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List of Publications by Year
in descending order

148 papers	3,367 citations	304602 22 h-index	243529 44 g-index
159 all docs	159 docs citations	159 times ranked	1186 citing authors

#	Article	IF	Citations
1	Adaptive Random Testing: The ART of test case diversity. Journal of Systems and Software, 2010, 83, 60-66.	3.3	270
2	Metamorphic Testing. ACM Computing Surveys, 2019, 51, 1-27.	16.1	234
3	Adaptive Random Test Case Prioritization. , 2009, , .		165
4	In black and white. ACM Transactions on Software Engineering and Methodology, 1998, 7, 250-295.	4.8	141
5	A Tale of Clouds: Paradigm Comparisons and Some Thoughts on Research Issues. , 2008, , .		136
6	Fault-based testing without the need of oracles. Information and Software Technology, 2003, 45, 1-9.	3.0	128
7	Proportional sampling strategy: a compendium and some insights. Journal of Systems and Software, 2001, 58, 65-81.	3.3	111
8	TACCLE. ACM Transactions on Software Engineering and Methodology, 2001, 10, 56-109.	4.8	109
9	Capturing propagation of infected program states. , 2009, , .		78
10	Automated functional testing of online search services. Software Testing Verification and Reliability, 2012, 22, 221-243.	1.7	69
11	Data flow testing of service-oriented workflow applications. , 2008, , .		64
12	Semi-Proving: An Integrated Method for Program Proving, Testing, and Debugging. IEEE Transactions on Software Engineering, 2011, 37, 109-125.	4.3	64
13	Metamorphic testing of programs on partial differential equations: a case study. , 0, , .		57
14	Test case prioritization for regression testing of service-oriented business applications. , 2009, , .		57
15	Testing context-aware middleware-centric programs. , 2006, , .		54
16	INTEGRATION TESTING OF CONTEXT-SENSITIVE MIDDLEWARE-BASED APPLICATIONS: A METAMORPHIC APPROACH. International Journal of Software Engineering and Knowledge Engineering, 2006, 16, 677-703.	0.6	51
17	A choice relation framework for supporting category-partition test case generation. IEEE Transactions on Software Engineering, 2003, 29, 577-593.	4.3	50
18	How well does test case prioritization integrate with statistical fault localization?. Information and Software Technology, 2012, 54, 739-758.	3.0	50

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19	Semi-proving. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2002, , .	0.5	45
20	An Adaptive Service Selection Approach to Service Composition. , 2008, , .		45
21	How Well Do Test Case Prioritization Techniques Support Statistical Fault Localization. , 2009, , .		42
22	Testing context-sensitive middleware-based software applications. , 0, , .		38
23	Fault localization through evaluation sequences. Journal of Systems and Software, 2010, 83, 174-187.	3.3	36
24	Metamorphic Testing and Beyond. , 0, , .		34
25	AN INTEGRATED CLASSIFICATION-TREE METHODOLOGY FOR TEST CASE GENERATION. International Journal of Software Engineering and Knowledge Engineering, 2000, 10, 647-679.	0.6	33
26	Non-parametric statistical fault localization. Journal of Systems and Software, 2011, 84, 885-905.	3.3	33
27	Fault-Based Testing of Database Application Programs with Conceptual Data Model. , 0, , .		32
28	On the identification of categories and choices for specification-based test case generation. Information and Software Technology, 2004, 46, 887-898.	3.0	30
29	Data flow testing of service choreography. , 2009, , .		30
30	XML-manipulating test case prioritization for XML-manipulating services. Journal of Systems and Software, 2011, 84, 603-619.	3.3	30
31	Towards a Formal Foundation for DeMarco Data Flow Diagrams. Computer Journal, 1989, 32, 1-12.	1.5	29
32	An assessment of systems and software engineering scholars and institutions (2003â€"2007 and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.3	28
33	Fault Localization Based Only on Failed Runs. Computer, 2012, 45, 64-71.	1.2	28
34	5W+1H pattern: A perspective of systematic mapping studies and a case study on cloud software testing. Journal of Systems and Software, 2016, 116, 206-219.	3.3	28
35	Testing pervasive software in the presence of context inconsistency resolution services. , 2008, , .		27
36	Semi-proving. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2002, 27, 191-195.	0.5	25

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37	Towards research on software cybernetics. , 0, , .		25
38	Is non-parametric hypothesis testing model robust for statistical fault localization?. Information and Software Technology, 2009, 51, 1573-1585.	3.0	25
39	An empirical comparison between direct and indirect test result checking approaches. , 2006, , .		24
40	Experimental Study to Compare the Use of Metamorphic Testing and Assertion Checking. Ruan Jian Xue Bao/Journal of Software, 2009, 20, 2637-2654.	0.3	22
41	A Metamorphic Approach to Integration Testing of Context-Sensitive Middleware-Based Applications. , 0, , .		21
42	An assessment of systems and software engineering scholars and institutions (2000â€"2004). Journal of Systems and Software, 2006, 79, 816-819.	3.3	21
43	An Innovative Approach to Tackling the Boundary Effect in Adaptive Random Testing. , 2007, , .		21
44	Taking Advantage of Service Selection: A Study on the Testing of Location-Based Web Services Through Test Case Prioritization. , 2010, , .		21
45	A general noise-reduction framework for fault localization of Java programs. Information and Software Technology, 2013, 55, 880-896.	3.0	21
46	A Subsumption Hierarchy of Test Case Prioritization for Composite Services. IEEE Transactions on Services Computing, 2015, 8, 658-673.	3.2	21
47	Preemptive Regression Testingof Workflow-Based Web Services. IEEE Transactions on Services Computing, 2015, 8, 740-754.	3.2	20
48	Metamorphic Robustness Testing: Exposing Hidden Defects in Citation Statistics and Journal Impact Factors. IEEE Transactions on Software Engineering, 2021, 47, 1164-1183.	4.3	20
49	Fault-based testing in the absence of an oracle. , 0, , .		19
50	Improving the Effectiveness of Testing Pervasive Software via Context Diversity. ACM Transactions on Autonomous and Adaptive Systems, 2014, 9, 1-28.	0.4	19
51	An Examination of Requirements Specification Languages. Computer Journal, 1991, 34, 143-152.	1.5	18
52	Contributions of tester experience and a checklist guideline to the identification of categories and choices for software testing. Software Quality Journal, 2011, 19, 141-163.	1.4	18
53	On the adoption of MC/DC and control-flow adequacy for a tight integration of program testing and statistical fault localization. Information and Software Technology, 2013, 55, 897-917.	3.0	18
54	An assessment of systems and software engineering scholars and institutions (2002â€"2006). Journal of Systems and Software, 2009, 82, 1370-1373.	3.3	17

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55	Testing object-oriented industrial software without precise oracles or results. Communications of the ACM, 2007, 50, 78-85.	3.3	16
56	The ART of Divide and Conquer: An Innovative Approach to Improving the Efficiency of Adaptive Random Testing. , 2013, , .		16
57	Tag-Based Techniques for Black-Box Test Case Prioritization for Service Testing. , 2009, , .		15
58	EClass: An execution classification approach to improving the energy-efficiency of software via machine learning. Journal of Systems and Software, 2012, 85, 960-973.	3.3	15
59	An assessment of systems and software engineering scholars and institutions (2001â€"2005). Journal of Systems and Software, 2008, 81, 1059-1062.	3.3	14
60	PAT: A pattern classification approach to automatic reference oracles for the testing of mesh simplification programs. Journal of Systems and Software, 2009, 82, 422-434.	3.3	14
61	Finding failures from passed test cases: improving the pattern classification approach to the testing of mesh simplification programs. Software Testing Verification and Reliability, 2010, 20, 89-120.	1.7	14
62	Towards the Testing of Power-Aware Software Applications for Wireless Sensor Networks. Lecture Notes in Computer Science, 2007, , 84-99.	1.0	14
63	ROCS: an object-oriented class-level testing system based on the Relevant Observable ContextS technique. Information and Software Technology, 2000, 42, 677-686.	3.0	13
64	Software Testing Education and Training in Hong Kong. , 0, , .		13
65	DESSERT: a DividE-and-conquer methodology for identifying categorieS, choiceS, and choicE Relations for Test case generation. IEEE Transactions on Software Engineering, 2012, 38, 794-809.	4.3	13
66	KDFC-ART: a KD-tree approach to enhancing Fixed-size-Candidate-set Adaptive Random Testing. IEEE Transactions on Reliability, 2019, 68, 1444-1469.	3.5	13
67	Automatic goal-oriented classification of failure behaviors for testing XML-based multimedia software applications: An experimental case study. Journal of Systems and Software, 2006, 79, 602-612.	3.3	12
68	A Comparison of Tabular Expression-Based Testing Strategies. IEEE Transactions on Software Engineering, 2011, 37, 616-634.	4.3	12
69	CHOC'LATE. Communications of the ACM, 2010, 53, 113-118.	3.3	11
70	On Practical Adequate Test Suites for Integrated Test Case Prioritization and Fault Localization. , 2011, , .		11
71	Assuring the model evolution of protocol software specifications by regression testing process improvement. Software - Practice and Experience, 2011, 41, 1073-1103.	2.5	11
72	Test case selection with and without replacement. Information Sciences, 2000, 129, 81-103.	4.0	10

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73	A Dynamic Fault Localization Technique with Noise Reduction for Java Programs. , 2011, , .		10
74	Towards a problem-driven approach to perspective-based reading. , 0, , .		9
75	Identification of Categories and Choices in Activity Diagrams. , 0, , .		9
76	Debugging through Evaluation Sequences: A Controlled Experimental Study. , 2008, , .		9
77	Equality to Equals and Unequals: A Revisit of the Equivalence and Nonequivalence Criteria in Class-Level Testing of Object-Oriented Software. IEEE Transactions on Software Engineering, 2013, 39, 1549-1563.	4.3	9
78	Regression Testing Process Improvement for Specification Evolution of Real-World Protocol Software. , 2010, , .		8
79	JSCloud: Toward Remote Execution of JavaScript Code on Handheld Devices. , 2012, , .		8
80	A new restructuring algorithm for the classification-tree method. , 0, , .		7
81	Reference Models and Automatic Oracles for the Testing of Mesh Simplification Software for Graphics Rendering. , 2006, , .		7
82	An Empirical Study of the Use of Frankl-Weyuker Data Flow Testing Criteria to Test BPEL Web Services. , 2009, , .		7
83	Preemptive Regression Test Scheduling Strategies: A New Testing Approach to Thriving on the Volatile Service Environments. , 2012, , .		7
84	Toward a K-means clustering approach to adaptive random testing for object-oriented software. Science China Information Sciences, 2019, 62, 1.	2.7	7
85	The application of prolog to structured design. Software - Practice and Experience, 1994, 24, 659-676.	2.5	6
86	Piping Classification to Metamorphic Testing: An Empirical Study towards Better Effectiveness for the Identification of Failures in Mesh Simplification Programs. Proceedings - IEEE Computer Society's International Computer Software and Applications Conference, 2007, , .	0.0	6
87	Where to adapt dynamic service compositions. , 2009, , .		6
88	New visions on metamorphic testing after a quarter of a century of inception. , 2021, , .		6
89	An Automatic Test Data Generation System Based on the Integrated Classification-Tree Methodology. Lecture Notes in Computer Science, 2004, , 225-238.	1.0	6
90	An application of petri nets in structured analysis. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 1986, 11, 53-56.	0.5	5

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91	On the effectiveness of test case allocation schemes in partition testing. Information and Software Technology, 1997, 39, 719-726.	3.0	5
92	Lean Implementations of Software Testing Tools Using XML Representations of Source Codes. , 2008, , .		5
93	Correlating Context-Awareness and Mutation Analysis for Pervasive Computing Systems. , 2010, , .		5
94	Leveraging Performance and Power Savings for Embedded Systems Using Multiple Target Deadlines. , 2010, , .		5
95	Oracles Are Hardly Attain'd, and Hardly Understood: Confessions of Software Testing Researchers. , 2013, , .		5
96	CUDAsmith: A Fuzzer for CUDA Compilers. , 2020, , .		5
97	Beating Random Test Case Prioritization. IEEE Transactions on Reliability, 2021, 70, 654-675.	3.5	5
98	Metamorphic Robustness Testing of Google Translate. , 2020, , .		5
99	Towards harmonized professional standards for software engineers: constraints, conflicts and concessions. , 0, , .		4
100	Fault Propagation in Tabular Expression-Based Specifications. , 2008, , .		4
101	Resource prioritization of code optimization techniques for program synthesis of wireless sensor network applications. Journal of Systems and Software, 2009, 82, 1376-1387.	3.3	4
102	PORA: Proportion-Oriented Randomized Algorithm for Test Case Prioritization. , 2015, , .		4
103	The Impact of Lightweight Disassembler on Malware Detection: An Empirical Study. , 2018, , .		4
104	Choices, Choices: Comparing between CHOCâ€™LATE and the Classification-Tree Methodology. Lecture Notes in Computer Science, 2012, , 162-176.	1.0	4
105	The use of Prolog in the modelling and evaluation of structure charts. Information and Software Technology, 1994, 36, 23-33.	3.0	3
106	Classification-tree restructuring methodologies: a new perspective. IET Software, 2002, 149, 65.	1.0	3
107	A strategy for selecting synchronization sequences to test concurrent object-oriented software. , 0, , .		3
108	Computing curriculum-software engineering: its impacts on professional software engineering education. , 0, , .		3

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109	Precise Propagation of Fault-Failure Correlations in Program Flow Graphs. , 2011, , .		3
110	The Identification of Program Unstructuredness: A Formal Approach. Computer Journal, 1987, 30, 507-511.	1.5	2
111	Short Notes: Towards a Single Criterion for Identifying Program Unstructuredness. Computer Journal, 1987, 30, 378-380.	1.5	2
112	Testing of large number multiplication functions in cryptographic systems. , 0, , .		2
113	A scheme for dynamic detection of concurrent execution of object-oriented software. , 0, , .		2
114	Research Directions on Model-Based Metamorphic Testing and Verification. , 0, , .		2
115	Tabular Expression-Based Testing Strategies: A Comparison. , 2007, , .		2
116	Fault Localization with Non-parametric Program Behavior Model. , 2008, , .		2
117	Automatic Generation of Normal Forms for Testing Object-Oriented Software. , 2009, , .		2
118	An enhanced flow analysis technique for detecting unreachability faults in concurrent systems. Information Sciences, 2012, 194, 254-269.	4.0	2
119	Incremental Identification of Categories and Choices for Test Case Generation: A Study of the Software Practitioners' Preferences. , 2013, , .		2
120	Is XML-Based Test Case Prioritization for Validating WS-BPEL Evolution Effective in Both Average and Adverse Scenarios?. , 2014, , .		2
121	Connecting the Average and the Non-Average. International Journal of Web Services Research, 2015, 12, 1-24.	0.5	2
122	Exploiting the Largest Available Zone: A Proactive Approach to Adaptive Random Testing by Exclusion. IEEE Access, 2020, 8, 52475-52488.	2.6	2
123	Formal or Informal, Practical or Impractical: Towards Integrating Formal Methods with Informal Practices in Software Engineering Education. , 1993, , 189-197.		2
124	PEACEPACT: Prioritizing Examples to Accelerate Perturbation-Based Adversary Generation for DNN Classification Testing. , 2020, , .		2
125	On the completeness of test cases for atomic arithmetic expressions. , 0, , .		1
126	Software engineering professionalism: is the end of constraints and conflicts in sight?. , 0, , .		1

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127	Static Slicing for Pervasive Programs. Proceedings International Conference on Quality Software, 2006, , .	0.0	1
128	Transformation of UML interaction diagrams into contract specifications for object-oriented testing. , 2007, , .		1
129	CrowdAdaptor: A Crowd Sourcing Approach toward Adaptive Energy-Efficient Configurations of Virtual Machines Hosting Mobile Applications. , 2014, , .		1
130	Slope-Based Sequencing Yardstick for Analyzing Unsatisfactory Performance of Multithreaded Programs. , 2015, , .		1
131	An Axiom-Based Test Case Selection Strategy for Object-Oriented Programs. IFIP Advances in Information and Communication Technology, 1995, , 107-114.	0.5	1
132	On the detection of unstructuredness in flowgraphs. Information Processing Letters, 1987, 25, 189-193.	0.4	0
133	One system, two ideologies: integrating the two worlds of software engineering education. , 0, , .		0
134	Towards the application of classification techniques to test and identify faults in multimedia systems. , 0, , .		0
135	Title is missing!. Information and Software Technology, 2004, 46, 987-988.	3.0	0
136	Message from the Steering Committee Chair. , 2005, , .		0
137	Tabular Expression-Based Testing Strategies: A Comparison. , 2007, , .		0
138	Synthesizing Component-Based WSN Applications via Automatic Combination of Code Optimization Techniques. , 2007, , .		0
139	Toward Scalable Statistical Service Selection. , 2008, , .		0
140	A Scheme to Aid Construction of Left-Hand Sides of Axioms in Algebraic Specifications for Object-Oriented Program Testing. , 2008, , .		0
141	Position Statement: Conventional Wisdom Works in Conventional Circumstances: Towards New Solutions to New Paradigms That Challenge Software Testing. , 2009, , .		0
142	Message from the Steering Committee Chair. , 2010, , .		0
143	Message from the ICASE 2011 Organizers. , 2011, , .		0
144	Focus section on program debugging. Software - Practice and Experience, 2013, 43, 969-970.	2.5	0

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145	Focus section on quality software. Software - Practice and Experience, 2015, 45, 873-874.	2.5	0
146	Keynote Speeches. , 2016, , .		0
147	Guest Editorial: A Retrospective of Special Sections on Software Testing and Program Analysis. IEEE Transactions on Reliability, 2021, 70, 443-445.	3.5	0
148	Towards a unified algebraic view of structured systems development models. Data Base for Advances in Information Systems, 1986, 17, 48-48.	1.0	0