

Wk Chan

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.

128
papers

1,986
citations

25
h-index

37
g-index

158
ext. papers

2,402
ext. citations

2.9
avg, IF

4.96
L-index

#	Paper	IF	Citations
128	. <i>IEEE Transactions on Multimedia</i> , 2021 , 1-1	6.6	0
127	Execution Repair for Spark Programs by Active Maintenance of Partition Dependency. <i>IEEE Access</i> , 2021 , 9, 101555-101573	3.5	
126	DeepEutaxy: Diversity in Weight Search Direction for Fixing Deep Learning Model Training Through Batch Prioritization. <i>IEEE Transactions on Reliability</i> , 2021 , 70, 1040-1052	4.6	
125	. <i>IEEE Transactions on Reliability</i> , 2020 , 69, 1021-1049	4.6	3
124	AggrePlay: efficient record and replay of multi-threaded programs 2019 ,		2
123	A Systematic Study on Factors Impacting GUI Traversal-Based Test Case Generation Techniques for Android Applications. <i>IEEE Transactions on Reliability</i> , 2019 , 68, 913-926	4.6	3
122	Apricot: A Weight-Adaptation Approach to Fixing Deep Learning Models 2019 ,		12
121	Fuse: An Architecture for Smart Contract Fuzz Testing Service 2018 ,		3
120	HistLock+: Precise Memory Access Maintenance Without Lockset Comparison for Complete Hybrid Data Race Detection. <i>IEEE Transactions on Reliability</i> , 2018 , 67, 786-801	4.6	5
119	Sifter: A Service Isolation Strategy for Internet Applications. <i>IEEE Transactions on Services Computing</i> , 2018 , 1-1	4.8	3
118	A Gamification Technique for Motivating Students to Learn Code Readability in Software Engineering 2018 ,		7
117	ReTestDroid: Towards Safer Regression Test Selection for Android Application 2018 ,		1
116	A theoretical analysis on cloning the failed test cases to improve spectrum-based fault localization. <i>Journal of Systems and Software</i> , 2017 , 129, 35-57	3.3	18
115	Accuracy Graphs of Spectrum-Based Fault Localization Formulas. <i>IEEE Transactions on Reliability</i> , 2017 , 66, 403-424	4.6	17
114	An Empirical Analysis of Three-Stage Data-Preprocessing for Analogy-Based Software Effort Estimation on the ISBSG Data 2017 ,		8
113	Cross-validation based K nearest neighbor imputation for software quality datasets: An empirical study. <i>Journal of Systems and Software</i> , 2017 , 132, 226-252	3.3	30
112	SDA-CLOUD: A Multi-VM Architecture for Adaptive Dynamic Data Race Detection. <i>IEEE Transactions on Services Computing</i> , 2017 , 10, 80-93	4.8	2

111	Which Factor Impacts GUI Traversal-Based Test Case Generation Technique Most? A Controlled Experiment on Android Applications 2017 ,		2
110	SimplyDroid: Efficient event sequence simplification for android application 2017 ,		2
109	ASP: Abstraction Subspace Partitioning for Detection of Atomicity Violations with an Empirical Study. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2016 , 27, 724-734	3.7	3
108	Testing and Debugging in Continuous Integration with Budget Quotas on Test Executions 2016 ,		2
107	HistLock: Efficient and Sound Hybrid Detection of Hidden Predictive Data Races with Functional Contexts 2016 ,		2
106	To What Extent is Stress Testing of Android TV Applications Automated in Industrial Environments?. <i>IEEE Transactions on Reliability</i> , 2016 , 65, 1223-1239	4.6	5
105	DFL: Dual-Service Fault Localization 2016 ,		2
104	MT 2016 ,		7
103	Hierarchical Program Paths. <i>ACM Transactions on Software Engineering and Methodology</i> , 2016 , 25, 1-44	3.3	3
102	Facilitating Monkey Test by Detecting Operable Regions in Rendered GUI of Mobile Game Apps 2016 ,		2
101	Input-based adaptive randomized test case prioritization: A local beam search approach. <i>Journal of Systems and Software</i> , 2015 , 105, 91-106	3.3	33
100	PORA: Proportion-Oriented Randomized Algorithm for Test Case Prioritization 2015 ,		3
99	ASN: A Dynamic Barrier-Based Approach to Confirmation of Deadlocks from Warnings for Large-Scale Multithreaded Programs. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2015 , 26, 13-23	3.7	9
98	Connecting the Average and the Non-Average. <i>International Journal of Web Services Research</i> , 2015 , 12, 1-24	0.8	1
97	ASR: Abstraction Subspace Reduction for Exposing Atomicity Violation Bugs in Multithreaded Programs 2015 ,		1
96	Architecting Dynamic Data Race Detection as a Cloud-Based Service 2015 ,		4
95	A Subsumption Hierarchy of Test Case Prioritization for Composite Services. <i>IEEE Transactions on Services Computing</i> , 2015 , 8, 658-673	4.8	15
94	. <i>IEEE Transactions on Services Computing</i> , 2015 , 8, 740-754	4.8	15

93	Prioritizing Test Cases for Regression Testing of Location-Based Services: Metrics, Techniques, and Case Study. <i>IEEE Transactions on Services Computing</i> , 2014 , 7, 54-67	4.8	31
92	Extending the Theoretical Fault Localization Effectiveness Hierarchy with Empirical Results at Different Code Abstraction Levels 2014 ,		7
91	Magiclock: Scalable Detection of Potential Deadlocks in Large-Scale Multithreaded Programs. <i>IEEE Transactions on Software Engineering</i> , 2014 , 40, 266-281	3.5	29
90	ConLock: a constraint-based approach to dynamic checking on deadlocks in multithreaded programs 2014 ,		35
89	Improving the Effectiveness of Testing Pervasive Software via Context Diversity. <i>ACM Transactions on Autonomous and Adaptive Systems</i> , 2014 , 9, 1-28	1.2	14
88	In quest of the science in statistical fault localization. <i>Software - Practice and Experience</i> , 2013 , 43, 971-987		1
87	A general noise-reduction framework for fault localization of Java programs. <i>Information and Software Technology</i> , 2013 , 55, 880-896	3.4	17
86	Taming Deadlocks in Multithreaded Programs 2013 ,		3
85	Oracles Are Hardly Attain'd, and Hardly Understood: Confessions of Software Testing Researchers 2013 ,		4
84	Lock Trace Reduction for Multithreaded Programs. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2013 , 24, 2407-2417	3.7	17
83	On the adoption of MC/DC and control-flow adequacy for a tight integration of program testing and statistical fault localization. <i>Information and Software Technology</i> , 2013 , 55, 897-917	3.4	13
82	Test Pair Selection for Test Case Prioritization in Regression Testing for WS-BPEL Programs. <i>International Journal of Web Services Research</i> , 2013 , 10, 73-102	0.8	6
81	Which compiler optimization options should I use for detecting data races in multithreaded programs? 2013 ,		5
80	A Study on the Efficiency Aspect of Data Race Detection: A Compiler Optimization Level Perspective 2013 ,		3
79	Bypassing Code Coverage Approximation Limitations via Effective Input-Based Randomized Test Case Prioritization 2013 ,		7
78	Prioritizing Structurally Complex Test Pairs for Validating WS-BPEL Evolutions 2013 ,		5
77	Human and program factors affecting the maintenance of programs with deployed design patterns. <i>Information and Software Technology</i> , 2012 , 54, 99-118	3.4	4
76	How well does test case prioritization integrate with statistical fault localization?. <i>Information and Software Technology</i> , 2012 , 54, 739-758	3.4	37

75	EClass: An execution classification approach to improving the energy-efficiency of software via machine learning. <i>Journal of Systems and Software</i> , 2012 , 85, 960-973	3.3	8
74	Fault Localization Based Only on Failed Runs. <i>Computer</i> , 2012 , 45, 64-71	1.6	15
73	JSCloud: Toward Remote Execution of JavaScript Code on Handheld Devices 2012 ,		7
72	Preemptive Regression Test Scheduling Strategies: A New Testing Approach to Thriving on the Volatile Service Environments 2012 ,		4
71	An empirical evaluation of several test-a-few strategies for testing particular conditions. <i>Software - Practice and Experience</i> , 2012 , 42, 967-994	2.5	2
70	CARISMA: a context-sensitive approach to race-condition sample-instance selection for multithreaded applications 2012 ,		21
69	MagicFuzzer: Scalable deadlock detection for large-scale applications 2012 ,		32
68	Guest editors' Introduction to the special section on exploring the boundaries of software test automation. <i>Software Quality Journal</i> , 2011 , 19, 689-690	1.2	
67	XML-manipulating test case prioritization for XML-manipulating services. <i>Journal of Systems and Software</i> , 2011 , 84, 603-619	3.3	25
66	Assuring the model evolution of protocol software specifications by regression testing process improvement. <i>Software - Practice and Experience</i> , 2011 , 41, n/a-n/a	2.5	8
65	LOFT: Redundant Synchronization Event Removal for Data Race Detection 2011 ,		13
64	A Dynamic Fault Localization Technique with Noise Reduction for Java Programs 2011 ,		7
63	FLOMA: Statistical fault localization for mobile embedded system 2011 ,		5
62	On Practical Adequate Test Suites for Integrated Test Case Prioritization and Fault Localization 2011 ,		10
61	Non-parametric statistical fault localization. <i>Journal of Systems and Software</i> , 2011 , 84, 885-905	3.3	23
60	A web search-centric approach to recommender systems with URLs as minimal user contexts. <i>Journal of Systems and Software</i> , 2011 , 84, 930-941	3.3	4
59	Precise Propagation of Fault-Failure Correlations in Program Flow Graphs 2011 ,		2
58	Point-of-Interest Aware Test Case Prioritization: Methods and Experiments 2010 ,		2

57	Leveraging Performance and Power Savings for Embedded Systems Using Multiple Target Deadlines 2010 ,		3
56	Bridging the Gap Between the Theory and Practice of Software Test Automation 2010 ,		3
55	Partial constraint checking for context consistency in pervasive computing. <i>ACM Transactions on Software Engineering and Methodology</i> , 2010 , 19, 1-61	3.3	48
54	Detecting atomic-set serializability violations in multithreaded programs through active randomized testing 2010 ,		53
53	Taking Advantage of Service Selection: A Study on the Testing of Location-Based Web Services Through Test Case Prioritization 2010 ,		15
52	On the Integration of Test Adequacy, Test Case Prioritization, and Statistical Fault Localization 2010 ,		9
51	Fault localization through evaluation sequences. <i>Journal of Systems and Software</i> , 2010 , 83, 174-187	3.3	30
50	More Tales of Clouds: Software Engineering Research Issues from the Cloud Application Perspective 2009 ,		9
49	Test case prioritization for regression testing of service-oriented business applications 2009 ,		43
48	Capturing propagation of infected program states 2009 ,		58
47	Data flow testing of service choreography 2009 ,		24
46	PAT: A pattern classification approach to automatic reference oracles for the testing of mesh simplification programs. <i>Journal of Systems and Software</i> , 2009 , 82, 422-434	3.3	10
45	Finding failures from passed test cases: improving the pattern classification approach to the testing of mesh simplification programs. <i>Software Testing Verification and Reliability</i> , 2009 , 20, 89-120	0.9	10
44	Resource prioritization of code optimization techniques for program synthesis of wireless sensor network applications. <i>Journal of Systems and Software</i> , 2009 , 82, 1376-1387	3.3	3
43	Is non-parametric hypothesis testing model robust for statistical fault localization?. <i>Information and Software Technology</i> , 2009 , 51, 1573-1585	3.4	17
42	Tag-Based Techniques for Black-Box Test Case Prioritization for Service Testing 2009 ,		12
41	Modeling and testing of cloud applications 2009 ,		26
40	Adaptive Random Test Case Prioritization 2009 ,		123

39	Weaving Context Sensitivity into Test Suite Construction 2009 ,		11
38	Taming coincidental correctness: Coverage refinement with context patterns to improve fault localization 2009 ,		73
37	Atomicity Analysis of Service Composition across Organizations. <i>IEEE Transactions on Software Engineering</i> , 2009 , 35, 2-28	3.5	25
36	Where to adapt dynamic service compositions 2009 ,		5
35	An Empirical Study of the Use of Frankl-Weyuker Data Flow Testing Criteria to Test BPEL Web Services 2009 ,		4
34	Experimental Study to Compare the Use of Metamorphic Testing and Assertion Checking. <i>Ruan Jian Xue Bao/Journal of Software</i> , 2009 , 20, 2637-2654		19
33	An Adaptive Service Selection Approach to Service Composition 2008 ,		37
32	Debugging through Evaluation Sequences: A Controlled Experimental Study 2008 ,		7
31	Heuristics-Based Strategies for Resolving Context Inconsistencies in Pervasive Computing Applications 2008 ,		23
30	Testing pervasive software in the presence of context inconsistency resolution services 2008 ,		24
29	Data flow testing of service-oriented workflow applications 2008 ,		53
28	Inter-context control-flow and data-flow test adequacy criteria for nesC applications 2008 ,		28
27	Fault Localization with Non-parametric Program Behavior Model 2008 ,		2
26	Enhancing adaptive random testing for programs with high dimensional input domains or failure-unrelated parameters. <i>Software Quality Journal</i> , 2008 , 16, 303-327	1.2	14
25	A Tale of Clouds: Paradigm Comparisons and Some Thoughts on Research Issues 2008 ,		70
24	A Metamorphic Testing Approach for Online Testing of Service-Oriented Software Applications. <i>International Journal of Web Services Research</i> , 2007 , 4, 61-81	0.8	68
23	Detection and resolution of atomicity violation in service composition 2007 ,		11
22	On impact-oriented automatic resolution of pervasive context inconsistency 2007 ,		9

21	Testing object-oriented industrial software without precise oracles or results. <i>Communications of the ACM</i> , 2007 , 50, 78-85	2.5	11
20	Piping Classification to Metamorphic Testing: An Empirical Study towards Better Effectiveness for the Identification of Failures in Mesh Simplification Programs. <i>Proceedings - IEEE Computer Society's International Computer Software and Applications Conference</i> , 2007 ,		3
19	Enhancing adaptive random testing in high dimensional input domains 2007 ,		14
18	Do Maintainers Utilize Deployed Design Patterns Effectively?. <i>Proceedings - International Conference on Software Engineering</i> , 2007 ,		13
17	Goal-Directed Context Validation for Adaptive Ubiquitous Systems 2007 ,		1
16	Process Evolution with Atomicity Consistency 2007 ,		4
15	Towards the Testing of Power-Aware Software Applications for Wireless Sensor Networks. <i>Lecture Notes in Computer Science</i> , 2007 , 84-99	0.9	9
14	Reference Models and Automatic Oracles for the Testing of Mesh Simplification Software for Graphics Rendering 2006 ,		5
13	Toward effective deployment of design patterns for software extension 2006 ,		3
12	Testing context-aware middleware-centric programs 2006 ,		47
11	Publishing and composition of atomicity-equivalent services for B2B collaboration 2006 ,		18
10	Work experience versus refactoring to design patterns 2006 ,		10
9	Local analysis of atomicity sphere for B2B collaboration 2006 ,		5
8	Incremental consistency checking for pervasive context 2006 ,		37
7	INTEGRATION TESTING OF CONTEXT-SENSITIVE MIDDLEWARE-BASED APPLICATIONS: A METAMORPHIC APPROACH. <i>International Journal of Software Engineering and Knowledge Engineering</i> , 2006 , 16, 677-703	1	42
6	An empirical comparison between direct and indirect test result checking approaches 2006 ,		19
5	Automatic goal-oriented classification of failure behaviors for testing XML-based multimedia software applications: An experimental case study. <i>Journal of Systems and Software</i> , 2006 , 79, 602-612	3.3	10
4	Fault-based testing of database application programs with conceptual data model		23

3	A metamorphic approach to integration testing of context-sensitive middleware-based applications	16
2	Towards a metamorphic testing methodology for service-oriented software applications	19
1	Testing context-sensitive middleware-based software applications	28