Rui Abreu

List of Publications by Year
in descending order

120 papers	4,209 citations	687335 13 h-index	315719 38 g-index
133 all docs	133 docs citations	133 times ranked	1317 citing authors

#	Article	IF	Citations
1	A Survey on Software Fault Localization. IEEE Transactions on Software Engineering, 2016, 42, 707-740.	5.6	636
2	On the Accuracy of Spectrum-based Fault Localization. , 2007, , .		408
3	A practical evaluation of spectrum-based fault localization. Journal of Systems and Software, 2009, 82, 1780-1792.	4.5	367
4	An Evaluation of Similarity Coefficients for Software Fault Localization. , 2006, , .		331
5	Evaluating and Improving Fault Localization. , 2017, , .		259
6	Spectrum-Based Multiple Fault Localization. , 2009, , .		239
7	Empirical review of automated analysis tools on 47,587 Ethereum smart contracts. , 2020, , .		147
8	GZoltar: an eclipse plug-in for testing and debugging. , 2012, , .		124
9	Threats to the validity and value of empirical assessments of the accuracy of coverage-based fault locators. , 2013, , .		101
10	Empirical review of Java program repair tools: a large-scale experiment on 2,141 bugs and 23,551 repair attempts. , 2019, , .		82
11	Catalog of energy patterns for mobile applications. Empirical Software Engineering, 2019, 24, 2209-2235.	3.9	63
12	Zoltar: A Toolset for Automatic Fault Localization. , 2009, , .		59
13	Performance-Based Guidelines for Energy Efficient Mobile Applications. , 2017, , .		54
14	SmartBugs. , 2020, , .		51
15	A Test-Suite Diagnosability Metric for Spectrum-Based Fault Localization Approaches. , 2017, , .		50
16	Multiple fault localization of software programs: A systematic literature review. Information and Software Technology, 2020, 124, 106312.	4.4	48
17	Entropy-based test generation for improved fault localization. , 2013, , .		46
18	Using HTML5 visualizations in software fault localization. , 2013, , .		42

#	Article	IF	Citations
19	Continuous test generation. , 2014, , .		41
20	Prioritizing tests for fault localization through ambiguity group reduction. , 2011, , .		40
21	Towards a mobile and wearable system for predicting panic attacks. , 2015, , .		36
22	On the Empirical Evaluation of Fault Localization Techniques for Spreadsheets. Lecture Notes in Computer Science, 2013, , 68-82.	1.3	36
23	Simultaneous debugging of software faults. Journal of Systems and Software, 2011, 84, 573-586.	4.5	35
24	Smelling Faults in Spreadsheets. , 2014, , .		30
25	Automatic software fault localization using generic program invariants. , 2008, , .		29
26	On the empirical evaluation of similarity coefficients for spreadsheets fault localization. Automated Software Engineering, 2015, 22, 47-74.	2.9	29
27	Diagnosis of Embedded Software Using Program Spectra. , 2007, , .		28
28	Zoltar. , 2009, , .		28
29	On the Accuracy of Spectrum-based Fault Localization. , 2007, , .		28
30	Diagnosing multiple intermittent failures using maximum likelihood estimation. Artificial Intelligence, 2010, 174, 1481-1497.	5.8	27
31	Using constraints to diagnose faulty spreadsheets. Software Quality Journal, 2015, 23, 297-322.	2.2	27
32	An Empirical Study on the Use of Defect Prediction for Test Case Prioritization. , 2019, , .		27
33	An observation-based model for fault localization. , 2008, , .		26
34	Refining spectrum-based fault localization rankings. , 2009, , .		26
35	A dynamic code coverage approach to maximize fault localization efficiency. Journal of Systems and Software, 2014, 90, 18-28.	4.5	26
36	Leafactor: Improving Energy Efficiency of Android Apps via Automatic Refactoring. , 2017, , .		24

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37	Prevalence of Single-Fault Fixes and Its Impact on Fault Localization. , 2017, , .		23
38	To the attention of mobile software developers: guess what, test your app!. Empirical Software Engineering, 2019, 24, 2438-2468.	3.9	23
39	The ANTAREX approach to autotuning and adaptivity for energy efficient HPC systems. , 2016, , .		22
40	A diagnosis-based approach to software comprehension. , 2014, , .		18
41	Prioritizing tests for software fault diagnosis. Software - Practice and Experience, 2011, 41, 1105-1129.	3.6	17
42	A wearable and mobile intervention delivery system for individuals with panic disorder. , 2015, , .		16
43	Do Energy-Oriented Changes Hinder Maintainability?. , 2019, , .		15
44	Automated Fault Diagnosis in Embedded Systems. , 2008, , .		14
45	Diagnosing unobserved components in self-adaptive systems. , 2014, , .		14
46	On the Energy Footprint of Mobile Testing Frameworks. IEEE Transactions on Software Engineering, 2021, 47, 2260-2271.	5.6	14
47	Empirical Study of Restarted and Flaky Builds on Travis CI. , 2020, , .		14
48	PETTool: A pattern-based GUI testing tool. , 2010, , .		13
49	Revisiting the Practical Use of Automated Software Fault Localization Techniques. , 2017, , .		13
50	The GZoltar Project: A Graphical Debugger Interface. Lecture Notes in Computer Science, 2010, , 215-218.	1.3	13
51	Localizing Software Faults Simultaneously. , 2009, , .		12
52	MZoltar: automatic debugging of Android applications. , 2013, , .		12
53	FaultySheet Detective: When Smells Meet Fault Localization. , 2014, , .		12
54	An Analysis of 35+ Million Jobs of Travis CI. , 2019, , .		11

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55	Spectrum-Based Fault Localization for Diagnosing Concurrency Faults. Lecture Notes in Computer Science, 2013, , 239-254.	1.3	11
56	Exploiting count spectra for Bayesian fault localization. , 2010, , .		10
57	Leveraging Qualitative Reasoning to Improve SFL. , 2018, , .		10
58	Demystifying the Combination of Dynamic Slicing and Spectrum-based Fault Localization. , 2019, , .		10
59	MOTSD: a multi-objective test selection tool using test suite diagnosability. , 2019, , .		9
60	Architecture-Based Run-Time Fault Diagnosis. Lecture Notes in Computer Science, 2011, , 261-277.	1.3	9
61	Time, Frequency & Complexity Analysis for Recognizing Panic States from Physiologic Time-Series. , 2016, , .		9
62	Diagnosing Software Faults Using Multiverse Analysis. , 2020, , .		9
63	AI for the win. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2012, 37, 1-8.	0.7	8
64	Debugging Spreadsheets: A CSP-based Approach. , 2012, , .		8
65	Diagnosing architectural run-time failures. , 2013, , .		8
66	Leveraging a Constraint Solver for Minimizing Test Suites. , 2013, , .		7
67	Framing program comprehension as fault localization. Journal of Software: Evolution and Process, 2016, 28, 840-862.	1.6	7
68	Pangolin: An SFL-Based Toolset for Feature Localization. , 2019, , .		7
69	MHS2: A Map-Reduce Heuristic-Driven Minimal Hitting Set Search Algorithm. Lecture Notes in Computer Science, 2013, , 25-36.	1.3	7
70	A Comparative Study of Automatic Program Repair Techniques for Security Vulnerabilities. , 2021, , .		7
71	On the Runtime and Energy Performance of WebAssembly: Is WebAssembly superior to JavaScript yet?. , 2021, , .		7
72	An empirical study on the usage of testability information to fault localization in software. , 2011, , .		6

#	Article	IF	Citations
73	Progress in Artificial Intelligence. Lecture Notes in Computer Science, 2013, , .	1.3	6
74	Probabilistic Error Propagation Modeling in Logic Circuits. , 2011, , .		5
75	Encoding Test Requirements as Constraints for Test Suite Minimization. , 2013, , .		5
76	Measuring the energy footprint of mobile testing frameworks. , 2018, , .		5
77	EMaaS: Energy Measurements as a Service for Mobile Applications. , 2019, , .		5
78	Syrius: Synthesis of Rules for Intrusion Detectors. IEEE Transactions on Reliability, 2022, 71, 370-381.	4.6	5
79	Improving Energy Efficiency Through Automatic Refactoring. Journal of Software Engineering Research and Development, 0, 7, 2.	1.0	5
80	A Topology-Based Model for Estimating the Diagnostic Efficiency of Statistics-Based Approaches. , 2012, , .		4
81	CodeAware: Sensor-Based Fine-Grained Monitoring and Management of Software Artifacts. , 2015, , .		4
82	A Theoretical and Empirical Analysis of Program Spectra Diagnosability. IEEE Transactions on Software Engineering, 2021, 47, 412-431.	5.6	4
83	Spectrum-based feature localization. , 2021, , .		4
84	A Distributed Approach to Diagnosis Candidate Generation. Lecture Notes in Computer Science, 2013, , 175-186.	1.3	4
85	Visual sketching. , 2020, , .		4
86	An OpenGL-based eclipse plug-in for visual debugging. , 2011, , .		3
87	Fundamental Approaches to Software Engineering. Lecture Notes in Computer Science, 2013, , .	1.3	3
88	Cues for scent intensification in debugging. , 2013, , .		3
89	A Database of Existing Vulnerabilities to Enable Controlled Testing Studies. International Journal of Secure Software Engineering, 2017, 8, 1-23.	0.4	3
90	A qualitative reasoning approach to spectrum-based fault localization. , 2018, , .		3

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91	Supervised Learning for Test Suit Selection in Continuous Integration. , 2021, , .		3
92	Testing for Distinguishing Repair Candidates in Spreadsheets â€" the Mussco Approach. Lecture Notes in Computer Science, 2015, , 124-140.	1.3	3
93	Using Fault Screeners for Software Error Detection. Communications in Computer and Information Science, 2010, , 60-74.	0.5	3
94	Maestro: a platform for benchmarking automatic program repair tools on software vulnerabilities. , 2022, , .		3
95	Increasing System Availability with Local Recovery Based on Fault Localization. , 2010, , .		2
96	Computational Collective Intelligence. Technologies and Applications. Lecture Notes in Computer Science, 2012, , .	1.3	2
97	Integrating Interactive Visualizations of Automatic Debugging Techniques on an Integrated Development Environment. International Journal of Creative Interfaces and Computer Graphics, 2012, 3, 42-59.	0.1	2
98	Interoperability in Ambient Assisted Living using OpenEHR. , 2013, , .		2
99	Empirical Evaluation of Similarity Coefficients for Multiagent Fault Localization. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2017, 47, 767-782.	9.3	2
100	Prioritizing Tests for Fault Localization. , 2013, , 247-257.		2
101	Testing Software and Systems. Lecture Notes in Computer Science, 2015, , .	1.3	2
102	Patterns and Energy Consumption: Design, Implementation, Studies, and Stories. , 2021, , 89-121.		2
103	A Diagnostic Reasoning Approach to Defect Prediction. Lecture Notes in Computer Science, 2011, , 416-425.	1.3	2
104	Lightweight Automatic Error Detection by Monitoring Collar Variables. Lecture Notes in Computer Science, 2012, , 215-230.	1.3	2
105	Self-Healing on the Cloud: State-of-the-Art and Future Challenges. , 2012, , .		1
106	Multicore Software Engineering, Performance, and Tools. Lecture Notes in Computer Science, 2013, , .	1.3	1
107	Automatic systems diagnosis without behavioral models. , 2014, , .		1
108	Risks and Security of Internet and Systems. Lecture Notes in Computer Science, 2017, , .	1.3	1

#	Article	IF	Citations
109	GreenSoftwareLab: Towards an Engineering Discipline for Green Software. Impact, 2018, 2018, 9-11.	0.1	1
110	Lightweight source code monitoring with Triggr. , 2018, , .		1
111	Testing â€" Practice and Research Techniques. Lecture Notes in Computer Science, 2010, , .	1.3	1
112	Continuous Test Generation on Guava. Lecture Notes in Computer Science, 2015, , 228-234.	1.3	1
113	On Understanding Contextual Changes of Failures. , 2021, , .		1
114	Foreword of the 5th Portuguese Software Engineering Doctoral Symposium (SEDES'2014). , 2014, , .		0
115	Learning Diagnosis Models Using Variable-Fidelity Component Model Libraries ã˜... ã˜...Supported by SFI grant 12/RC/2289.. IFAC-PapersOnLine, 2015, 48, 428-433.	0.9	0
116	Fixing vulnerabilities potentially hinders maintainability. Empirical Software Engineering, 2021, 26, 1.	3.9	0
117	OCE: An Online Colaborative Editor. Lecture Notes in Computer Science, 2012, , 89-98.	1.3	0
118	Testing Software and Systems. Lecture Notes in Computer Science, 2013, , .	1.3	0
119	NARROWING THE GAP BETWEEN MUSEUMS, CLASSROOMS AND TECHNOLOGY: THE U.OPENLAB INITIATIVE PROTOTYPE. , 2016, , .		0
120	Model-Based Software Debugging. , 2019, , 365-387.		0