## Yuriy Brun

## 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.

86	2,858 citations	25	<b>52</b>
papers		h-index	g-index
93 ext. papers	3,646 ext. citations	3.4 avg, IF	5.25 L-index

#	Paper	IF	Citations
86	Quality of Automated Program Repair on Real-World Defects. <i>IEEE Transactions on Software Engineering</i> , <b>2020</b> , 1-1	3.5	5
85	Visualizing Distributed System Executions. <i>ACM Transactions on Software Engineering and Methodology</i> , <b>2020</b> , 29, 1-38	3.3	7
84	Causal testing <b>2020</b> ,		5
83	TacTok: semantics-aware proof synthesis <b>2020</b> , 4, 1-31		2
82	Wasm/k: delimited continuations for WebAssembly <b>2020</b> ,		1
81	Automatically Generating Precise Oracles from Structured Natural Language Specifications 2019,		6
80	SOSRepair: Expressive Semantic Search for Real-World Program Repair. <i>IEEE Transactions on Software Engineering</i> , <b>2019</b> , 1-1	3.5	4
79	Preventing undesirable behavior of intelligent machines. <i>Science</i> , <b>2019</b> , 366, 999-1004	33.3	29
78	Discrete-Event Simulation and Integer Linear Programming for Constraint-Aware Resource Scheduling. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems,</i> <b>2018</b> , 48, 1578-1593	7.3	5
77	. IEEE Software, <b>2018</b> , 35, 25-31	1.5	1
76	Do automated program repair techniques repair hard and important bugs?. <i>Empirical Software Engineering</i> , <b>2018</b> , 23, 2901-2947	3.3	20
75	Themis: automatically testing software for discrimination 2018,		24
74	Software fairness <b>2018</b> ,		13
73	Making well-informed software design decisions 2018,		4
72	Fairness testing: testing software for discrimination 2017,		103
71	Clarifications on the Construction and Use of the ManyBugs Benchmark. <i>IEEE Transactions on Software Engineering</i> , <b>2017</b> , 43, 1089-1090	3.5	3
70	2017,		12

## (2014-2017)

69	Software Engineering for Self-Adaptive Systems: Research Challenges in the Provision of Assurances. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 3-30	0.9	26	
68	Challenges in Composing and Decomposing Assurances for Self-Adaptive Systems. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 64-89	0.9	4	
67	Debugging Distributed Systems. <i>Queue</i> , <b>2016</b> , 14, 91-110	0.9	11	
66	Specification and analysis of human-intensive system resource-utilization policies 2016,		2	
65	Debugging distributed systems. <i>Communications of the ACM</i> , <b>2016</b> , 59, 32-37	2.5	31	
64	Preventing data errors with continuous testing 2015,		11	
63	Using Declarative Specification to Improve the Understanding, Extensibility, and Comparison of Model-Inference Algorithms. <i>IEEE Transactions on Software Engineering</i> , <b>2015</b> , 41, 408-428	3.5	29	
62	. IEEE Transactions on Software Engineering, <b>2015</b> , 41, 764-780	3.5	10	
61	Using simulation to evaluate error detection strategies: A case study of cloud-based deployment processes. <i>Journal of Systems and Software</i> , <b>2015</b> , 110, 205-221	3.3	1	
60	. IEEE Transactions on Software Engineering, <b>2015</b> , 41, 745-763	3.5	7	
59	Development History Granularity Transformations (N) 2015,		5	
58	Repairing Programs with Semantic Code Search (T) <b>2015</b> ,		74	
57	Discovering specification violations in networked software systems 2015,		6	
56	The ManyBugs and IntroClass Benchmarks for Automated Repair of C Programs. <i>IEEE Transactions on Software Engineering</i> , <b>2015</b> , 41, 1236-1256	3.5	126	
55	Using Computer Simulation to Study Nurse-to-Patient Ratios in an Emergency Department. <i>Journal of Nursing Administration</i> , <b>2015</b> , 45, 551-6	1.6	4	
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54	Is the cure worse than the disease? overfitting in automated program repair <b>2015</b> ,		134	
53	Is the cure worse than the disease? overfitting in automated program repair <b>2015</b> ,  Resource Specification for Prototyping Human-Intensive Systems. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 332-346	0.9	3	

51	The plastic surgery hypothesis <b>2014</b> ,		84
50	Inferring models of concurrent systems from logs of their behavior with CSight 2014,		78
49	Mining precise performance-aware behavioral models from existing instrumentation 2014,		8
48	Shedding light on distributed system executions <b>2014</b> ,		8
47	Automatic mining of specifications from invocation traces and method invariants 2014,		38
46	Software Engineering for Self-Adaptive Systems: A Second Research Roadmap. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 1-32	0.9	191
45	A Design Space for Self-Adaptive Systems. Lecture Notes in Computer Science, 2013, 33-50	0.9	16
44	. IEEE Transactions on Software Engineering, <b>2013</b> , 39, 1358-1375	3.5	38
43	Entrusting Private Computation and Data to Untrusted Networks. <i>IEEE Transactions on Dependable and Secure Computing</i> , <b>2013</b> , 10, 225-238	3.9	9
42	Resource scheduling through resource-aware simulation of emergency departments 2013,		4
41	Understanding regression failures through test-passing and test-failing code changes 2013,		2
40	Making offline analyses continuous <b>2013</b> ,		1
39	Data debugging with continuous testing <b>2013</b> ,		12
38	Unifying FSM-inference algorithms through declarative specification 2013,		18
37	Supporting process undo and redo in software engineering decision making 2013,		5
36	Keeping Data Private while Computing in the Cloud <b>2012</b> ,		16
35	Automated Analysis and Code Generation for Domain-Specific Models 2012,		9
34	Efficient 3-SAT algorithms in the tile assembly model. <i>Natural Computing</i> , <b>2012</b> , 11, 209-229	1.3	4

33	Speculative analysis of integrated development environment recommendations 2012,	16
32	Traffic routing for evaluating self-adaptation <b>2012</b> ,	11
31	Improving IDE recommendations by considering global implications of existing recommendations <b>2012</b> ,	1
30	Mining temporal invariants from partially ordered logs. <i>Operating Systems Review (ACM)</i> , <b>2012</b> , 45, 39-46 <sub>0.8</sub>	23
29	Speculative analysis of integrated development environment recommendations. <i>ACM SIGPLAN Notices</i> , <b>2012</b> , 47, 669-682	16
28	Engineering Heterogeneous Robotics Systems: A Software Architecture-Based Approach. <i>Computer</i> , <b>2011</b> , 44, 62-71	9
27	Isomorphism in model tools and editors <b>2011</b> ,	1
26	Synoptic <b>2011</b> ,	20
25	Crystal <b>2011</b> ,	15
24	Proactive detection of collaboration conflicts <b>2011</b> ,	102
24	Proactive detection of collaboration conflicts 2011,  Leveraging existing instrumentation to automatically infer invariant-constrained models 2011,	102
23	Leveraging existing instrumentation to automatically infer invariant-constrained models 2011,	101
23	Leveraging existing instrumentation to automatically infer invariant-constrained models <b>2011</b> ,  Smart Redundancy for Distributed Computation <b>2011</b> ,	101
23	Leveraging existing instrumentation to automatically infer invariant-constrained models 2011,  Smart Redundancy for Distributed Computation 2011,  Improving Efficiency of 3-SAT-Solving Tile Systems. Lecture Notes in Computer Science, 2011, 1-12  o.9  Improving impact of self-adaptation and self-management research through evaluation	101 23 2
23 22 21 20	Leveraging existing instrumentation to automatically infer invariant-constrained models 2011,  Smart Redundancy for Distributed Computation 2011,  Improving Efficiency of 3-SAT-Solving Tile Systems. Lecture Notes in Computer Science, 2011, 1-12 0.9  Improving impact of self-adaptation and self-management research through evaluation methodology 2010,	101 23 2
23 22 21 20	Leveraging existing instrumentation to automatically infer invariant-constrained models 2011,  Smart Redundancy for Distributed Computation 2011,  Improving Efficiency of 3-SAT-Solving Tile Systems. Lecture Notes in Computer Science, 2011, 1-12 0.9  Improving impact of self-adaptation and self-management research through evaluation methodology 2010,  Speculative analysis 2010,  Using dynamic execution traces and program invariants to enhance behavioral model inference	101 23 2 7 23

15	Synthesizing partial component-level behavior models from system specifications 2009,		24
14	Path finding in the tile assembly model. <i>Theoretical Computer Science</i> , <b>2009</b> , 410, 1461-1472	1.1	6
13	Engineering Self-Adaptive Systems through Feedback Loops. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 48-70	0.9	275
12	Software Engineering for Self-Adaptive Systems: A Research Roadmap. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 1-26	0.9	451
11	Connecting the Dots: Molecular Machinery for Distributed Robotics. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 102-111	0.9	
10	Nondeterministic polynomial time factoring in the tile assembly model. <i>Theoretical Computer Science</i> , <b>2008</b> , 395, 3-23	1.1	31
9	Solving satisfiability in the tile assembly model with a constant-size tileset. <i>Journal of Algorithms</i> , <b>2008</b> , 63, 151-166		16
8	Solving NP-complete problems in the tile assembly model. <i>Theoretical Computer Science</i> , <b>2008</b> , 395, 31-	-4 <b>6</b> .1	39
7	An Architectural Style for Solving Computationally Intensive Problems on Large Networks 2007,		21
6	A Discreet, Fault-Tolerant, and Scalable Software Architectural Style for Internet-Sized Networks <b>2007</b> ,		4
5	Arithmetic computation in the tile assembly model: Addition and multiplication. <i>Theoretical Computer Science</i> , <b>2007</b> , 378, 17-31	1.1	50
4	Fault and adversary tolerance as an emergent property of distributed systemsTsoftware architectures <b>2007</b> ,		18
3	Constant-Size Tileset for Solving an NP-Complete Problem in Nondeterministic Linear Time <b>2007</b> , 26-35	5	1
2	Self-assembly of DNA double-double crossover complexes into high-density, doubly connected, planar structures. <i>Journal of the American Chemical Society</i> , <b>2005</b> , 127, 17590-1	16.4	74
1	DNA triangles and self-assembled hexagonal tilings. <i>Journal of the American Chemical Society</i> , <b>2004</b> , 126, 13924-5	16.4	115