

# Abhijit Chatterjee

## List of Publications by Citations

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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.

97  
papers

663  
citations

12  
h-index

20  
g-index

132  
ext. papers

873  
ext. citations

2.3  
avg, IF

4.1  
L-index

#	Paper	IF	Citations
97	Signature Testing of Analog and RF Circuits: Algorithms and Methodology. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , <b>2007</b> , 54, 1018-1031		77
96	DSP-Driven Self-Tuning of RF Circuits for Process-Induced Performance Variability. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2010</b> , 18, 305-314	2.6	60
95	A New Self-Healing Methodology for RF Amplifier Circuits Based on Oscillation Principles. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2012</b> , 20, 1835-1848	2.6	31
94	A Power-Scalable Channel-Adaptive Wireless Receiver Based on Built-In Orthogonally Tunable LNA. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2012</b> , 59, 946-957	3.9	30
93	Alternate Testing of RF Transceivers Using Optimized Test Stimulus for Accurate Prediction of System Specifications. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2005</b> , 21, 323-339	0.7	25
92	Environment-Adaptive Concurrent Combanding and Bias Control for Efficient Power-Amplifier Operation. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2011</b> , 58, 607-618	3.9	21
91	Signal Acquisition of High-Speed Periodic Signals Using Incoherent Sub-Sampling and Back-End Signal Reconstruction Algorithms. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2011</b> , 19, 1125-1135	2.6	19
90	A novel self-healing methodology for RF Amplifier circuits based on oscillation principles <b>2009</b> ,		16
89	Multidimensional Adaptive Power Management for Low-Power Operation of Wireless Devices. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , <b>2008</b> , 55, 867-871	3.5	16
88	Process-Variation Tolerant Channel-Adaptive Virtually Zero-Margin Low-Power Wireless Receiver Systems. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , <b>2014</b> , 33, 1764-1777	2.5	15
87	Low Cost EVM Testing of Wireless RF SoC Front-Ends Using Multitones. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , <b>2012</b> , 31, 1088-1101	2.5	15
86	Optimized Multitone Test Stimulus Driven Diagnosis of RF Transceivers Using Model Parameter Estimation <b>2011</b> ,		13
85	Guided Probabilistic Checksums for Error Control in Low-Power Digital Filters. <i>IEEE Transactions on Computers</i> , <b>2011</b> , 60, 1313-1326	2.5	12
84	Wideband Sparse Signal Acquisition With Dual-rate Time-Interleaved Undersampling Hardware and Multico-set Signal Reconstruction Algorithms. <i>IEEE Transactions on Signal Processing</i> , <b>2015</b> , 63, 6486-6497	4.8	11
83	Phase Distortion to Amplitude Conversion-Based Low-Cost Measurement of AM-AM and AM-PM Effects in RF Power Amplifiers. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2012</b> , 20, 1602-1614	2.6	11
82	Concurrent PAR and power amplifier adaptation for power efficient operation of WiMAX OFDM transmitters <b>2008</b> ,		11
81	Analog Sensor Based Testing of Phase-Locked Loop Dynamic Performance Parameters <b>2013</b> ,		9

80	Low-Resolution DAC-Driven Linearity Testing of Higher Resolution ADCs Using Polynomial Fitting Measurements. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2013</b> , 21, 454-464	2.6	9
79	Accurate signature driven power conscious tuning of RF systems using hierarchical performance models <b>2011</b> ,		9
78	System-Level Specification Testing Of Wireless Transceivers. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2008</b> , 16, 263-276	2.6	9
77	Design of process variation tolerant radio frequency low noise amplifier <b>2008</b> ,		9
76	Optimized wafer-probe and assembled package test design for analog circuits. <i>ACM Transactions on Design Automation of Electronic Systems</i> , <b>2005</b> , 10, 303-329	1.5	8
75	Real-time checking of linear control systems using analog checksums <b>2013</b> ,		7
74	Real-time DC motor error detection and control compensation using linear checksums <b>2016</b> ,		7
73	Signature Driven Hierarchical Post-Manufacture Tuning of RF Systems for Performance and Power. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2015</b> , 23, 342-355	2.6	6
72	Adaptive testing of analog/RF circuits using hardware extracted FSM models <b>2016</b> ,		6
71	Periodic jitter and bounded uncorrelated jitter decomposition using incoherent undersampling <b>2013</b> ,		6
70	High Resolution Pulse Propagation Driven Trojan Detection in Digital Logic: Optimization Algorithms and Infrastructure <b>2014</b> ,		6
69	Concurrent error detection in nonlinear digital filters using checksum linearization and residue prediction <b>2015</b> ,		5
68	Jitter Characterization of Pseudo-random Bit Sequences Using Incoherent Sub-sampling <b>2010</b> ,		5
67	Error resilient video encoding using Block-Frame Checksums <b>2010</b> ,		5
66	Automatic test stimulus generation for accurate diagnosis of RF systems using transient response signatures <b>2011</b> ,		5
65	Time Domain Characterization and Test of High Speed Signals Using Incoherent Sub-sampling <b>2011</b> ,		5
64	Environment and Process Adaptive Low Power Wireless Baseband Signal Processing Using Dual Real-Time Feedback <b>2009</b> ,		5
63	Low-Cost Specification Based Testing of RF Amplifier Circuits using Oscillation Principles. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2010</b> , 26, 13-24	0.7	5

62	Enhanced Resolution Jitter Testing Using Jitter Expansion. <i>VLSI Test Symposium (VTS), Proceedings, IEEE, 2007,</i>		5
61	Fault Detection and Automated Fault Diagnosis for Embedded Integrated Electrical Passives. <i>Journal of Signal Processing Systems, 1999, 21, 265-276</i>		5
60	Targeting hardware trojans in mixed-signal circuits for security <b>2016,</b>		5
59	Real-Time Error Detection in Nonlinear Control Systems Using Machine Learning Assisted State-Space Encoding. <i>IEEE Transactions on Dependable and Secure Computing, 2021, 18, 576-592</i>	3.9	5
58	On-line diagnosis and compensation for parametric failures in linear state variable circuits and systems using time-domain checksum observers <b>2017,</b>		4
57	A High Throughput Multiplier Design Exploiting Input Based Statistical Distribution in Completion Delays <b>2013,</b>		4
56	Adaptive RF Front-end Design via Self-discovery: Using Real-time Data to Optimize Adaptation Control <b>2013,</b>		4
55	Design of efficient analog physically unclonable functions using alternative test principles <b>2017,</b>		4
54	Challenge Engineering and Design of Analog Push Pull Amplifier Based Physically Unclonable Function for Hardware Security <b>2015,</b>		4
53	Orthogonally tunable inductorless RF LNA for adaptive wireless systems <b>2011,</b>		4
52	Optimized digital compatible pulse sequences for testing of RF front end modules <b>2010,</b>		4
51	RF substrates yield improvement using package-chip co-design and on-chip calibration <b>2010,</b>		4
50	Barrier Functions in Cascaded Controller: Safe Quadrotor Control <b>2020,</b>		4
49	TRAP: Test Generation Driven Classification of Analog/RF ICs Using Adaptive Probabilistic Clustering Algorithm <b>2016,</b>		4
48	Hierarchical Check Based Detection and Diagnosis of Sensor-Actuator Malfunction in Autonomous Systems: A Quadcopter Study <b>2019,</b>		4
47	Cross-Layer Control Adaptation for Autonomous System Resilience <b>2018,</b>		4
46	Content-Aware Low-Complexity Object Detection for Tracking Using Adaptive Compressed Sensing. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 578-590</i>	5.2	3
45	An adaptive class-E power amplifier with improvement in efficiency, reliability and process variation tolerance <b>2013,</b>		3

44	Concurrent built in test and tuning of beamforming MIMO systems using learning assisted performance optimization <b>2017</b> ,		3
43	Post-Manufacture Tuning for Nano-CMOS Yield Recovery Using Reconfigurable Logic. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2010</b> , 18, 675-679	2.6	3
42	Low-frequency test method for integrated RF substrates <b>2009</b> ,		3
41	A Survey of Test Techniques for MCM Substrates. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>1997</b> , 10, 27-38	0.7	3
40	Test Enabled Process Tuning for Adaptive Baseband OFDM Processor. <i>VLSI Test Symposium (VTS), Proceedings, IEEE</i> , <b>2008</b> ,		3
39	Guided Probabilistic Checksums for Error Control in Low Power Digital-Filters <b>2008</b> ,		3
38	Adaptive Signal Scaling Driven Critical Path Modulation for Low Power Baseband OFDM Processors <b>2008</b> ,		3
37	Testing RF Components with Supply Current Signatures <b>2007</b> ,		3
36	An Accurate DNA Sensing and Diagnosis Methodology Using Fabricated Silicon Nanopores. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , <b>2006</b> , 53, 2377-2383		3
35	Safety Uncertainty in Control Barrier Functions using Gaussian Processes <b>2021</b> ,		3
34	Hierarchical State Space Checks for Errors in Sensors, Actuators and Control of Nonlinear Systems: Diagnosis and Compensation <b>2019</b> ,		3
33	Checksum based error detection in linearized representations of non linear control systems <b>2016</b> ,		2
32	Trojan detection in digital systems using current sensing of pulse propagation in logic gates <b>2016</b> ,		2
31	A programmable BIST design for PLL static phase offset estimation and clock duty cycle detection <b>2013</b> ,		2
30	Error Resilient Real-Time State Variable Systems for Signal Processing and Control <b>2014</b> ,		2
29	Atomic model learning: A machine learning paradigm for post silicon debug of RF/analog circuits <b>2014</b> ,		2
28	Real-time correction of dc servo motor and controller failures using analog checksums <b>2014</b> ,		2
27	Low-Frequency and Low-Cost Test Methodology for Integrated RF Substrates. <i>IEEE Transactions on Advanced Packaging</i> , <b>2010</b> , 33, 669-680		2

26	Dynamic power modulation in baseband OFDM signal processor using application driven metrics: Image transmission and processing <b>2010</b> ,		2
25	Jitter characterization of incoherently sub-sampled high-speed digital signals <b>2010</b> ,		2
24	Activity Measures for Fast Relative Power Estimation in Numerical Transformation for Low Power DSP Synthesis. <i>Journal of Signal Processing Systems</i> , <b>1998</b> , 18, 25-38		2
23	Adaptive Design for Performance-Optimized Robustness. <i>Defect and Fault Tolerance in VLSI Systems, Proceedings of the IEEE International Symposium on</i> , <b>2006</b> ,		2
22	Gaussian Control Barrier Functions: Safe Learning and Control <b>2020</b> ,		2
21	Encoded Check Driven Concurrent Error Detection in Particle Filters for Nonlinear State Estimation <b>2020</b> ,		2
20	Error-Resilient Video Encoding Using Parallel Independent Signature Processing. <i>IEEE Transactions on Circuits and Systems for Video Technology</i> , <b>2017</b> , 27, 1077-1090	6.4	1
19	Automatic Test Stimulus Generation for Diagnosis of RF Transceivers Using Model Parameter Estimation. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2015</b> , 23, 3114-3118	2.6	1
18	Digitally Assisted Built-In Tuning Using Hamming Distance Proportional Signatures in RF Circuits. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2016</b> , 24, 2918-2931	2.6	1
17	One-Port Resonance-Based Test Technique for RF Interconnect and Filters Embedded in RF Substrates. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , <b>2013</b> , 3, 236-246 <sup>1.7</sup>		1
16	Low cost signal reconstruction based testing of RF components using incoherent undersampling <b>2013</b> ,		1
15	Power Aware Post-manufacture Tuning of Analog Nanocircuits <b>2011</b> ,		1
14	Feedback Driven Adaptive Power Management for Minimum Power Operation of Wireless Receivers <b>2007</b> ,		1
13	Concurrent Error Detection in Embedded Digital Control of Nonlinear Autonomous Systems Using Adaptive State Space Checks <b>2020</b> ,		1
12	Testing RF Components with Supply Current Signatures		1
11	eCloud: A Vision for the Evolution of the Edge-Cloud Continuum. <i>Computer</i> , <b>2021</b> , 54, 24-33	1.6	1
10	Incoherent Undersampling-Based Waveform Reconstruction Using a Time-Domain Zero-Crossing Metric. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2015</b> , 23, 2357-2370	2.6	0
9	Low Cost Built-in Sensor Testing of Phase-Locked Loop Dynamic Parameters. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2014</b> , 30, 515-526	0.7	0

8	ALERA. <i>ACM Transactions on Intelligent Systems and Technology</i> , <b>2019</b> , 10, 1-25	8	o
7	Diagnosis and Compensation of Control Program, Sensor and Actuator Failures in Nonlinear Systems Using Hierarchical State Space Checks. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2020</b> , 36, 683-701	0.7	o
6	Low Cost Signal Reconstruction Based Testing of RF Components using Incoherent Undersampling. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2014</b> , 30, 213-228	0.7	
5	Test Method for Measuring Bit Error Rate of Pulsed Transceivers in Presence of Narrowband Interferers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , <b>2007</b> , 55, 1942-1950	4.1	
4	Distributed Diagnosis of Interconnections in SoC and MCM Designs. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2004</b> , 20, 291-307	0.7	
3	Dynamic Test Stimulus Adaptation for Analog/RF Circuits Using Booleanized Models Extracted From Hardware. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , <b>2020</b> , 39, 2006-2019	2.5	
2	Efficient Built-In Test and Calibration of High Speed Serial I/O Systems Using Monobit Signal Acquisition. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2019</b> , 35, 809-822	0.7	
1	High Resolution Pulse Propagation Driven Trojan Detection in Digital Systems. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2021</b> , 37, 41-63	0.7	