

Martin Rinard

List of Publications by Year in descending order

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74
papers

4,960
citations

394421

19
h-index

477307

29
g-index

76
all docs

76
docs citations

76
times ranked

1493
citing authors

#	ARTICLE	IF	CITATIONS
1	Managing performance vs. accuracy trade-offs with loop perforation. , 2011, , .		358
2	Ownership types for safe programming. , 2002, , .		358
3	Compositional pointer and escape analysis for Java programs. , 1999, , .		283
4	Automatically patching errors in deployed software. , 2009, , .		282
5	Automatic patch generation by learning correct code. , 2016, , .		281
6	An analysis of patch plausibility and correctness for generate-and-validate patch generation systems. , 2015, , .		250
7	Taint-based directed whitebox fuzzing. , 2009, , .		232
8	Staged program repair with condition synthesis. , 2015, , .		225
9	Dynamic knobs for responsive power-aware computing. , 2011, , .		195
10	Quality of service profiling. , 2010, , .		166
11	Probabilistic accuracy bounds for fault-tolerant computations that discard tasks. , 2006, , .		131
12	Automatic detection and repair of errors in data structures. , 2003, , .		110
13	Automatic inference of code transforms for patch generation. , 2017, , .		107
14	An analysis of the search spaces for generate and validate patch generation systems. , 2016, , .		102
15	Ownership types for safe region-based memory management in real-time Java. , 2003, , .		99
16	Inference and enforcement of data structure consistency specifications. , 2006, , .		99
17	Pointer and escape analysis for multithreaded programs. , 2001, , .		91
18	Pointer analysis for multithreaded programs. , 1999, , .		88

#	ARTICLE	IF	CITATIONS
19	Role analysis. , 2002, , .		81
20	Automatic patch generation by learning correct code. ACM SIGPLAN Notices, 2016, 51, 298-312.	0.2	71
21	Towards Efficient Satisfiability Checking for Boolean Algebra with Presburger Arithmetic. Lecture Notes in Computer Science, 2007, , 215-230.	1.3	65
22	Software analysis: a roadmap. , 2000, , .		63
23	Data structure repair using goal-directed reasoning. , 2005, , .		56
24	Compositional pointer and escape analysis for Java programs. ACM SIGPLAN Notices, 1999, 34, 187-206.	0.2	55
25	Acceptability-oriented computing. , 2003, , .		50
26	Deciding Boolean Algebra with Presburger Arithmetic. Journal of Automated Reasoning, 2006, 36, 213-239.	1.4	49
27	Detecting and eliminating memory leaks using cyclic memory allocation. , 2007, , .		47
28	Parallelizing Sequential Programs with Statistical Accuracy Tests. Transactions on Embedded Computing Systems, 2013, 12, 1-26.	2.9	45
29	Automatic parallelization of divide and conquer algorithms. , 1999, , .		44
30	Modular Pluggable Analyses for Data Structure Consistency. IEEE Transactions on Software Engineering, 2006, 32, 988-1005.	5.6	44
31	Randomized accuracy-aware program transformations for efficient approximate computations. , 2012, , .		44
32	Generalized Typestate Checking for Data Structure Consistency. Lecture Notes in Computer Science, 2005, , 430-447.	1.3	44
33	Incrementalized pointer and escape analysis. , 2001, , .		43
34	Automatic runtime error repair and containment via recovery shepherding. , 2014, , .		40
35	Goal-Directed Reasoning for Specification-Based Data Structure Repair. IEEE Transactions on Software Engineering, 2006, 32, 931-951.	5.6	39
36	Verifying a File System Implementation. Lecture Notes in Computer Science, 2004, , 373-390.	1.3	37

#	ARTICLE	IF	CITATIONS
37	An Algorithm for Deciding BAPA: Boolean Algebra with Presburger Arithmetic. Lecture Notes in Computer Science, 2005, , 260-277.	1.3	35
38	Synchronization transformations for parallel computing. , 1997, , .		33
39	Full functional verification of linked data structures. ACM SIGPLAN Notices, 2008, 43, 349-361.	0.2	33
40	Histogram-Based Global Load Balancing in Structured Peer-to-Peer Systems. IEEE Transactions on Knowledge and Data Engineering, 2009, 21, 595-608.	5.7	31
41	Exploring the acceptability envelope. , 2005, , .		30
42	Field Constraint Analysis. Lecture Notes in Computer Science, 2005, , 157-173.	1.3	29
43	Automatic runtime error repair and containment via recovery shepherding. ACM SIGPLAN Notices, 2014, 49, 227-238.	0.2	26
44	Pointer and escape analysis for multithreaded programs. ACM SIGPLAN Notices, 2001, 36, 12-23.	0.2	24
45	Automatic detection and repair of errors in data structures. ACM SIGPLAN Notices, 2003, 38, 78-95.	0.2	22
46	Symbolic bounds analysis of pointers, array indices, and accessed memory regions. ACM SIGPLAN Notices, 2000, 35, 182-195.	0.2	21
47	Generalized tpestate checking using set interfaces and pluggable analyses. ACM SIGPLAN Notices, 2004, 39, 46-55.	0.2	21
48	A parameterized type system for race-free Java programs. ACM SIGPLAN Notices, 2001, 36, 56-69.	0.2	20
49	Crayon. , 2016, , .		19
50	Using First-Order Theorem Provers in the Jahob Data Structure Verification System. , 2007, , 74-88.		19
51	Randomized accuracy-aware program transformations for efficient approximate computations. ACM SIGPLAN Notices, 2012, 47, 441-454.	0.2	17
52	Hob: A Tool for Verifying Data-Structure Consistency. Lecture Notes in Computer Science, 2005, , 237-241.	1.3	17
53	A classification system and analysis for aspect-oriented programs. Software Engineering Notes: an Informal Newsletter of the Special Interest Committee on Software Engineering / ACM, 2004, 29, 147-158.	0.7	16
54	Decision Procedures for Set-Valued Fields. Electronic Notes in Theoretical Computer Science, 2005, 131, 51-62.	0.9	16

#	ARTICLE	IF	CITATIONS
55	Crosscutting techniques in program specification and analysis. , 2005, , .		16
56	Automatic parallelization of divide and conquer algorithms. ACM SIGPLAN Notices, 1999, 34, 72-83.	0.2	15
57	Reducing serial I/O power in error-tolerant applications by efficient lossy encoding. , 2016, , .		14
58	Dynamic knobs for responsive power-aware computing. Computer Architecture News, 2011, 39, 199-212.	2.5	12
59	Warp: A Hardware Platform for Efficient Multimodal Sensing With Adaptive Approximation. IEEE Micro, 2020, 40, 57-66.	1.8	11
60	Incrementalized pointer and escape analysis. ACM SIGPLAN Notices, 2001, 36, 35-46.	0.2	10
61	Data representation synthesis. ACM SIGPLAN Notices, 2011, 46, 38-49.	0.2	10
62	Runtime Checking for Program Verification. , 0, , 202-213.		10
63	Manipulating Program Functionality to Eliminate Security Vulnerabilities. Advances in Information Security, 2011, , 109-115.	1.2	8
64	Bolt. ACM SIGPLAN Notices, 2012, 47, 431-450.	0.2	8
65	Efficiency Limits for Value-Deviation-Bounded Approximate Communication. IEEE Embedded Systems Letters, 2015, 7, 109-112.	1.9	7
66	Pointer analysis for multithreaded programs. ACM SIGPLAN Notices, 1999, 34, 77-90.	0.2	6
67	Patterns and statistical analysis for understanding reduced resource computing. ACM SIGPLAN Notices, 2010, 45, 806-821.	0.2	6
68	Region inference for an object-oriented language. ACM SIGPLAN Notices, 2004, 39, 243-254.	0.2	5
69	Automated Techniques for Surviving (Otherwise) Fatal Software Errors. Electronic Notes in Theoretical Computer Science, 2007, 174, 113-116.	0.9	5
70	Generalized Records and Spatial Conjunction in Role Logic. Lecture Notes in Computer Science, 2004, , 361-376.	1.3	5
71	Integrated Reasoning and Proof Choice Point Selection in the Jahob System – Mechanisms for Program Survival. Lecture Notes in Computer Science, 2009, , 1-16.	1.3	5
72	Polynomial Constraints for Sets with Cardinality Bounds. Lecture Notes in Computer Science, 2007, , 258-273.	1.3	2

#	ARTICLE	IF	CITATIONS
73	Incremental Deterministic Planning. , 2006, , .		1
74	Survival strategies for synthesized hardware systems. , 2009, , .		0