Yuriy Brun

List of Publications by Year
in descending order

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93 papers	4,369 citations	377584 21 h-index	355658 38 g-index
93 all docs	93 docs citations	93 times ranked	2427 citing authors

#	Article	IF	Citations
1	Quality of Automated Program Repair on Real-World Defects. IEEE Transactions on Software Engineering, 2022, 48, 637-661.	4.3	24
2	Fairkit-learn: A Fairness Evaluation and Comparison Toolkit. , 2022, , .		1
3	Diversity-driven automated formal verification. , 2022, , .		7
4	SOSRepair: Expressive Semantic Search for Real-World Program Repair. IEEE Transactions on Software Engineering, 2021, 47, 2162-2181.	4.3	17
5	eQual: informing early design decisions. , 2020, , .		6
6	Visualizing Distributed System Executions. ACM Transactions on Software Engineering and Methodology, 2020, 29, 1-38.	4.8	21
7	Causal testing. , 2020, , .		25
8	TacTok: semantics-aware proof synthesis. , 2020, 4, 1-31.		12
9	Wasm/k: delimited continuations for WebAssembly. , 2020, , .		5
10	Automatically Generating Precise Oracles from Structured Natural Language Specifications. , 2019, , .		27
11	Preventing undesirable behavior of intelligent machines. Science, 2019, 366, 999-1004.	6.0	74
12	Discrete-Event Simulation and Integer Linear Programming for Constraint-Aware Resource Scheduling. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2018, 48, 1578-1593.	5.9	9
13	Do automated program repair techniques repair hard and important bugs?. Empirical Software Engineering, 2018, 23, 2901-2947.	3.0	34
14	Themis: automatically testing software for discrimination. , 2018, , .		53
15	Software fairness. , 2018, , .		54
16	Do automated program repair techniques repair hard and important bugs?. , 2018, , .		5
17	Making well-informed software design decisions. , 2018, , .		7
18	Collaborative-Design Conflicts: Costs and Solutions. IEEE Software, 2018, 35, 25-31.	2.1	2

#	Article	IF	Citations
19	Fairness testing: testing software for discrimination. , 2017, , .		201
20	Clarifications on the Construction and Use of the ManyBugs Benchmark. IEEE Transactions on Software Engineering, 2017, 43, 1089-1090.	4.3	4
21	Tortoise: Interactive system configuration repair. , 2017, , .		20
22	Software Engineering for Self-Adaptive Systems: Research Challenges in the Provision of Assurances. Lecture Notes in Computer Science, 2017, , 3-30.	1.0	49
23	Challenges in Composing and Decomposing Assurances for Self-Adaptive Systems. Lecture Notes in Computer Science, 2017, , 64-89.	1.0	7
24	Debugging Distributed Systems. Queue, 2016, 14, 91-110.	0.8	16
25	Specification and analysis of human-intensive system resource-utilization policies. , 2016, , .		3
26	Visually reasoning about system and resource behavior. , 2016, , .		1
27	Debugging distributed systems. Communications of the ACM, 2016, 59, 32-37.	3.3	56
28	Detecting latent cross-platform API violations. , 2015, , .		3
29	Development History Granularity Transformations (N). , 2015, , .		7
30	Repairing Programs with Semantic Code Search (T). , 2015, , .		111
31	Discovering specification violations in networked software systems. , 2015, , .		8
32	The ManyBugs and IntroClass Benchmarks for Automated Repair of C Programs. IEEE Transactions on Software Engineering, 2015, 41, 1236-1256.	4.3	196
33	Using Computer Simulation to Study Nurse-to-Patient Ratios in an Emergency Department. Journal of Nursing Administration, 2015, 45, 551-556.	0.7	5
34	Is the cure worse than the disease? overfitting in automated program repair. , 2015, , .		203
35	Preventing data errors with continuous testing. , 2015, , .		19
36	Using Declarative Specification to Improve the Understanding, Extensibility, and Comparison of Model-Inference Algorithms. IEEE Transactions on Software Engineering, 2015, 41, 408-428.	4.3	39

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37	Self-Adapting Reliability in Distributed Software Systems. IEEE Transactions on Software Engineering, 2015, 41, 764-780.	4.3	13
38	Using simulation to evaluate error detection strategies: A case study of cloud-based deployment processes. Journal of Systems and Software, 2015, 110, 205-221.	3.3	1
39	Reducing Feedback Delay of Software Development Tools via Continuous Analysis. IEEE Transactions on Software Engineering, 2015, 41, 745-763.	4.3	7
40	Resource Specification for Prototyping Human-Intensive Systems. Lecture Notes in Computer Science, 2015, , 332-346.	1.0	3
41	Behavioral resource-aware model inference. , 2014, , .		35
42	The plastic surgery hypothesis. , 2014, , .		136
43	Inferring models of concurrent systems from logs of their behavior with CSight. , 2014, , .		120
44	Mining precise performance-aware behavioral models from existing instrumentation. , 2014, , .		12
45	Shedding light on distributed system executions. , 2014, , .		11
46	Automatic mining of specifications from invocation traces and method invariants. , 2014, , .		56
47	Software Engineering for Self-Adaptive Systems: A Second Research Roadmap. Lecture Notes in Computer Science, 2013, , 1-32.	1.0	317
48	A Design Space for Self-Adaptive Systems. Lecture Notes in Computer Science, 2013, , 33-50.	1.0	28
49	Early Detection of Collaboration Conflicts and Risks. IEEE Transactions on Software Engineering, 2013, 39, 1358-1375.	4.3	62
50	Entrusting Private Computation and Data to Untrusted Networks. IEEE Transactions on Dependable and Secure Computing, 2013, 10, 225-238.	3.7	10
51	Resource scheduling through resource-aware simulation of emergency departments. , 2013, , .		4
52	Understanding regression failures through test-passing and test-failing code changes. , 2013, , .		2
53	Making offline analyses continuous. , 2013, , .		3
54	Data debugging with continuous testing. , 2013, , .		16

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55	Unifying FSM-inference algorithms through declarative specification. , 2013, , .		21
56	Supporting process undo and redo in software engineering decision making. , 2013, , .		8
57	Speculative analysis of integrated development environment recommendations. , 2012, , .		22
58	Traffic routing for evaluating self-adaptation. , 2012, , .		19
59	Improving IDE recommendations by considering global implications of existing recommendations. , 2012, , .		1
60	Mining temporal invariants from partially ordered logs. Operating Systems Review (ACM), 2012, 45, 39-46.	1.5	27
61	Speculative analysis of integrated development environment recommendations. ACM SIGPLAN Notices, 2012, 47, 669-682.	0.2	23
62	Keeping Data Private while Computing in the Cloud. , 2012, , .		18
63	Automated Analysis and Code Generation for Domain-Specific Models. , 2012, , .		12
64	Efficient 3-SAT algorithms in the tile assembly model. Natural Computing, 2012, 11, 209-229.	1.8	4
65	Isomorphism in model tools and editors. , 2011, , .		1
66	Engineering Heterogeneous Robotics Systems: A Software Architecture-Based Approach. Computer, 2011, 44, 62-71.	1.2	11
67	Synoptic. , 2011, , .		28
68	Crystal. , 2011, , .		24
69	Proactive detection of collaboration conflicts. , 2011, , .		156
70	Leveraging existing instrumentation to automatically infer invariant-constrained models. , 2011, , .		150
71	Smart Redundancy for Distributed Computation. , 2011, , .		30
72	Improving Efficiency of 3-SAT-Solving Tile Systems. Lecture Notes in Computer Science, 2011, , 1-12.	1.0	2

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73	An architecture-driven software mobility framework. Journal of Systems and Software, 2010, 83, 972-989.	3.3	43
74	Improving impact of self-adaptation and self-management research through evaluation methodology. , 2010, , .		15
75	Speculative analysis. , 2010, , .		30
76	Using dynamic execution traces and program invariants to enhance behavioral model inference. , 2010, , .		36
77	From system specifications to component behavioral models. , 2009, , .		10
78	Crystal-growth-inspired algorithms for computational grids. , 2009, , .		0
79	Synthesizing partial component-level behavior models from system specifications. , 2009, , .		29
80	Path finding in the tile assembly model. Theoretical Computer Science, 2009, 410, 1461-1472.	0.5	10
81	Engineering Self-Adaptive Systems through Feedback Loops. Lecture Notes in Computer Science, 2009, , 48-70.	1.0	381
82	Software Engineering for Self-Adaptive Systems: A Research Roadmap. Lecture Notes in Computer Science, 2009, , 1-26.	1.0	624
83	Connecting the Dots: Molecular Machinery for Distributed Robotics. Lecture Notes in Computer Science, 2009, , 102-111.	1.0	0
84	Nondeterministic polynomial time factoring in the tile assembly model. Theoretical Computer Science, 2008, 395, 3-23.	0.5	51
85	Solving satisfiability in the tile assembly model with a constant-size tileset. Journal of Algorithms, 2008, 63, 151-166.	0.9	22
86	Solving NP-complete problems in the tile assembly model. Theoretical Computer Science, 2008, 395, 31-46.	0.5	55
87	Fault and adversary tolerance as an emergent property of distributed systems' software architectures. , 2007, , .		25
88	An Architectural Style for Solving Computationally Intensive Problems on Large Networks. , 2007, , .		28
89	A Discreet, Fault-Tolerant, and Scalable Software Architectural Style for Internet-Sized Networks. , 2007, , .		6
90	Arithmetic computation in the tile assembly model: Addition and multiplication. Theoretical Computer Science, 2007, 378, 17-31.	0.5	74

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91	Constant-Size Tileset for Solving an NP-Complete Problem in Nondeterministic Linear Time. , 2007, , 26-35.		2
92	Self-Assembly of DNA Double-Double Crossover Complexes into High-Density, Doubly Connected, Planar Structures. Journal of the American Chemical Society, 2005, 127, 17590-17591.	6.6	82
93	DNA Triangles and Self-Assembled Hexagonal Tilings. Journal of the American Chemical Society, 2004, 126, 13924-13925.	6.6	122