Slim Boumaiza

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/9003292/publications.pdf

Version: 2024-02-01

125 papers	1,905 citations	257101 24 h-index	315357 38 g-index
125 all docs	125 docs citations	125 times ranked	1212 citing authors

#	Article	IF	Citations
1	Physically Inspired Neural Network Model for RF Power Amplifier Behavioral Modeling and Digital Predistortion. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 913-923.	2.9	151
2	Power Efficiency and Linearity Enhancement Using Optimized Asymmetrical Doherty Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 425-434.	2.9	132
3	A Modified Doherty Configuration for Broadband Amplification Using Symmetrical Devices. IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 3201-3213.	2.9	122
4	An Extended-Bandwidth Three-Way Doherty Power Amplifier. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 3318-3328.	2.9	64
5	Linearity-Enhanced Doherty Power Amplifier Using Output Combining Network With Predefined AMâ€“PM Characteristics. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 195-204.	2.9	46
6	Digital Predistortion of Millimeter-Wave RF Beamforming Arrays Using Low Number of Steering Angle-Dependent Coefficient Sets. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 4479-4492.	2.9	45
7	Ultimate Transmission. IEEE Microwave Magazine, 2012, 13, 64-82.	0.7	42
8	Complexity-reduced Volterra series model for power amplifier digital predistortion. Analog Integrated Circuits and Signal Processing, 2014, 79, 331-343.	0.9	40
9	Multi-Band Complexity-Reduced Generalized-Memory-Polynomial Power-Amplifier Digital Predistortion. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 1763-1774.	2.9	40
10	Self-Heating and Equivalent Channel Temperature in Short Gate Length GaN HEMTs. IEEE Transactions on Electron Devices, 2019, 66, 3748-3755.	1.6	40
11	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
12	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
13	Extended Hammerstein Behavioral Model Using Artificial Neural Networks. IEEE Transactions on Microwave Theory and Techniques, 2009, 57, 745-751.	2.9	36
14	Baseband Equivalent Volterra Series for Digital Predistortion of Dual-Band Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 700-714.	2.9	36
15	Modified Doherty Amplifier With Extended Bandwidth and Back-Off Power Range Using Optimized Peak Combining Current Ratio. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 5347-5357.	2.9	36
16	A Mixed-Technology Asymmetrically Biased Extended and Reconfigurable Doherty Amplifier With Improved Power Utilization Factor. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 1946-1956.	2.9	34
17	Reconfigurable Doherty Power Amplifier for Multifrequency Wireless Radio Systems. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 1588-1598.	2.9	33
18	A Data-Based Nested LUT Model for RF Power Amplifiers Exhibiting Memory Effects. IEEE Microwave and Wireless Components Letters, 2007, 17, 712-714.	2.0	31

#	Article	IF	Citations
19	Block-Wise Estimation of and Compensation for I/Q Imbalance in Direct-Conversion Transmitters. IEEE Transactions on Signal Processing, 2009, 57, 4970-4973.	3.2	31
20	Electronically Tunable Doherty Power Amplifier for Multi-Mode Multi-Band Base Stations. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 1229-1240.	3.5	31
21	On the Robustness of Digital Predistortion Function Synthesis and Average Power Tracking for Highly Nonlinear Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2007, 55, 1382-1389.	2.9	30
22	Single-Input Single-Output Digital Predistortion of Power Amplifier Arrays in Millimeter Wave RF Beamforming Transmitters. , 2018, , .		29
23	Digital Predistortion Function Synthesis using Undersampled Feedback Signal. IEEE Microwave and Wireless Components Letters, 2016, 26, 855-857.	2.0	26
24	IQ Imbalance Compensation and Digital Predistortion for Millimeter-Wave Transmitters Using Reduced Sampling Rate Observations. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 3433-3442.	2.9	26
25	60-GHz Power Amplifier in 45-nm SOI-CMOS Using Stacked Transformer-Based Parallel Power Combiner. IEEE Microwave and Wireless Components Letters, 2018, 28, 711-713.	2.0	25
26	Doherty Power Amplifier With Extended Bandwidth and Improved Linearizability Under Carrier-Aggregated Signal Stimuli. IEEE Microwave and Wireless Components Letters, 2016, 26, 358-360.	2.0	24
27	Two-Way Doherty Power Amplifier Efficiency Enhancement by Incorporating Transistorsâ€™ Nonlinear Phase Distortion. IEEE Microwave and Wireless Components Letters, 2018, 28, 168-170.	2.0	24
28	Baseband Equivalent Volterra Series for Behavioral Modeling and Digital Predistortion of Power Amplifiers Driven With Wideband Carrier Aggregated Signals. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 2594-2603.	2.9	22
29	Digitally Assisted 28 GHz Active Phase Shifter With 0.1 dB/0.5Â° RMS Magnitude/Phase Errors and Enhanced Linearity. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 914-918.	2.2	22
30	Quantitative Measurements of Memory Effects in Wideband RF Power Amplifiers Driven by Modulated Signals. IEEE Microwave and Wireless Components Letters, 2007, 17, 79-81.	2.0	21
31	Crest Factor Reduction of Inter-Band Multi-Standard Carrier Aggregated Signals. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 3286-3297.	2.9	20
32	Dual-Band 3-Way Doherty Power Amplifier With Extended Back-Off Power and Bandwidth. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 270-274.	2.2	20
33	Two-Port Network Theory-Based Design Method for Broadband Class J Doherty Amplifiers. IEEE Access, 2019, 7, 51028-51038.	2.6	19
34	A 28-GHz Beamforming Doherty Power Amplifier With Enhanced AM-PM Characteristic. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 3017-3027.	2.9	19
35	Direct Learning Algorithm for Digital Predistortion Training Using Sub-Nyquist Intermediate Frequency Feedback Signal. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 267-277.	2.9	18
36	Power-Scalable Wideband Linearization of Power Amplifiers. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 1456-1464.	2.9	17

#	Article	IF	Citations
37	Modeling Bias Dependence of Self-Heating in GaN HEMTs Using Two Heat Sources. IEEE Transactions on Electron Devices, 2020, 67, 3082-3087.	1.6	17
38	Behavioral modeling and digital predistortion of Power Amplifiers with memory using Two Hidden Layers Artificial Neural Networks. , 2010, , .		16
39	An 85-W Multi-Octave Pushâ€“Pull GaN HEMT Power Amplifier for High-Efficiency Communication Applications at Microwave Frequencies. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 3691-3700.	2.9	16
40	Complexity reduced odd-order memory polynomial pre-distorter for 400-watt multi-carrier Doherty amplifier linearization. , 2008, , .		15
41	Doherty Power Amplifier With Enhanced Efficiency at Extended Operating Average Power Levels. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 4179-4187.	2.9	15
42	Dual-Band Volterra Series Digital Pre-Distortion for Envelope Tracking Power Amplifiers. IEEE Microwave and Wireless Components Letters, 2014, 24, 430-432.	2.0	15
43	Analysis and Compensation of Nonidealities in Frequency Multiplier-Based High-Frequency Vector Signal Generators. IEEE Transactions on Microwave Theory and Techniques, 2019, 67, 2270-2283.	2.9	15
44	A Series-Connected-Load Doherty Power Amplifier With Pushâ€“Pull Main and Auxiliary Amplifiers for Base Station Applications. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 796-807.	2.9	15
45	10W gaN inverse class F PA with input/output harmonic termination for high efficiency WiMAX transmitter. , 2009, , .		14
46	Doherty Power Amplifier Distortion Correction Using an RF Linearization Amplifier. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 2246-2257.	2.9	14
47	High-efficiency GaN class-E power amplifier with compact harmonic-suppression network. , 2007, , .		13
48	Experimental study of the effects of RF front-end imperfection on MIMO transmitter performance. , 2008, , .		13
49	Wideband Compensation of RF Vector Multiplier for RF Predistortion Systems. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016, 63, 1084-1088.	2.2	13
50	Novel Parallel-Processing-Based Hardware Implementation of Baseband Digital Predistorters for Linearizing Wideband 5G Transmitters. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 4066-4076.	2.9	13
51	Wireless <italic>LC</italic>-Type Passive Humidity Sensor Using Large-Area RF Magnetron Sputtered ZnO Films. IEEE Transactions on Electron Devices, 2018, 65, 3447-3453.	1.6	12
52	Comprehensive First-Pass Design Methodology for High Efficiency Mode Power Amplifier [TC Contests. IEEE Microwave Magazine, 2010, 11, 116-121.	0.7	11
53	Uniformly Distributed Near-Field Probing Array for Enhancing the Performance of 5G Millimeter-Wave Beamforming Transmitters. IEEE Microwave and Wireless Components Letters, 2021, 31, 823-826.	2.0	11
54	A Novel Broadband Linear-in-Magnitude RF Envelope Detector With Enhanced Detection Speed and Accuracy. IEEE Microwave and Wireless Components Letters, 2015, 25, 325-327.	2.0	10

#	Article	IF	Citations
55	Millimeter Wave SOI-CMOS Power Amplifier With Enhanced AM-PM Characteristic. IEEE Access, 2020, 8, 8861-8875.	2.6	10
56	On wideband/multi-band power amplifier suitable for software defined radios in cognitive networks. , 2009, , .		9
57	Novel Baseband Equivalent Model for Digital Predistortion of Wideband Frequency-Multiplier-Based Millimeter Wave Sources. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 3942-3957.	2.9	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	First-pass design of high efficiency power amplifiers using accurate large signal models. , 2010, , .		8
60	Multispectrum Signal Transmitters: Advances in Broadband High-Efficiency Power Amplifiers for Carrier Aggregated Signals. IEEE Microwave Magazine, 2014, 15, S14-S24.	0.7	8
61	Envelope Memory Polynomial Reformulation for Hardware Optimization of Analog-RF Predistortion. IEEE Microwave and Wireless Components Letters, 2015, 25, 415-417.	2.0	8
62	High Frequency and Wideband Modulated Signal Generation Using Frequency Doublers. , 2018, , .		8
63	A 60 GHz CMOS-SOI Stacked Push-Push Frequency Doubler with 12 dBm Output Power and 20% Efficiency. , 2021, , .		8
64	High efficiency GaN class E amplifier for polar transmitter. , 2009, , .		7
65	On the calibration of the feedback receiver using reduced sampling rate and its application to digital predistortion of 5G power amplifiers. , 2017, , .		7
66	A Comparative Study of Power Amplifiers' Sensitivity to Load Mismatch: Single Branch vs. Doherty Architectures. , 2007, , .		6
67	Study of the Output Load Mismatch Effects on the Load Modulation of Doherty Power Amplifiers. , 2007, , .		6
68	Wiener G-functionals for nonlinear power amplifier digital predistortion. , 2012, , .		6
69	Digitally Assisted Analog/RF Predistorter With a Small-Signal-Assisted Parameter <newline/>Identification Algorithm. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 4297-4305.	2.9	6
70	On the Effectiveness of Near-Field Feedback for Digital Pre-Distortion of Millimeter-Wave RF Beamforming Arrays. , 2020, , .		6
71	Parallel-Processing-Based Digital Predistortion Architecture and FPGA Implementation for Wide-band 5G Transmitters. , 2019, , .		5
72	High-Frequency Vector-Modulated Signal Generation Using Frequency-Multiplier-Based RF Beamforming Architecture. , 2020, , .		5

#	Article	IF	Citations
73	Investigation of the Impact of Zero-Forcing Precoding on the Variation of Massive MIMO Transmittersâ€™ Performance With Channel Conditions. IEEE Microwave and Wireless Components Letters, 2021, 31, 802-804.	2.0	5
74	Digital Predistortion of Millimeter-Wave Arrays Using Near-Field Based Transmitter Observation Receivers. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 3713-3723.	2.9	5
75	Optimized Design of a Digital IQ Demodulator Suitable for Adaptive Predistortion of 3rd Generation Base Station PAs. , 2006, , .		4
76	On the Robustness of the Predistortion Function Synthesis for Highly Nonlinear RF Power Amplifiers Linearization. , 2006, , .		4
77	High-efficiency GaN class-E power amplifier with ecompact harmonic-suppression network. , 2007, , .		4
78	X-parameter measurement challenges for unmatched device characterization. , 2010, , .		4
79	Automated symbolic optimization and high level synthesis of single- and multi- band digital pre-distortion hardware in an FPGA. , 2015, , .		4
80	RF Receiver Characterization and Spurious-Free Dynamic Range Enhancement for PIM/Weakly Nonlinear Device Measurements. IEEE Transactions on Microwave Theory and Techniques, 2016, 64, 4030-4038.	2.9	4
81	Dual-Band Digital Predistortion Using a Single Transmitter Observation Receiver and Single Training Engine. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 315-321.	2.9	4
82	FPGA bulding blocks for an hybrid base band digital predistorter suitable for 3G poweramplifiers. , 2005, , .		3
83	Study and minimization of the Out-phasing amplifiers nonlinearity. , 2006, , .		3
84	Design and Optimization of Digital Signal Components Separator of LINC Transmitters Using FPGA Processors. , 2007, , .		3
85	Multi-Branch Polynomial Model with Embedded Average Power Dependency for 3G RF Power Amplifiers. , 2007, , .		3
86	Advanced techniques for enhancing wireless RF transmitters' power efficiency. , 2008, , .		3
87	WiMAX baseband processor implementation and validation on a FPGA/DSP platform. Canadian Conference on Electrical and Computer Engineering, 2008, , .	0.0	3
88	2012 IMS/RFIC/ARFTG Workshops. IEEE Microwave Magazine, 2012, 13, 58-59.	0.7	3
89	I/Q Imbalance Compensation in Wideband Millimeter-Wave Transmitters Using a Single Undersampling ADC. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2730-2738.	3.5	3
90	Analysis and Linearization of Frequency-Multiplier-Based RF Beamforming Transmitters Over a Wide Steering Range. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 3987-4001.	2.9	3

#	Article	IF	Citations
91	Embedded software implementation of an adaptive baseband predistorter. , 2005, , .		2
92	Automating the Verification of SDR Base band Signal Processing Algorithms Developed on DSP/FPGA Platform. Signal Processing Systems Design and Implementation (siPS), IEEE Workshop on, 2006, , .	0.0	2
93	Spectral Methods for Accurate Identification and Quantification of Memory Effects of Wideband RF Power Amplifiers. , 2007, , .		2
94	Hammerstein-Like Predistortion Techniques for Wideband Wireless Power Amplifier Linearization. , 2007, , .		2
95	Digital predistorter architecture with small signal gain control for highly nonlinear RF power amplifiers. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	2
96	Inverse class F power amplifier in push-pull configuration. , 2009, , .		2
97	Design of high-efficiency and broadband-tuned class AB power amplifier. Microwave and Optical Technology Letters, 2011, 53, 395-398.	0.9	2
98	Digital predistortion challenges in the context of software defined transmitters. , 2011, , .		2
99	Application of embedding dimension estimation to Volterra series-based behavioral modeling and predistortion of wideband RF power amplifier. International Journal of Microwave and Wireless Technologies, 2013, 5, 115-122.	1.5	2
100	Time domain poly-harmonic distortion models of RF transistors and its extraction using a hybrid passive/active measurement setup. , 2017, , .		2
101	Digital Predistortion of Millimeter-Wave Hybrid Beamforming Transmitters Using Observation Receivers With Low-Bit Resolution Analog-to-Digital Converter. IEEE Access, 2021, 9, 100627-100636.	2.6	2
102	Proof-of-Concept of Millimeter-Wave RF Beamforming Transmitter Architecture Employing Frequency-Multiplier-Based Up-Converters. IEEE Microwave and Wireless Components Letters, 2022, 32, 776-779.	2.0	2
103	A Time-Domain Multi-Tone Distortion Model for Effective Design of High Power Amplifiers. IEEE Access, 2022, 10, 23152-23166.	2.6	2
104	Massive MIMO Precoding Methods That Minimize the Variation in Average Power and Active Impedance With Channel Conditions. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 4002-4016.	2.9	2
105	Blind Peak-to-Average Power Ratio Reduction Technique for WiMAX RF Front-end. , 2006, , .		1
106	On the Wireless Transmitters Linear and Nonlionear Distortions Detection and Pre-Correction. , 2006, , .		1
107	On the effects of the average power of training sequences used to synthesize memory digital predistorters in WCDMA transmitters. , 2007, , .		1
108	WCDMA/WIMAX dual-band bandpass filter design using frequency transformation and circuit conversion. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	1

#	Article	IF	Citations
109	400-Watt Doherty amplifier linearization using optimized memory polynomials predistorter. , 2007, , .		1
110	Optimized design of a digital I/Q demodulator suitable for adaptive pre-distortion of 3rd generation base station PAs. Analog Integrated Circuits and Signal Processing, 2008, 55, 47-58.	0.9	1
111	Rapid behavior modeling platform for RF power amplifiers/transmitters. , 2008, , .		1
112	Experimental sensitivity analysis of multi-standard power amplifiers nonlinear characterization under modulated signals. , 2010, , .		1
113	Empirical and deterministic approach for the optimization of wideband RF power amplifiers' behavior modeling and predistortion structure. Microwave and Optical Technology Letters, 2011, 53, 116-118.	0.9	1
114	Short term memory effects study for optimal predistortion-based linearization of base-stations wireless transmitters. , 2006, , .		0
115	Memory Effect Pre-compensation for Wideband RF Power Amplifiers Using FIR-Based Weak Nonlinear Filters. , 2007, , .		0
116	High-efficiency GaN class-E power amplifier with compact harmonic-suppression network. , 2007, , .		0
117	Characterization and Modeling of Wideband Wireless Transceivers. , 2007, , .		0
118	Adaptive Antenna Selection Algorithm for Spatial Multiplexing MIMO Systems. , 2007, , .		0
119	An integrated nonlinear behavior modeling system for RF power amplifiers/transmitters. , 2007, , .		0
120	Accurate identification of static nonlinear properties of wideband RF power amplifiers. , 2008, , .		0
121	Inward nonlinear characterization of Doherty Power Amplifiers. , 2009, , .		0
122	IMS 2012 Student Design Competitions. IEEE Microwave Magazine, 2012, 13, 122-124.	0.7	0
123	Broadband and Linearity Enhanced Doherty Power Amplifier using Complex-valued Load Modulation. , 2018, , .		0
124	Compensation of Transmitter I/Q Imbalance in Millimeter-Wave MIMO Systems Using a Single Transmitter Observation Receiver. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 2920-2929.	2.9	0
125	Self-heating in Short-channel GaN HEMTs: Maximum Channel Temperature and Equivalent Channel Temperature. , 2022, , .		0