

Abhijit Chatterjee

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.

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	Safety Uncertainty in Control Barrier Functions using Gaussian Processes 2021 ,		3
96	eCloud: A Vision for the Evolution of the Edge-Cloud Continuum. <i>Computer</i> , 2021 , 54, 24-33	1.6	1
95	Real-Time Error Detection in Nonlinear Control Systems Using Machine Learning Assisted State-Space Encoding. <i>IEEE Transactions on Dependable and Secure Computing</i> , 2021 , 18, 576-592	3.9	5
94	High Resolution Pulse Propagation Driven Trojan Detection in Digital Systems. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , 2021 , 37, 41-63	0.7	
93	Concurrent Error Detection in Embedded Digital Control of Nonlinear Autonomous Systems Using Adaptive State Space Checks 2020 ,		1
92	Gaussian Control Barrier Functions: Safe Learning and Control 2020 ,		2
91	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> , 2020 , 36, 683-701	0.7	0
90	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> , 2020 , 39, 2006-2019	2.5	
89	Encoded Check Driven Concurrent Error Detection in Particle Filters for Nonlinear State Estimation 2020 ,		2
88	Barrier Functions in Cascaded Controller: Safe Quadrotor Control 2020 ,		4
87	ALERA. <i>ACM Transactions on Intelligent Systems and Technology</i> , 2019 , 10, 1-25	8	0
86	Hierarchical State Space Checks for Errors in Sensors, Actuators and Control of Nonlinear Systems: Diagnosis and Compensation 2019 ,		3
85	Hierarchical Check Based Detection and Diagnosis of Sensor-Actuator Malfunction in Autonomous Systems: A Quadcopter Study 2019 ,		4
84	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> , 2019 , 35, 809-822	0.7	
83	Content-Aware Low-Complexity Object Detection for Tracking Using Adaptive Compressed Sensing. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2018 , 8, 578-590	5.2	3
82	Cross-Layer Control Adaptation for Autonomous System Resilience 2018 ,		4
81	Error-Resilient Video Encoding Using Parallel Independent Signature Processing. <i>IEEE Transactions on Circuits and Systems for Video Technology</i> , 2017 , 27, 1077-1090	6.4	1

80	On-line diagnosis and compensation for parametric failures in linear state variable circuits and systems using time-domain checksum observers 2017 ,		4
79	Design of efficient analog physically unclonable functions using alternative test principles 2017 ,		4
78	Concurrent built in test and tuning of beamforming MIMO systems using learning assisted performance optimization 2017 ,		3
77	Checksum based error detection in linearized representations of non linear control systems 2016 ,		2
76	Trojan detection in digital systems using current sensing of pulse propagation in logic gates 2016 ,		2
75	Adaptive testing of analog/RF circuits using hardware extracted FSM models 2016 ,		6
74	Digitally Assisted Built-In Tuning Using Hamming Distance Proportional Signatures in RF Circuits. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2016 , 24, 2918-2931	2.6	1
73	Real-time DC motor error detection and control compensation using linear checksums 2016 ,		7
72	TRAP: Test Generation Driven Classification of Analog/RF ICs Using Adaptive Probabilistic Clustering Algorithm 2016 ,		4
71	Targeting hardware trojans in mixed-signal circuits for security 2016 ,		5
70	Incoherent Undersampling-Based Waveform Reconstruction Using a Time-Domain Zero-Crossing Metric. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2015 , 23, 2357-2370	2.6	0
69	Wideband Sparse Signal Acquisition With Dual-rate Time-Interleaved Undersampling Hardware and Multicoset Signal Reconstruction Algorithms. <i>IEEE Transactions on Signal Processing</i> , 2015 , 63, 6486-6497 ^{4.8}		11
68	Automatic Test Stimulus Generation for Diagnosis of RF Transceivers Using Model Parameter Estimation. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2015 , 23, 3114-3118	2.6	1
67	Concurrent error detection in nonlinear digital filters using checksum linearization and residue prediction 2015 ,		5
66	Signature Driven Hierarchical Post-Manufacture Tuning of RF Systems for Performance and Power. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2015 , 23, 342-355	2.6	6
65	Challenge Engineering and Design of Analog Push Pull Amplifier Based Physically Unclonable Function for Hardware Security 2015 ,		4
64	Low Cost Signal Reconstruction Based Testing of RF Components using Incoherent Undersampling. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , 2014 , 30, 213-228	0.7	
63	Low Cost Built-in Sensor Testing of Phase-Locked Loop Dynamic Parameters. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , 2014 , 30, 515-526	0.7	0

62	High Resolution Pulse Propagation Driven Trojan Detection in Digital Logic: Optimization Algorithms and Infrastructure 2014,		6
61	Error Resilient Real-Time State Variable Systems for Signal Processing and Control 2014,		2
60	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> , 2014 , 33, 1764-1777	1.7	15
59	Atomic model learning: A machine learning paradigm for post silicon debug of RF/analog circuits 2014,		2
58	Real-time correction of dc servo motor and controller failures using analog checksums 2014,		2
57	A High Throughput Multiplier Design Exploiting Input Based Statistical Distribution in Completion Delays 2013,		4
56	Adaptive RF Front-end Design via Self-discovery: Using Real-time Data to Optimize Adaptation Control 2013,		4
55	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> , 2013 , 3, 236-246 ^{1.7}		1
54	Periodic jitter and bounded uncorrelated jitter decomposition using incoherent undersampling 2013,		6
53	A programmable BIST design for PLL static phase offset estimation and clock duty cycle detection 2013,		2
52	An adaptive class-E power amplifier with improvement in efficiency, reliability and process variation tolerance 2013,		3
51	Low cost signal reconstruction based testing of RF components using incoherent undersampling 2013,		1
50	Analog Sensor Based Testing of Phase-Locked Loop Dynamic Performance Parameters 2013,		9
49	Real-time checking of linear control systems using analog checksums 2013,		7
48	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> , 2013 , 21, 454-464	2.6	9
47	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> , 2012 , 31, 1088-1101	2.5	15
46	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> , 2012 , 59, 946-957	3.9	30
45	A New Self-Healing Methodology for RF Amplifier Circuits Based on Oscillation Principles. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2012 , 20, 1835-1848	2.6	31

44	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> , 2012 , 20, 1602-1614	2.6	11
43	Power Aware Post-manufacture Tuning of Analog Nanocircuits 2011 ,		1
42	Orthogonally tunable inductorless RF LNA for adaptive wireless systems 2011 ,		4
41	Optimized Multitone Test Stimulus Driven Diagnosis of RF Transceivers Using Model Parameter Estimation 2011 ,		13
40	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> , 2011 , 19, 1125-1135	2.6	19
39	Guided Probabilistic Checksums for Error Control in Low-Power Digital Filters. <i>IEEE Transactions on Computers</i> , 2011 , 60, 1313-1326	2.5	12
38	Automatic test stimulus generation for accurate diagnosis of RF systems using transient response signatures 2011 ,		5
37	Accurate signature driven power conscious tuning of RF systems using hierarchical performance models 2011 ,		9
36	Environment-Adaptive Concurrent Comanding and Bias Control for Efficient Power-Amplifier Operation. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2011 , 58, 607-618	3.9	21
35	Time Domain Characterization and Test of High Speed Signals Using Incoherent Sub-sampling 2011 ,		5
34	DSP-Driven Self-Tuning of RF Circuits for Process-Induced Performance Variability. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2010 , 18, 305-314	2.6	60
33	Optimized digital compatible pulse sequences for testing of RF front end modules 2010 ,		4
32	Post-Manufacture Tuning for Nano-CMOS Yield Recovery Using Reconfigurable Logic. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2010 , 18, 675-679	2.6	3
31	Low-Frequency and Low-Cost Test Methodology for Integrated RF Substrates. <i>IEEE Transactions on Advanced Packaging</i> , 2010 , 33, 669-680		2
30	Dynamic power modulation in baseband OFDM signal processor using application driven metrics: Image transmission and processing 2010 ,		2
29	Jitter Characterization of Pseudo-random Bit Sequences Using Incoherent Sub-sampling 2010 ,		5
28	RF substrates yield improvement using package-chip co-design and on-chip calibration 2010 ,		4
27	Jitter characterization of incoherently sub-sampled high-speed digital signals 2010 ,		2

26	Error resilient video encoding using Block-Frame Checksums 2010 ,		5
25	Low-Cost Specification Based Testing of RF Amplifier Circuits using Oscillation Principles. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , 2010 , 26, 13-24	0.7	5
24	Environment and Process Adaptive Low Power Wireless Baseband Signal Processing Using Dual Real-Time Feedback 2009 ,		5
23	A novel self-healing methodology for RF Amplifier circuits based on oscillation principles 2009 ,		16
22	Low-frequency test method for integrated RF substrates 2009 ,		3
21	Multidimensional Adaptive Power Management for Low-Power Operation of Wireless Devices. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2008 , 55, 867-871	3.5	16
20	Test Enabled Process Tuning for Adaptive Baseband OFDM Processor. <i>VLSI Test Symposium (VTS), Proceedings, IEEE</i> , 2008 ,		3
19	System-Level Specification Testing Of Wireless Transceivers. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2008 , 16, 263-276	2.6	9
18	Guided Probabilistic Checksums for Error Control in Low Power Digital-Filters 2008 ,		3
17	Design of process variation tolerant radio frequency low noise amplifier 2008 ,		9
16	Adaptive Signal Scaling Driven Critical Path Modulation for Low Power Baseband OFDM Processors 2008 ,		3
15	Concurrent PAR and power amplifier adaptation for power efficient operation of WiMAX OFDM transmitters 2008 ,		11
14	Test Method for Measuring Bit Error Rate of Pulsed Transceivers in Presence of Narrowband Interferers. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2007 , 55, 1942-1950	4.1	
13	Testing RF Components with Supply Current Signatures 2007 ,		3
12	Feedback Driven Adaptive Power Management for Minimum Power Operation of Wireless Receivers 2007 ,		1
11	Enhanced Resolution Jitter Testing Using Jitter Expansion. <i>VLSI Test Symposium (VTS), Proceedings, IEEE</i> , 2007 ,		5
10	Signature Testing of Analog and RF Circuits: Algorithms and Methodology. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , 2007 , 54, 1018-1031		77
9	An Accurate DNA Sensing and Diagnosis Methodology Using Fabricated Silicon Nanopores. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , 2006 , 53, 2377-2383		3

8	Adaptive Design for Performance-Optimized Robustness. <i>Defect and Fault Tolerance in VLSI Systems, Proceedings of the IEEE International Symposium on</i> , 2006 ,		2
7	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> , 2005 , 21, 323-339	0.7	25
6	Optimized wafer-probe and assembled package test design for analog circuits. <i>ACM Transactions on Design Automation of Electronic Systems</i> , 2005 , 10, 303-329	1.5	8
5	Distributed Diagnosis of Interconnections in SoC and MCM Designs. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , 2004 , 20, 291-307	0.7	
4	Fault Detection and Automated Fault Diagnosis for Embedded Integrated Electrical Passives. <i>Journal of Signal Processing Systems</i> , 1999 , 21, 265-276		5
3	Activity Measures for Fast Relative Power Estimation in Numerical Transformation for Low Power DSP Synthesis. <i>Journal of Signal Processing Systems</i> , 1998 , 18, 25-38		2
2	A Survey of Test Techniques for MCM Substrates. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , 1997 , 10, 27-38	0.7	3
1	Testing RF Components with Supply Current Signatures		1