design Methodology for Generic Doherty Amplifier Architectures Using Three-Port Input/Output Networks. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 3242-3253.	2.9	16
38	Broadband continuous mode power amplifier with onâ€board harmonic injection. IET Microwaves, Antennas and Propagation, 2019, 13, 1402-1407.	0.7	16
39	Reducing Quantization Noise to Boost Efficiency and Signal Bandwidth in Deltaâ€“Sigma-Based Transmitters. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 4245-4251.	2.9	15
40	Concurrent Multi-Band Envelope Modulated Power Amplifier Linearized Using Extended Phase-Aligned DPD. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 3298-3308.	2.9	15
41	Modeling of Input Nonlinearity and Waveform Engineered High-Efficiency Class-F Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 4216-4228.	2.9	15
42	Continuous-Mode Inverse Class-GF Power Amplifier With Second-Harmonic Impedance Optimization at Device Input. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 2506-2518.	2.9	15
43	Loop Enhanced Passive Source- and Load-Pull Technique for High Reflection Factor Synthesis. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 2952-2959.	2.9	14
44	Harmonically Tuned Continuous Class-C Operation Mode for Power Amplifier Applications. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 3017-3027.	2.9	14
45	Experimental study of the effects of RF front-end imperfection on MIMO transmitter performance. , 2008, , .		13
46	Novel Calibration Algorithm of Multiport Wideband Receivers Based on Real-Valued Time-Delay Neural Networks. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 3540-3548.	2.9	13
47	Carrier Aggregated Radio-Over-Fiber Downlink for Achieving 2Gbps for 5G Applications. IEEE Access, 2019, 7, 3136-3142.	2.6	13
48	Systematic Design Methodology of Broadband Doherty Amplifier Using Unified Matching/Combining Networks With an Application to GaN MMIC Design. IEEE Access, 2021, 9, 5791-5805.	2.6	12
49	Performance Driven Six-Port Receiver and Its Advantages over Low-IF Receiver Architecture. Journal of Electrical and Computer Engineering, 2014, 2014, 1-8.	0.6	11
50	Blind Compensation of I/Q Impairments in Wireless Transceivers. Sensors, 2017, 17, 2948.	2.1	11
51	Theory and Design Methodology for Reverse-Modulated Dual-Branch Power Amplifiers Applied to a 4G/5G Broadband GaN MMIC PA Design. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 3120-3131.	2.9	11
52	BER performance assessment of linearized MIMO transmitters in presence of RF crosstalk. , 2010, , .		10
53	Envelope Tracked Pulse Gate Modulated GaN HEMT Power Amplifier for Wireless Transmitters. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 571-579.	3.5	10
54	A Ku-Band Microwave Wireless Energy Transmission System Based on Rectifier Diode. IEEE Access, 2019, 7, 135556-135562.	2.6	10

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55	Linearized Multi-Level $DeltaSigma$ Modulated Wireless Transmitters for SDR Applications Using Simple DLGA Algorithm. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2013, 3, 594-601.	2.7	9
56	Two-Dimensional Piecewise Behavioral Model for Highly Nonlinear Dual-Band Transmitters. IEEE Transactions on Industrial Electronics, 2017, 64, 8666-8675.	5.2	9
57	Concurrent Dual-Band Low Intermediate Frequency Receiver Based on the Multiport Correlator and Single Local Oscillator. IEEE Microwave and Wireless Components Letters, 2018, 28, 353-355.	2.0	9
58	Wireless Communications Transmitter Performance Enhancement Using Advanced Signal Processing Algorithms Running in a Hybrid DSP/FPGA Platform. Journal of Signal Processing Systems, 2009, 56, 187-198.	1.4	8
59	Dual-band predistortion linearization of an envelope modulated power amplifier operated in concurrent multi-standard mode. , 2014, , .		8
60	Partitioned Distortion Mitigation in LTE Radio Uplink to Enhance Transmitter Efficiency. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 2661-2671.	2.9	8
61	Concurrent Dual-Band Receiver Based on Novel Six-Port Correlator for Wireless Applications. IEEE Access, 2017, 5, 25826-25834.	2.6	8
62	Linearization of a Highly Nonlinear Envelope Tracking Power Amplifier Targeting Maximum Efficiency. IEEE Microwave and Wireless Components Letters, 2017, 27, 82-84.	2.0	7
63	Doherty Transmitter Based on Monopole Array Antenna Active Load Modulation. IEEE Microwave and Wireless Components Letters, 2018, 28, 927-929.	2.0	7
64	Investigation of load modulated inverse Class-F power amplifier with extended conduction angle. International Journal of RF and Microwave Computer-Aided Engineering, 2018, 28, e21482.	0.8	7
65	Green Power Amplification Systems for 3G+ Wireless Communication Infrastructure. , 2010, , .		6
66	Broadband Doherty power amplifiers. , 2013, , .		6
67	Six-port technology for MIMO and cognitive radio receiver applications. , 2015, , .		6
68	Concurrent Dual-Band Receiver Based on the Multi-Port Correlator for Wireless Applications. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 759-763.	2.2	6
69	Homodyne Digitally Assisted and Spurious-Free Mixerless Direct Carrier Modulator With High Carrier Leakage Suppression. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 1475-1488.	2.9	6
70	A Novel High-Pass Deltaâ€“Sigma Modulator-Based Digital-IF Transmitter With Enhanced Performance for SDR Applications. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 1795-1799.	2.2	6
71	Artificial Intelligence-Based Power-Temperature Inclusive Digital Predistortion. IEEE Transactions on Industrial Electronics, 2022, 69, 13872-13880.	5.2	6
72	Broadband class-E power amplifier with high cold output impedance suitable for load modulated dual branch amplifiers. , 2016, , .		5

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73	Selective Intermodulation Compensation in a Multi-Stage Digital Predistorter for Nonlinear Multi-Band Power Amplifiers. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2017, 7, 534-546.	2.7	5
74	Highly Linear and Reconfigurable Three-Way Amplitude Modulation-Based Mixerless Wireless Transmitter. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 1467-1474.	2.9	5
75	Statistics-Based Approach for Blind Post-Compensation of Modulatorâ€™s Imperfections and Power Amplifier Nonlinearity. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 1063-1075.	3.5	5
76	Improved <scp>smallâ€signal</scp> hybrid <scp>parameterâ€extraction</scp> technique for <scp>AlGaN</scp> / <scp>GaN</scp> high electron mobility transistors. International Journal of RF and Microwave Computer-Aided Engineering, 2021, 31, e22562.	0.8	5
77	Multiport Technology: New Perspectives and Applications. Journal of Electrical and Computer Engineering, 2014, 2014, 1-4.	0.6	4
78	Detailed implementation of asynchronous circuits on commercial FPGAs. Analog Integrated Circuits and Signal Processing, 2020, 103, 375-389.	0.9	4
79	High performance wideband digital predistortion platform for 3G+ applications with better than 55dBc over 40 MHz bandwidth. , 2010, , .		3
80	Joint evaluation and mitigation of RF impairments and nonlinear distortion in WiMAX Transceiver under Nakagami-m fading channel. , 2011, , .		3
81	Effort-Reduced Calibration of Six-Port Based Receivers for CR/SDR Applications. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2013, 3, 586-593.	2.7	3
82	Efficiency optimized 60 GHz CMOS Power amplifier for high PAPR signals. , 2015, , .		3
83	Analytical Design Space of Power Amplifiers Including the Class-A/B/J Continuum for Dynamic Load Modulation. IEEE Access, 2019, 7, 71933-71942.	2.6	3
84	Linearization of Radio-Over-Fiber Cloud-RAN Transmitters Using Pre- and Post-Distortion Techniques. IEEE Photonics Technology Letters, 2021, 33, 339-342.	1.3	3
85	Trading-off stability for efficiency in designing switching-mode GaN PAs for WiMAX applications. , 2009, , .		2
86	Optimal fundamental load modulation for harmonically tuned switch mode power amplifier. , 2016, , .		2
87	Agile Blocker and Clock Jitter Tolerant Low-Power Frequency Selective Receiver with Energy Harvesting Capability. Scientific Reports, 2017, 7, 9658.	1.6	2
88	Temperature Dependent Robust Behavioral Modeling of Non-Linear Power Amplifier. , 2018, , .		2
89	Analysis, Calibration, and Performance Evaluation of a Generalized <inline-formula> <tex-math notation="LaTeX">N </tex-math> </inline-formula>-Phase Quadrature Phase Shift Frequency Selective Receiver. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 365-382.	2.9	2
90	Linearized Full Duplex Radio-Over-Fiber-Over-Space Mixerless Transceiver Architecture. IEEE Photonics Technology Letters, 2021, 33, 113-116.	1.3	2

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91	Review of the Neural Network based Digital Predistortion Linearization of Multi-Band/MIMO Transmitters. , 2021, , .		2
92	Optimal Fundamental Load Modulation for Class-X Harmonically Tuned Power Amplifier. , 2019, , .		2
93	A Class-X Power Amplifier With Finite Number of Harmonics. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 3897-3909.	2.9	2
94	Blind Peak-to-Average Power Ratio Reduction Technique for WiMAX RF Front-end. , 2006, , .		1
95	Feedback-based digital predistorter for multi-bit delta-sigma transmitter. , 2011, , .		1
96	A 60GHz CMOS class C amplifier intended for use in Doherty architecture. , 2012, , .		1
97	Mitigation of distortion and memory effect in a concurrent dual-band six port receiver. , 2014, , .		1
98	High performance homodyne six port receiver using memory polynomial calibration. , 2014, , .		1
99	Advanced envelope delta-sigma transmitter architecture with PLM power amplifier for multi-standard applications. , 2016, , .		1
100	Wideband high-efficiency linearized PA design with reduction in memory effects and IMD3. International Journal of Microwave and Wireless Technologies, 2018, 10, 391-400.	1.5	1
101	Forward Behavioral Modeling of a Three-Way Amplitude Modulator-Based Transmitter Using an Augmented Memory Polynomial. Sensors, 2018, 18, 770.	2.1	1
102	Short term memory effects study for optimal predistortion-based linearization of base-stations wireless transmitters. , 2006, , .		0
103	Accurate identification of static nonlinear properties of wideband RF power amplifiers. , 2008, , .		0
104	Mixed analog/digital design of wireless Doherty power amplifiers and transmitters. , 2012, , .		0
105	Performance of quadrature phase shift frequency selective receiver in presence of blockers. , 2018, , .		0
106	Low Speed Digital RoF Transmitter Linearizer Using Sub-band Signal Processing Technique. , 2019, , .		0
107	Bandwidth Performance Analysis of DLM PAs Including the Class-A/B/J Continuum. , 2019, , .		0
108	Delay-compensation block for first-order low-pass delta-sigma modulators. Microwave and Optical Technology Letters, 2019, 61, 583-586.	0.9	0

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109	Digital Predistortion Algorithm of Advance Coherent Modulation Schemes Enabling Radio over Fiber for Access Networks. , 2021, , .		0
110	Averaged and Cluster DPDs for Beamforming Applications. , 2022, , .		0