

Jan Vitek

List of Publications by Year in descending order

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Version: 2024-02-01

130
papers

2,899
citations

304743

22
h-index

315739

38
g-index

134
all docs

134
docs citations

134
times ranked

1120
citing authors

#	ARTICLE	IF	CITATIONS
1	Deoptless: speculation with dispatched on-stack replacement and specialized continuations. , 2022, , .		2
2	Formally verified speculation and deoptimization in a JIT compiler. , 2021, 5, 1-26.		8
3	What we eval in the shadows: a large-scale study of eval in R programs. , 2021, 5, 1-23.		1
4	Type stability in Julia: avoiding performance pathologies in JIT compilation. , 2021, 5, 1-26.		2
5	Promises are made to be broken: migrating R to strict semantics. , 2021, 5, 1-20.		0
6	World age in Julia: optimizing method dispatch in the presence of eval. , 2020, 4, 1-26.		5
7	Self-contained development environments. ACM SIGPLAN Notices, 2020, 53, 76-87.	0.2	0
8	Designing types for R, empirically. , 2020, 4, 1-25.		3
9	Contextual dispatch for function specialization. , 2020, 4, 1-24.		7
10	On the Impact of Programming Languages on Code Quality. ACM Transactions on Programming Languages and Systems, 2019, 41, 1-24.	2.1	36
11	On the design, implementation, and use of laziness in R. , 2019, 3, 1-27.		6
12	R melts brains: an IR for first-class environments and lazy effectful arguments. , 2019, , .		12
13	Towards a Type System for R. , 2019, , .		4
14	Julia subtyping: a rational reconstruction. , 2018, 2, 1-27.		16
15	Self-contained development environments. , 2018, , .		0
16	Correctness of speculative optimizations with dynamic deoptimization. , 2018, 2, 1-28.		15
17	Julia: dynamism and performance reconciled by design. , 2018, 2, 1-23.		50
18	Can Android Run on Time? Extending and Measuring the Android Platform's Timeliness. Transactions on Embedded Computing Systems, 2018, 17, 1-26.	2.9	4

#	ARTICLE	IF	CITATIONS
19	Orca: GC and type system co-design for actor languages. , 2017, 1, 1-28.		10
20	Verifying a Concurrent Garbage Collector Using a Rely-Guarantee Methodology. Lecture Notes in Computer Science, 2017, , 496-513.	1.3	4
21	Is sound gradual typing dead?. , 2016, , .		62
22	Is sound gradual typing dead?. ACM SIGPLAN Notices, 2016, 51, 456-468.	0.2	8
23	The real software crisis. Communications of the ACM, 2015, 58, 34-36.	4.5	41
24	Atomicity refinement for verified compilation. , 2014, , .		1
25	A fast abstract syntax tree interpreter for R. , 2014, , .		27
26	The case for the three R's of systems research. , 2014, , .		2
27	Atomicity Refinement for Verified Compilation. ACM Transactions on Programming Languages and Systems, 2014, 36, 1-30.	2.1	9
28	M ³ . , 2014, , .		0
29	Crack detection technique for operating wind turbine blades using Vibro-Acoustic Modulation. Structural Health Monitoring, 2014, 13, 660-670.	7.5	31
30	The case for the three R's of systems research. ACM SIGPLAN Notices, 2014, 49, 115-116.	0.2	0
31	A fast abstract syntax tree interpreter for R. ACM SIGPLAN Notices, 2014, 49, 89-102.	0.2	1
32	Flexible access control for javascript. , 2013, , .		7
33	Terra. ACM SIGPLAN Notices, 2013, 48, 105-116.	0.2	19
34	Micro-Transactions for concurrent data structures. Concurrency Computation Practice and Experience, 2013, 25, 2252-2268.	2.2	2
35	Detecting deadlock in programs with data-centric synchronization. , 2013, , .		14
36	Flexible access control for javascript. ACM SIGPLAN Notices, 2013, 48, 305-322.	0.2	9

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37	Plan B. ACM SIGPLAN Notices, 2013, 48, 329-342.	0.2	6
38	SIGPLAN chair's report. ACM SIGPLAN Notices, 2013, 48, 1-2.	0.2	1
39	A data-centric approach to synchronization. ACM Transactions on Programming Languages and Systems, 2012, 34, 1-48.	2.1	22
40	R3. ACM SIGPLAN Notices, 2012, 47, 30-36.	0.2	20
41	Eval begone!. ACM SIGPLAN Notices, 2012, 47, 607-620.	0.2	7
42	A black-box approach to understanding concurrency in DaCapo. ACM SIGPLAN Notices, 2012, 47, 335-354.	0.2	10
43	Introduction to the Special Issue on Java Technologies for Real-Time and Embedded Systems. Concurrency Computation Practice and Experience, 2012, 24, 751-752.	2.2	0
44	Memory Safety for Safety Critical Java. , 2012, , 235-264.		1
45	Evaluating the Design of the R Language. Lecture Notes in Computer Science, 2012, , 104-131.	1.3	90
46	Atomicity in Real-Time Computing. , 2012, , 147-165.		0
47	Mobile AgentsMobile agents. , 2012, , 1880-1893.		1
48	Automated construction of JavaScript benchmarks. ACM SIGPLAN Notices, 2011, 46, 677-694.	0.2	17
49	The Eval That Men Do. Lecture Notes in Computer Science, 2011, , 52-78.	1.3	55
50	A family of real-time Java benchmarks. Concurrency Computation Practice and Experience, 2011, 23, 1679-1700.	2.2	15
51	Virtualizing real-time embedded systems with Java. , 2011, , .		0
52	Scheduling real-time garbage collection on uniprocessors. ACM Transactions on Computer Systems, 2011, 29, 1-29.	0.8	13
53	Automated construction of JavaScript benchmarks. , 2011, , .		53
54	Static Dominance Inference. Lecture Notes in Computer Science, 2011, , 211-227.	1.3	10

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55	Integrating typed and untyped code in a scripting language. ACM SIGPLAN Notices, 2010, 45, 377-388.	0.2	13
56	An analysis of the dynamic behavior of JavaScript programs. ACM SIGPLAN Notices, 2010, 45, 1-12.	0.2	53
57	RTTM. , 2010, , .		26
58	Reflexes. Transactions on Embedded Computing Systems, 2010, 10, 1-29.	2.9	4
59	Integrating typed and untyped code in a scripting language. , 2010, , .		75
60	Schism. ACM SIGPLAN Notices, 2010, 45, 146-159.	0.2	14
61	High-level programming of embedded hard real-time devices. , 2010, , .		56
62	An analysis of the dynamic behavior of JavaScript programs. , 2010, , .		220
63	A Type System for Data-Centric Synchronization. Lecture Notes in Computer Science, 2010, , 304-328.	1.3	11
64	Challenge benchmarks for verification of real-time programs. , 2010, , .		8
65	Of scripts and programs. , 2009, , .		1
66	Thorn. , 2009, , .		39
67	Thorn. ACM SIGPLAN Notices, 2009, 44, 117-136.	0.2	20
68	CDx. , 2009, , .		54
69	Real time Java on resource-constrained platforms with Fiji VM. , 2009, , .		47
70	Scheduling Hard Real-Time Garbage Collection. , 2009, , .		16
71	Understanding the dynamics of JavaScript. , 2009, , .		9
72	Loci: Simple Thread-Locality for Java. Lecture Notes in Computer Science, 2009, , 445-469.	1.3	26

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73	High-Performance Transactional Event Processing. Lecture Notes in Computer Science, 2009, , 27-46.	1.3	0
74	Implicit ownership types for memory management. Science of Computer Programming, 2008, 71, 213-241.	1.9	19
75	Memory Management for Real-Time Java: State of the Art. , 2008, , .		13
76	Flexible task graphs. , 2008, , .		14
77	Flexible task graphs. ACM SIGPLAN Notices, 2008, 43, 1-11.	0.2	5
78	Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems. Lecture Notes in Computer Science, 2008, , 50-64.	1.3	0
79	Matchete: Paths through the Pattern Matching Jungle. , 2008, , 150-166.		5
80	Garbage collection for safety critical Java. , 2007, , .		14
81	Streamflex. ACM SIGPLAN Notices, 2007, 42, 211-228.	0.2	22
82	A real-time Java virtual machine with applications in avionics. Transactions on Embedded Computing Systems, 2007, 7, 1-49.	2.9	88
83	Reflexes. , 2007, , .		21
84	Encapsulating objects with confined types. ACM Transactions on Programming Languages and Systems, 2007, 29, 32.	2.1	26
85	Hierarchical real-time garbage collection. ACM SIGPLAN Notices, 2007, 42, 123-133.	0.2	7
86	Scoped types and aspects for real-time Java memory management. Real-Time Systems, 2007, 37, 1-44.	1.3	21
87	Hierarchical real-time garbage collection. , 2007, , .		15
88	Streamflex. , 2007, , .		58
89	Implementation, Compilation, Optimization of Object-Oriented Languages, Programs and Systems. Lecture Notes in Computer Science, 2007, , 1-14.	1.3	0
90	An Emprical Evaluation of Memory Management Alternatives for Real-Time Java. , 2006, , .		24

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91	Type-based confinement. Journal of Functional Programming, 2006, 16, 83-128.	0.8	22
92	Inferential backbone assignment for sparse data. Journal of Biomolecular NMR, 2006, 35, 187-208.	2.8	15
93	A new approach to real-time checkpointing. , 2006, , .		8
94	Redundancy and coverage detection in sensor networks. ACM Transactions on Sensor Networks, 2006, 2, 94-128.	3.6	138
95	Scoped Types and Aspects for Real-Time Java. Lecture Notes in Computer Science, 2006, , 124-147.	1.3	29
96	Combining Offline and Online Optimizations: Register Allocation and Method Inlining. Lecture Notes in Computer Science, 2006, , 307-322.	1.3	0
97	Engineering a common intermediate representation for the Ovm framework. Science of Computer Programming, 2005, 57, 357-378.	1.9	16
98	Concurrency and synchronization in Java programs. Science of Computer Programming, 2005, 58, 291-292.	1.9	0
99	The Seal Calculus. Information and Computation, 2005, 201, 1-54.	0.7	57
100	A transactional object calculus. Science of Computer Programming, 2005, 57, 164-186.	1.9	45
101	PolyD. ACM SIGPLAN Notices, 2005, 40, 487-503.	0.2	0
102	Reconsidering complete search algorithms for protein backbone NMR assignment. Bioinformatics, 2005, 21, ii230-ii236.	4.1	15
103	Coordination and mobility in CoreLime. Mathematical Structures in Computer Science, 2004, 14, 397-419.	0.6	3
104	Model-Based Assignment and Inference of Protein Backbone Nuclear Magnetic Resonances. Statistical Applications in Genetics and Molecular Biology, 2004, 3, 1-33.	0.6	11
105	Optimistic Concurrency Semantics for Transactions in Coordination Languages. Lecture Notes in Computer Science, 2004, , 183-198.	1.3	10
106	A Semantic Framework for Designer Transactions. Lecture Notes in Computer Science, 2004, , 249-263.	1.3	26
107	Coordinating processes with secure spaces. Science of Computer Programming, 2003, 46, 163-193.	1.9	32
108	Lightweight confinement for featherweight java. ACM SIGPLAN Notices, 2003, 38, 135-148.	0.2	3

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109	Java Subtype Tests in Real-Time. Lecture Notes in Computer Science, 2003, , 378-404.	1.3	23
110	Secure composition of untrusted code: box Ľ, wrappers, and causality types. Journal of Computer Security, 2003, 11, 135-187.	0.8	25
111	Incommunicado. ACM SIGPLAN Notices, 2002, 37, 262-274.	0.2	1
112	Encapsulating objects with confined types. ACM SIGPLAN Notices, 2001, 36, 241-255.	0.2	5
113	Confined types in Java. Software - Practice and Experience, 2001, 31, 507-532.	3.6	60
114	The JavaSeal Mobile Agent Kernel. Autonomous Agents and Multi-Agent Systems, 2001, 4, 359-384.	2.1	28
115	Encapsulating objects with confined types. , 2001, , .		69
116	Confined types. , 1999, , .		58
117	Confined types. ACM SIGPLAN Notices, 1999, 34, 82-96.	0.2	9
118	Seal: A Framework for Secure Mobile Computations. Lecture Notes in Computer Science, 1999, , 47-77.	1.3	97
119	Aliasing in Object Oriented Systems. Lecture Notes in Computer Science, 1999, , 136-163.	1.3	3
120	Flexible alias protection. Lecture Notes in Computer Science, 1998, , 158-185.	1.3	133
121	4th ECOOP Workshop on Mobility: Secure Internet Mobile Computations. Lecture Notes in Computer Science, 1998, , 288-290.	1.3	0
122	Near optimal hierarchical encoding of types. Lecture Notes in Computer Science, 1997, , 128-145.	1.3	37
123	Security and communication in mobile object systems. Lecture Notes in Computer Science, 1997, , 177-194.	1.3	13
124	Efficient type inclusion tests. , 1997, , .		45
125	Efficient type inclusion tests. ACM SIGPLAN Notices, 1997, 32, 142-157.	0.2	6
126	On extending Java. Lecture Notes in Computer Science, 1997, , 321-335.	1.3	3

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127	Compact dispatch tables for dynamically typed object oriented languages. Lecture Notes in Computer Science, 1996, , 309-325.	1.3	21
128	Message Dispatch on Pipelined Processors. , 1995, , 253-282.		17
129	Static analysis of PostScript code. Computer Languages, Systems and Structures, 1993, 19, 65-78.	0.3	0
130	Compile-time analysis of object-oriented programs. Lecture Notes in Computer Science, 1992, , 236-250.	1.3	19