

Hagit Attiya

List of Publications by Year in descending order

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Version: 2024-02-01

157
papers

4,140
citations

218592

26
h-index

182361

51
g-index

168
all docs

168
docs citations

168
times ranked

777
citing authors

#	ARTICLE	IF	CITATIONS
1	Sharing memory robustly in message-passing systems. Journal of the ACM, 1995, 42, 124-142.	1.8	367
2	Atomic snapshots of shared memory. Journal of the ACM, 1993, 40, 873-890.	1.8	361
3	Renaming in an asynchronous environment. Journal of the ACM, 1990, 37, 524-548.	1.8	270
4	Sequential consistency versus linearizability. ACM Transactions on Computer Systems, 1994, 12, 91-122.	0.6	187
5	Computing on an anonymous ring. Journal of the ACM, 1988, 35, 845-875.	1.8	180
6	Atomic Snapshots in $O(n \log n)$ Operations. SIAM Journal on Computing, 1998, 27, 319-340.	0.8	81
7	Adaptive and Efficient Algorithms for Lattice Agreement and Renaming. SIAM Journal on Computing, 2001, 31, 642-664.	0.8	65
8	Laws of order. , 2011, , .		64
9	Concurrent updates with RCU. , 2014, , .		61
10	Are wait-free algorithms fast?. Journal of the ACM, 1994, 41, 725-763.	1.8	57
11	Computing in Totally Anonymous Asynchronous Shared Memory Systems. Information and Computation, 2002, 173, 162-183.	0.5	57
12	Algorithms adapting to point contention. Journal of the ACM, 2003, 50, 444-468.	1.8	55
13	Reliable communication over unreliable channels. Journal of the ACM, 1994, 41, 1267-1297.	1.8	51
14	The Combinatorial Structure of Wait-Free Solvable Tasks. SIAM Journal on Computing, 2002, 31, 1286-1313.	0.8	50
15	Tight bounds for asynchronous randomized consensus. Journal of the ACM, 2008, 55, 1-26.	1.8	49
16	Bounds on the time to reach agreement in the presence of timing uncertainty. Journal of the ACM, 1994, 41, 122-152.	1.8	48
17	Atomic snapshots using lattice agreement. Distributed Computing, 1995, 8, 121-132.	0.7	48
18	An adaptive collect algorithm with applications. Distributed Computing, 2002, 15, 87-96.	0.7	46

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19	Better computing on the anonymous ring. <i>Journal of Algorithms</i> , 1991, 12, 204-238.	0.9	45
20	Long-lived renaming made adaptive. , 1999, , .		43
21	Tight RMR lower bounds for mutual exclusion and other problems. , 2008, , .		43
22	Using mappings to prove timing properties. <i>Distributed Computing</i> , 1992, 6, 121-139.	0.7	41
23	Transactional contention management as a non-clairvoyant scheduling problem. , 2006, , .		40
24	Counting networks with arbitrary fan-out. <i>Distributed Computing</i> , 1995, 8, 163-169.	0.7	39
25	Efficient elections in chordal ring networks. <i>Algorithmica</i> , 1989, 4, 437-446.	1.0	38
26	The complexity of obstruction-free implementations. <i>Journal of the ACM</i> , 2009, 56, 1-33.	1.8	33
27	Specification and Complexity of Collaborative Text Editing. , 2016, , .		33
28	Inherent limitations on disjoint-access parallel implementations of transactional memory. , 2009, , .		31
29	Information-flow models for shared memory with an application to the powerPC architecture. <i>IEEE Transactions on Parallel and Distributed Systems</i> , 2003, 14, 502-515.	4.0	30
30	Polylogarithmic concurrent data structures from monotone circuits. <i>Journal of the ACM</i> , 2012, 59, 1-24.	1.8	30
31	A correctness condition for high-performance multiprocessors (extended abstract). , 1992, , .		29
32	Optimal Clock Synchronization under Different Delay Assumptions. <i>SIAM Journal on Computing</i> , 1996, 25, 369-389.	0.8	29
33	Using mappings to prove timing properties. , 1990, , .		27
34	Transactional Contention Management as a Non-Clairvoyant Scheduling Problem. <i>Algorithmica</i> , 2010, 57, 44-61.	1.0	27
35	Computing with Reads and Writes in the Absence of Step Contention. <i>Lecture Notes in Computer Science</i> , 2005, , 122-136.	1.0	27
36	A Correctness Condition for High-Performance Multiprocessors. <i>SIAM Journal on Computing</i> , 1998, 27, 1637-1670.	0.8	26

#	ARTICLE	IF	CITATIONS
37	Adaptive wait-free algorithms for lattice agreement and renaming (extended abstract). , 1998, , .		25
38	Limitations of Highly-Available Eventually-Consistent Data Stores. IEEE Transactions on Parallel and Distributed Systems, 2017, 28, 141-155.	4.0	24
39	Laws of order. ACM SIGPLAN Notices, 2011, 46, 487-498.	0.2	24
40	Efficient and Robust Sharing of Memory in Message-Passing Systems. Journal of Algorithms, 2000, 34, 109-127.	0.9	23
41	Lower Bounds for Randomized Consensus under a Weak Adversary. SIAM Journal on Computing, 2010, 39, 3885-3904.	0.8	23
42	Limitations of Highly-Available Eventually-Consistent Data Stores. , 2015, , .		23
43	Adaptive and efficient mutual exclusion. Distributed Computing, 2002, 15, 177-189.	0.7	22
44	Nesting-Safe Recoverable Linearizability. , 2018, , .		22
45	Inherent Limitations on Disjoint-Access Parallel Implementations of Transactional Memory. Theory of Computing Systems, 2011, 49, 698-719.	0.7	19
46	Time-Adaptive Algorithms for Synchronization. SIAM Journal on Computing, 1997, 26, 539-556.	0.8	18
47	Partial snapshot objects. , 2008, , .		18
48	Transactional scheduling for read-dominated workloads. Journal of Parallel and Distributed Computing, 2012, 72, 1386-1396.	2.7	18
49	A programming language perspective on transactional memory consistency. , 2013, , .		18
50	Fast Randomized Test-and-Set and Renaming. Lecture Notes in Computer Science, 2010, , 94-108.	1.0	18
51	Improved implementations of binary universal operations. Journal of the ACM, 2001, 48, 1013-1037.	1.8	17
52	Max registers, counters, and monotone circuits. , 2009, , .		17
53	Practically stabilizing SWMR atomic memory in message-passing systems. Journal of Computer and System Sciences, 2015, 81, 692-701.	0.9	17
54	Transactional Scheduling for Read-Dominated Workloads. Lecture Notes in Computer Science, 2009, , 3-17.	1.0	17

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55	A Provably Starvation-Free Distributed Directory Protocol. Lecture Notes in Computer Science, 2010, , 405-419.	1.0	17
56	Limitations of fast consistency conditions for distributed shared memories. Information Processing Letters, 1996, 57, 243-248.	0.4	16
57	Impossibility Results for Distributed Computing. Synthesis Lectures on Distributed Computing Theory, 2014, 5, 1-162.	0.1	16
58	Efficient atomic snapshots using lattice agreement. Lecture Notes in Computer Science, 1992, , 35-53.	1.0	15
59	Safety of Live Transactions in Transactional Memory: TMS is Necessary and Sufficient. Lecture Notes in Computer Science, 2014, , 376-390.	1.0	14
60	Shared Memory Consistency Conditions for Nonsequential Execution: Definitions and Programming Strategies. SIAM Journal on Computing, 1998, 27, 65-89.	0.8	13
61	Lower bounds for adaptive collect and related objects. , 2004, , .		13
62	Lower bounds for randomized consensus under a weak adversary. , 2008, , .		13
63	Randomized consensus in expected $O(n \log n)$ individual work. , 2008, , .		13
64	Time and Space Lower Bounds for Implementations Using k -CAS. IEEE Transactions on Parallel and Distributed Systems, 2010, 21, 162-173.	4.0	13
65	A Single-Version STM that Is Multi-Versioned Permissive. Theory of Computing Systems, 2012, 51, 425-446.	0.7	13
66	Safety of Deferred Update in Transactional Memory. , 2013, , .		13
67	Built-In Coloring for Highly-Concurrent Doubly-Linked Lists. Lecture Notes in Computer Science, 2006, , 31-45.	1.0	13
68	Sequential consistency versus linearizability (extended abstract). , 1991, , .		11
69	Shared memory consistency conditions for non-sequential execution. , 1993, , .		11
70	Counting-Based Impossibility Proofs for Renaming and Set Agreement. Lecture Notes in Computer Science, 2012, , 356-370.	1.0	11
71	Programming DEC-Alpha based multiprocessors the easy way (extended abstract). , 1994, , .		10
72	Efficient Adaptive Collect Using Randomization. Lecture Notes in Computer Science, 2004, , 159-173.	1.0	10

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73	Time-adaptive algorithms for synchronization. , 1994, , .		9
74	Connection Management Without Retaining Information. Information and Computation, 1995, 123, 155-171.	0.5	9
75	Time Bounds for Decision Problems in the Presence of Timing Uncertainty and Failures. Journal of Parallel and Distributed Computing, 2001, 61, 1096-1109.	2.7	9
76	The distribution of file transmission duration in the web. International Journal of Communication Systems, 2004, 17, 407-419.	1.6	9
77	Efficient adaptive collect using randomization. Distributed Computing, 2006, 18, 179-188.	0.7	9
78	Needed. ACM SIGACT News, 2008, 39, 59-61.	0.1	9
79	Tracking in Order to Recover - Detectable Recovery of Lock-Free Data Structures. , 2020, , .		9
80	Upper bound on the complexity of solving hard renaming. , 2013, , .		8
81	Bounds on the Step and Namespace Complexity of Renaming. SIAM Journal on Computing, 2019, 48, 1-32.	0.8	8
82	Directory Protocols for Distributed Transactional Memory. Lecture Notes in Computer Science, 2015, , 367-391.	1.0	8
83	Single-Version STMs Can Be Multi-version Permissive (Extended Abstract). Lecture Notes in Computer Science, 2011, , 83-94.	1.0	8
84	Language complexity on the synchronous anonymous ring. Theoretical Computer Science, 1987, 53, 169-185.	0.5	7
85	Quantifying rollback propagation in distributed checkpointing. Journal of Parallel and Distributed Computing, 2004, 64, 370-384.	2.7	7
86	Tight bounds for asynchronous randomized consensus. , 2007, , .		7
87	Safe privatization in transactional memory. , 2018, , .		7
88	Nontrivial and universal helping for wait-free queues and stacks. Journal of Parallel and Distributed Computing, 2018, 121, 1-14.	2.7	7
89	Detectable recovery of lock-free data structures. , 2022, , .		7
90	Packet-Mode Emulation of Output-Queued Switches. IEEE Transactions on Computers, 2010, 59, 1378-1391.	2.4	6

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91	Highly concurrent multi-word synchronization. Theoretical Computer Science, 2011, 412, 1243-1262.	0.5	6
92	A non-topological proof for the impossibility of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll" \rangle \langle \text{mml:mi} \rangle k \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -set agreement. Theoretical Computer Science, 2013, 512, 41-48.	0.5	6
93	An $O(1)$ -barriers optimal RMRs mutual exclusion algorithm. , 2013, , .		6
94	Limited-Use Atomic Snapshots with Polylogarithmic Step Complexity. Journal of the ACM, 2015, 62, 1-22.	1.8	6
95	Adapting to Point Contention with Long-Lived Safe Agreement. Lecture Notes in Computer Science, 2006, , 10-23.	1.0	6
96	Indistinguishability. Communications of the ACM, 2020, 63, 90-99.	3.3	6
97	Better computing on the anonymous ring. Lecture Notes in Computer Science, 1988, , 329-338.	1.0	5
98	A direct lower bound for k -set consensus. , 1998, , .		5
99	Computing in totally anonymous asynchronous shared memory systems. Lecture Notes in Computer Science, 1998, , 49-61.	1.0	5
100	Local Labeling and Resource Allocation Using Preprocessing. SIAM Journal on Computing, 1999, 28, 1397-1414.	0.8	5
101	SHARING MEMORY WITH SEMI-BYZANTINE CLIENTS AND FAULTY STORAGE SERVERS. Parallel Processing Letters, 2006, 16, 419-428.	0.4	5
102	Concurrency and the Principle of Data Locality. IEEE Distributed Systems Online, 2007, 8, 3-3.	0.5	5
103	The complexity of updating snapshot objects. Journal of Parallel and Distributed Computing, 2011, 71, 1570-1577.	2.7	5
104	Lower bounds for restricted-use objects. , 2012, , .		5
105	The Cost of Privatization in Software Transactional Memory. IEEE Transactions on Computers, 2013, 62, 2531-2543.	2.4	5
106	Emulating a Shared Register in a System That Never Stops Changing. IEEE Transactions on Parallel and Distributed Systems, 2019, 30, 544-559.	4.0	5
107	Optimal Clock Synchronization Under Energy Constraints in Wireless Ad-Hoc Networks. Lecture Notes in Computer Science, 2006, , 221-234.	1.0	5
108	Pragmatic Self-stabilization of Atomic Memory in Message-Passing Systems. Lecture Notes in Computer Science, 2011, , 19-31.	1.0	5

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109	The combinatorial structure of wait-free solvable tasks. Lecture Notes in Computer Science, 1996, , 322-343.	1.0	5
110	Implementing FIFO queues and stacks. Lecture Notes in Computer Science, 1992, , 80-94.	1.0	4
111	Combining shared-coin algorithms. Journal of Parallel and Distributed Computing, 2010, 70, 317-322.	2.7	4
112	Time and Space Lower Bounds for Implementations Using k -CAS. Lecture Notes in Computer Science, 2005, , 169-183.	1.0	4
113	Early Deciding Synchronous Renaming in $O(\log f)$ Rounds or Less. Lecture Notes in Computer Science, 2012, , 195-206.	1.0	4
114	Simulating a Shared Register in an Asynchronous System that Never Stops Changing. Lecture Notes in Computer Science, 2015, , 75-91.	1.0	4
115	The Cost of Privatization. Lecture Notes in Computer Science, 2010, , 35-49.	1.0	4
116	Faster than optimal snapshots (for a while). , 2012, , .		3
117	Built-in Coloring for Highly-Concurrent Doubly-Linked Lists. Theory of Computing Systems, 2013, 52, 729-762.	0.7	3
118	Counting-based impossibility proofs for set agreement and renaming. Journal of Parallel and Distributed Computing, 2016, 87, 1-12.	2.7	3
119	Specification and space complexity of collaborative text editing. Theoretical Computer Science, 2021, 855, 141-160.	0.5	3
120	Time bounds for decision problems in the presence of timing uncertainty and failures. Lecture Notes in Computer Science, 1993, , 204-218.	1.0	3
121	Disjoint-Access Parallelism in Software Transactional Memory. Lecture Notes in Computer Science, 2015, , 72-97.	1.0	3
122	Structured Derivation of Semi-Synchronous Algorithms. Lecture Notes in Computer Science, 2011, , 374-388.	1.0	3
123	Safe privatization in transactional memory. ACM SIGPLAN Notices, 2018, 53, 233-245.	0.2	3
124	A Non-topological Proof for the Impossibility of k -Set Agreement. Lecture Notes in Computer Science, 2011, , 108-119.	1.0	3
125	Store-Collect in the Presence of Continuous Churn with Application to Snapshots and Lattice Agreement. Lecture Notes in Computer Science, 2020, , 1-15.	1.0	3
126	The level of handshake required for managing a connection. Distributed Computing, 1997, 11, 41-57.	0.7	2

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127	Randomization does not reduce the average delay in parallel packet switches. , 2005, , .		2
128	The power of DCAS. , 2007, , .		2
129	Efficient and Robust Local Mutual Exclusion in Mobile Ad Hoc Networks. , 2008, , .		2
130	Lower Bounds for Restricted-Use Objects. SIAM Journal on Computing, 2016, 45, 734-762.	0.8	2
131	Brief Announcement: Collect in the Presence of Continuous Churn with Application to Snapshots and Lattice Agreement. , 2020, , .		2
132	Highly-Concurrent Multi-word Synchronization. , 2007, , 112-123.		2
133	Store-collect in the presence of continuous churn with application to snapshots and lattice agreement. Information and Computation, 2022, 285, 104869.	0.5	2
134	Tight bounds for FEC-based reliable multicast. Information and Computation, 2004, 190, 117-135.	0.5	1
135	The Inherent Queuing Delay of Parallel Packet Switches. IEEE Transactions on Parallel and Distributed Systems, 2006, 17, 1048-1056.	4.0	1
136	Randomization Does Not Reduce the Average Delay in Parallel Packet Switches. SIAM Journal on Computing, 2008, 37, 1613-1636.	0.8	1
137	Sharing memories, robustly. ACM SIGACT News, 2011, 42, 79-82.	0.1	1
138	Trading Fences with RMRs and Separating Memory Models. , 2015, , .		1
139	Lower Bound on the Step Complexity of Anonymous Binary Consensus. Lecture Notes in Computer Science, 2016, , 257-268.	1.0	1
140	Characterizing Transactional Memory Consistency Conditions Using Observational Refinement. Journal of the ACM, 2018, 65, 1-44.	1.8	1
141	Invited Paper: The Inherent Complexity of Transactional Memory and What to Do about It. Lecture Notes in Computer Science, 2011, , 1-11.	1.0	1
142	Constructing efficient election algorithms from efficient traversal algorithms. Lecture Notes in Computer Science, 1988, , 337-344.	1.0	0
143	The complexity of updating multi-writer snapshot objects. , 2007, , .		0
144	Technical perspectiveDistributing your data and having it, too. Communications of the ACM, 2008, 51, 92-92.	3.3	0

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145	Editorial: It's all about change. Distributed Computing, 2009, 22, 1-1.	0.7	0
146	Announcement: best reviewer award 2011. Distributed Computing, 2012, 25, 1-1.	0.7	0
147	Special issue in memory of Berthold Vöcking. Distributed Computing, 2016, 29, 75-75.	0.7	0
148	Poly-logarithmic adaptive algorithms require revealing primitives. Journal of Parallel and Distributed Computing, 2017, 109, 102-116.	2.7	0
149	Special issue on DISC 2013, 2014 and PODC 2014. Distributed Computing, 2017, 30, 307-307.	0.7	0
150	Special issue on PODC 2015 and PODC 2016. Distributed Computing, 2019, 32, 459-459.	0.7	0
151	Editorial: Special issue of PODC 2017 and DISC 2017. Distributed Computing, 2020, 33, 207-207.	0.7	0
152	Staleness and Local Progress in Transactional Memory. Lecture Notes in Computer Science, 2021, , 227-243.	1.0	0
153	Special issue on PODC 2018 and DISC 2018. Distributed Computing, 2021, 34, 227-227.	0.7	0
154	Safety and Deferred Update in Transactional Memory. Lecture Notes in Computer Science, 2015, , 50-71.	1.0	0
155	Separating Lock-Freedom from Wait-Freedom. , 2018, , .		0
156	Special issue on PODC 2019. Distributed Computing, 2021, 34, 411-411.	0.7	0
157	Separating Lock-Freedom from Wait-Freedom at Every Level of the Consensus Hierarchy. Journal of Parallel and Distributed Computing, 2022, 163, 181-181.	2.7	0