

Uzi Vishkin

List of Publications by Year in descending order

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66
papers

5,282
citations

147566

31
h-index

182168

51
g-index

68
all docs

68
docs citations

68
times ranked

1158
citing authors

#	ARTICLE	IF	CITATIONS
1	An Efficient Parallel Biconnectivity Algorithm. SIAM Journal on Computing, 1985, 14, 862-874.	0.8	505
2	An $O(\log n)$ parallel connectivity algorithm. Journal of Algorithms, 1982, 3, 57-67.	0.9	476
3	On Finding Lowest Common Ancestors: Simplification and Parallelization. SIAM Journal on Computing, 1988, 17, 1253-1262.	0.8	427
4	Deterministic coin tossing with applications to optimal parallel list ranking. Information and Control, 1986, 70, 32-53.	1.3	310
5	Fast parallel and serial approximate string matching. Journal of Algorithms, 1989, 10, 157-169.	0.9	264
6	Constant Depth Reducibility. SIAM Journal on Computing, 1984, 13, 423-439.	0.8	250
7	Finding the maximum, merging, and sorting in a parallel computation model. Journal of Algorithms, 1981, 2, 88-102.	0.9	244
8	An $O(n \log n)$ parallel max-flow algorithm. Journal of Algorithms, 1982, 3, 128-146.	0.9	189
9	Approximate Parallel Scheduling. Part I: The Basic Technique with Applications to Optimal Parallel List Ranking in Logarithmic Time. SIAM Journal on Computing, 1988, 17, 128-142.	0.8	169
10	Randomized and deterministic simulations of PRAMs by parallel machines with restricted granularity of parallel memories. Acta Informatica, 1984, 21, 339.	0.5	161
11	Fast string matching with k differences. Journal of Computer and System Sciences, 1988, 37, 63-78.	0.9	158
12	Recursive Star-Tree Parallel Data Structure. SIAM Journal on Computing, 1993, 22, 221-242.	0.8	148
13	Simulation of Parallel Random Access Machines by Circuits. SIAM Journal on Computing, 1984, 13, 409-422.	0.8	146
14	Efficient string matching with k mismatches. Theoretical Computer Science, 1986, 43, 239-249.	0.5	139
15	Faster optimal parallel prefix sums and list ranking. Information and Computation, 1989, 81, 334-352.	0.5	123
16	Parallel ear decomposition search (EDS) and st-numbering in graphs. Theoretical Computer Science, 1986, 47, 277-298.	0.5	92
17	Implementation of simultaneous memory address access in models that forbid it. Journal of Algorithms, 1983, 4, 45-50.	0.9	88
18	Optimal parallel pattern matching in strings. Information and Control, 1985, 67, 91-113.	1.3	86

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19	The accelerated centroid decomposition technique for optimal parallel tree evaluation in logarithmic time. <i>Algorithmica</i> , 1988, 3, 329-346.	1.0	82
20	Deterministic Sampling—A New Technique for Fast Pattern Matching. <i>SIAM Journal on Computing</i> , 1991, 20, 22-40.	0.8	79
21	Finding level-ancestors in trees. <i>Journal of Computer and System Sciences</i> , 1994, 48, 214-230.	0.9	74
22	Converting high probability into nearly-constant time—with applications to parallel hashing. , 1991, , .		71
23	Approximate parallel scheduling. II. Applications to logarithmic-time optimal parallel graph algorithms. <i>Information and Computation</i> , 1991, 92, 1-47.	0.5	66
24	Optimal parallel generation of a computation tree form. <i>ACM Transactions on Programming Languages and Systems</i> , 1985, 7, 348-357.	1.7	64
25	Efficient pattern matching with scaling. <i>Journal of Algorithms</i> , 1992, 13, 2-32.	0.9	63
26	On parallel hashing and integer sorting. <i>Journal of Algorithms</i> , 1991, 12, 573-606.	0.9	58
27	On efficient parallel strong orientation. <i>Information Processing Letters</i> , 1985, 20, 235-240.	0.4	55
28	Finding Euler tours in parallel. <i>Journal of Computer and System Sciences</i> , 1984, 29, 330-337.	0.9	54
29	A Mesh-of-Trees Interconnection Network for Single-Chip Parallel Processing. , 2006, , .		52
30	Trade-Offs between Depth and Width in Parallel Computation. <i>SIAM Journal on Computing</i> , 1985, 14, 303-314.	0.8	50
31	An optimal parallel connectivity algorithm. <i>Discrete Applied Mathematics</i> , 1984, 9, 197-207.	0.5	48
32	Using simple abstraction to reinvent computing for parallelism. <i>Communications of the ACM</i> , 2011, 54, 75-85.	3.3	39
33	A parallel-design distributed-implementation (PDDI) general-purpose computer. <i>Theoretical Computer Science</i> , 1984, 32, 157-172.	0.5	37
34	Efficient string matching in the presence of errors. , 1985, , .		35
35	Fpga-based prototype of a pram-on-chip processor. , 2008, , .		35
36	Parallel algorithms for Burrows—Wheeler compression and decompression. <i>Theoretical Computer Science</i> , 2014, 525, 10-22.	0.5	31

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37	An efficient string matching algorithm with differences for nucleotide and amino acid sequences. Nucleic Acids Research, 1986, 14, 31-46.	6.5	29
38	Layout-Accurate Design and Implementation of a High-Throughput Interconnection Network for Single-Chip Parallel Processing. , 2007, , .		27
39	Optimal parallel pattern matching in strings. , 1985, , 497-508.		26
40	A complexity theory for unbounded fan-in parallelism. , 1982, , .		22
41	Optimal parallel algorithms for expression tree evaluation and list ranking. , 1988, , 91-100.		19
42	On parallel hashing and integer sorting. , 1990, , 729-743.		18
43	On finding lowest common ancestors: Simplification and parallelization. Lecture Notes in Computer Science, 1988, , 111-123.	1.0	16
44	Finding all nearest neighbors for convex polygons in parallel: A new lower bound technique and a matching algorithm. Discrete Applied Mathematics, 1990, 29, 97-111.	0.5	16
45	Better speedups using simpler parallel programming for graph connectivity and biconnectivity. , 2012, , .		16
46	Structural parallel algorithms. Lecture Notes in Computer Science, 1991, , 363-380.	1.0	12
47	Dynamic parallel memories. Information and Control, 1983, 56, 174-182.	1.3	11
48	Parallel ear decomposition search (EDS) and st-numbering in graphs. Lecture Notes in Computer Science, 1986, , 34-45.	1.0	11
49	Biconnectivity approximations and graph carvings. , 1992, , .		10
50	Sorting strings and constructing digital search trees in parallel. Theoretical Computer Science, 1996, 154, 225-245.	0.5	8
51	Randomized range-maxima in nearly-constant parallel time. Computational Complexity, 1992, 2, 350-373.	0.2	7
52	A parallel blocking flow algorithm for acyclic networks. Journal of Algorithms, 1992, 13, 489-501.	0.9	7
53	Randomized parallel speedups for list ranking. Journal of Parallel and Distributed Computing, 1987, 4, 319-333.	2.7	6
54	On a parallel-algorithms method for string matching problems (overview). Lecture Notes in Computer Science, 1994, , 22-32.	1.0	6

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55	Parallel construction of a suffix tree. Lecture Notes in Computer Science, 1987, , 314-325.	1.0	5
56	Almost fully-parallel parentheses matching. Discrete Applied Mathematics, 1995, 57, 11-28.	0.5	5
57	Experiments with List Ranking for Explicit Multi-Threaded (XMT) Instruction Parallelism. Lecture Notes in Computer Science, 1999, , 43-59.	1.0	5
58	A case for the PRAM as a standard programmer's model. Lecture Notes in Computer Science, 1993, , 11-19.	1.0	5
59	[31] Fast alignment of DNA and protein sequences. Methods in Enzymology, 1990, 183, 487-502.	0.4	4
60	Oblivious Network RAM and Leveraging Parallelism to Achieve Obliviousness. Lecture Notes in Computer Science, 2015, , 337-359.	1.0	4
61	Trade-offs between Communication Throughput and Parallel Time. Journal of Complexity, 1999, 15, 148-166.	0.7	3
62	Experiments with list ranking for explicit multi-threaded (XMT) instruction parallelism. Journal of Experimental Algorithmics, 2000, 5, 10.	0.7	3
63	Truly parallel burrows-wheeler compression and decompression. , 2013, , .		3
64	Algorithmic approach to designing an easy-to-program system: Can it lead to a HW-enhanced programmer's workflow add-on?. , 2009, , .		2
65	Improving Run-Time Scheduling for General-Purpose Parallel Code. , 2011, , .		1
66	FFT on XMT: Case Study of a Bandwidth-Intensive Regular Algorithm on a Highly-Parallel Many Core. , 2016, , .		0