

# Hong Jiang

## List of Publications by Year in descending order

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137  
papers

2,649  
citations

394286

19  
h-index

360920

35  
g-index

138  
all docs

138  
docs citations

138  
times ranked

1476  
citing authors

#	ARTICLE	IF	CITATIONS
1	EaD: ECC-Assisted Deduplication With High Performance and Low Memory Overhead for Ultra-Low Latency Flash Storage. IEEE Transactions on Computers, 2023, 72, 208-221.	2.4	2
2	How to Realize Efficient and Scalable Graph Embeddings via an Entropy-Driven Mechanism. IEEE Transactions on Big Data, 2023, 9, 358-371.	4.4	2
3	A-Cache: Asymmetric Buffer Cache for RAID-10 Systems Under a Single-Disk Failure to Significantly Boost Availability. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 723-736.	1.9	1
4	ComboTree: A Persistent Indexing Structure With Universal Operational Efficiency and Scalability. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 2277-2290.	4.0	1
5	Understanding and Exploiting the Full Potential of SSD Address Remapping. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 5112-5125.	1.9	1
6	TriangleKV: Reducing Write Stalls and Write Amplification in LSM-Tree Based KV Stores With Triangle Container in NVM. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 4339-4352.	4.0	3
7	DedupHR: Exploiting Content Locality to Alleviate Read/Write Interference in Deduplication-based Flash Storage. IEEE Transactions on Computers, 2021, , 1-1.	2.4	1
8	GraphCP: An I/O-Efficient Concurrent Graph Processing Framework. , 2021, , .		1
9	Improving Overall Performance of TLC SSD by Exploiting Dissimilarity of Flash Pages. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 332-346.	4.0	11
10	Optimal Encoding and Decoding Algorithms for the RAID-6 Liberation Codes. , 2020, , .		2
11	A Hybrid Update Strategy for I/O-Efficient Out-of-Core Graph Processing. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 1767-1782.	4.0	9
12	A Fast Filtering Mechanism to Improve Efficiency of Large-Scale Video Analytics. IEEE Transactions on Computers, 2020, 69, 914-928.	2.4	14
13	A Black-Box Fork-Join Latency Prediction Model for Data-Intensive Applications. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 1983-2000.	4.0	11
14	The Design of Fast Content-Defined Chunking for Data Deduplication Based Storage Systems. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 2017-2031.	4.0	42
15	Improving Flash Memory Performance and Reliability for Smartphones With I/O Deduplication. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2019, 38, 1017-1027.	1.9	9
16	2-Hopper: Accurately Estimate Individual and Social Attributes of Social Networks With Fewer Repeats via Random Walk. IEEE Access, 2019, 7, 139827-139838.	2.6	1
17	EdgeDB: An Efficient Time-Series Database for Edge Computing. IEEE Access, 2019, 7, 142295-142307.	2.6	19
18	PPF: Improving the Reliability of Deduplication-based Storage Systems with Per-File Parity. IEEE Transactions on Parallel and Distributed Systems, 2019, 30, 2117-2129.	4.0	10

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19	LiteTE: Lightweight, Communication-Efficient Distributed-Memory Triangle Enumerating. IEEE Access, 2019, 7, 26294-26306.	2.6	7
20	Public Auditing for Trusted Cloud Storage Services. IEEE Security and Privacy, 2019, 17, 10-22.	1.5	25
21	Accelerating content-defined-chunking based data deduplication by exploiting parallelism. Future Generation Computer Systems, 2019, 98, 406-418.	4.9	25
22	SPA-SSD: Exploit Heterogeneity and Parallelism of 3D SLC-TLC Hybrid SSD to Improve Write Performance. , 2019, , .		5
23	IOFollow: Improving the performance of VM live storage migration with IO following in the cloud. Future Generation Computer Systems, 2019, 91, 167-176.	4.9	20
24	A Renewable Energy Driven Approach for Computational Sprinting. IEEE Transactions on Parallel and Distributed Systems, 2019, 30, 1449-1463.	4.0	0
25	Using High-Bandwidth Networks Efficiently for Fast Graph Computation. IEEE Transactions on Parallel and Distributed Systems, 2019, 30, 1170-1183.	4.0	47
26	Application-Aware Big Data Deduplication in Cloud Environment. IEEE Transactions on Cloud Computing, 2019, 7, 921-934.	3.1	30
27	Storage Sharing Optimization Under Constraints of SLO Compliance and Performance Variability. IEEE Transactions on Services Computing, 2019, 12, 58-72.	3.2	3
28	EDC: Improving the Performance and Space Efficiency of Flash-Based Storage Systems with Elastic Data Compression. IEEE Transactions on Parallel and Distributed Systems, 2018, 29, 1261-1274.	4.0	9
29	SnapMig: Accelerating VM Live Storage Migration by Leveraging the Existing VM Snapshots in the Cloud. IEEE Transactions on Parallel and Distributed Systems, 2018, 29, 1416-1427.	4.0	19
30	Improving Restore Performance in Deduplication-Based Backup Systems via a Fine-Grained Defragmentation Approach. IEEE Transactions on Parallel and Distributed Systems, 2018, 29, 2254-2267.	4.0	16
31	HUS-Graph. , 2018, , .		5
32	ForkTail. , 2018, , .		7
33	PA-SSD. , 2018, , .		9
34	A communication-reduced and computation-balanced framework for fast graph computation. Frontiers of Computer Science, 2018, 12, 887-907.	1.6	18
35	GC-Aware Request Steering with Improved Performance and Reliability for SSD-Based RAIDs. , 2018, , .		9
36	DuoModel: Leveraging Reduced Model for Data Reduction and Re-Computation on HPC Storage. IEEE Letters of the Computer Society, 2018, 1, 5-8.	1.1	4

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37	A highly cost-effective task scheduling strategy for very large graph computation. Future Generation Computer Systems, 2018, 89, 698-712.	4.9	7
38	GreenSprint: Effective Computational Sprinting in Green Data Centers. , 2018, , .		6
39	Dynamic-Hash-Table Based Public Auditing for Secure Cloud Storage. IEEE Transactions on Services Computing, 2017, 10, 701-714.	3.2	175
40	Customizable SLO and Its Near-Precise Enforcement for Storage Bandwidth. ACM Transactions on Storage, 2017, 13, 1-25.	1.4	6
41	Improving Performance for Flash-Based Storage Systems through GC-Aware Cache Management. IEEE Transactions on Parallel and Distributed Systems, 2017, 28, 2852-2865.	4.0	17
42	Systematic Erasure Codes with Optimal Repair Bandwidth and Storage. ACM Transactions on Storage, 2017, 13, 1-27.	1.4	7
43	A Fast Asymmetric Extremum Content Defined Chunking Algorithm for Data Deduplication in Backup Storage Systems. IEEE Transactions on Computers, 2016, , 1-1.	2.4	25
44	A Comprehensive Study of the Past, Present, and Future of Data Deduplication. Proceedings of the IEEE, 2016, 104, 1681-1710.	16.4	200
45	LCC-Graph: A high-performance graph-processing framework with low communication costs. , 2016, , .		0
46	GCaR. , 2016, , .		34
47	GreenGear. , 2016, , .		6
48	An Improved Decoding Algorithm for Generalized RDP Codes. IEEE Communications Letters, 2016, 20, 632-635.	2.5	9
49	DARE: A Deduplication-Aware Resemblance Detection and Elimination Scheme for Data Reduction with Low Overheads. IEEE Transactions on Computers, 2016, 65, 1692-1705.	2.4	31
50	Real-Time Semantic Search Using Approximate Methodology for Large-Scale Storage Systems. IEEE Transactions on Parallel and Distributed Systems, 2016, 27, 1212-1225.	4.0	6
51	Elastic-RAID: A New Architecture for Improved Availability of Parity-Based RAIDs by Elastic Mirroring. IEEE Transactions on Parallel and Distributed Systems, 2016, 27, 1044-1056.	4.0	5
52	SASLO: Support User-Customized SLO Policy via Programmable End-to-End VM-Oriented IO Control. , 2015, , .		0
53	Factors affecting scalability of multithreaded Java applications on manycore systems. , 2015, , .		3
54	Similarity and Locality Based Indexing for High Performance Data Deduplication. IEEE Transactions on Computers, 2015, 64, 1162-1176.	2.4	41

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55	Proactive Data Migration for Improved Storage Availability in Large-Scale Data Centers. IEEE Transactions on Computers, 2015, 64, 2637-2651.	2.4	26
56	Improving Storage Availability in Cloud-of-Clouds with Hybrid Redundant Data Distribution. , 2015, , .		23
57	Improving Hybrid FTL by Fully Exploiting Internal SSD Parallelism with Virtual Blocks. Transactions on Architecture and Code Optimization, 2015, 11, 1-19.	1.6	8
58	Underprovisioning the Grid Power Infrastructure for Green Datacenters. , 2015, , .		11
59	AE: An Asymmetric Extremum content defined chunking algorithm for fast and bandwidth-efficient data deduplication. , 2015, , .		64
60	Read-Performance Optimization for Deduplication-Based Storage Systems in the Cloud. ACM Transactions on Storage, 2014, 10, 1-22.	1.4	50
61	FAST: Near Real-Time Searchable Data Analytics for the Cloud. , 2014, , .		19
62	Application-Aware Local-Global Source Deduplication for Cloud Backup Services of Personal Storage. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 1155-1165.	4.0	49
63	POD: Performance Oriented I/O Deduplication for Primary Storage Systems in the Cloud. , 2014, , .		31
64	ANTELOPE: A Semantic-Aware Data Cube Scheme for Cloud Data Center Networks. IEEE Transactions on Computers, 2014, 63, 2146-2159.	2.4	18
65	Combining Deduplication and Delta Compression to Achieve Low-Overhead Data Reduction on Backup Datasets. , 2014, , .		37
66	SANE: Semantic-Aware Namespace in Ultra-Large-Scale File Systems. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 1328-1338.	4.0	13
67	Efficiently Representing Membership for Variable Large Data Sets. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 960-970.	4.0	14
68	DDOps: dual-direction operations for load balancing on non-dedicated heterogeneous distributed systems. Cluster Computing, 2014, 17, 503-528.	3.5	9
69	Ddelta: A deduplication-inspired fast delta compression approach. Performance Evaluation, 2014, 79, 258-272.	0.9	58
70	SAFE: A Source Deduplication Framework for Efficient Cloud Backup Services. Journal of Signal Processing Systems, 2013, 72, 209-228.	1.4	11
71	Transparency-Orientated Encoding Strategies for Voice-over-IP Steganography. Computer Journal, 2012, 55, 702-716.	1.5	16
72	SAR: SSD Assisted Restore Optimization for Deduplication-Based Storage Systems in the Cloud. , 2012, , .		23

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73	GC-ARM: Garbage Collection-Aware RAM Management for Flash Based Solid State Drives. , 2012, , .		9
74	P-Dedupe: Exploiting Parallelism in Data Deduplication System. , 2012, , .		29
75	Semantic-Aware Metadata Organization Paradigm in Next-Generation File Systems. IEEE Transactions on Parallel and Distributed Systems, 2012, 23, 337-344.	4.0	25
76	A Scalable Inline Cluster Deduplication Framework for Big Data Protection. Lecture Notes in Computer Science, 2012, , 354-373.	1.0	39
77	Detecting Duplicates over Sliding Windows with RAM-Efficient Detached Counting Bloom Filter Arrays. , 2011, , .		3
78	Supporting Scalable and Adaptive Metadata Management in Ultralarge-Scale File Systems. IEEE Transactions on Parallel and Distributed Systems, 2011, 22, 580-593.	4.0	30
79	AA-Dedupe: An Application-Aware Source Deduplication Approach for Cloud Backup Services in the Personal Computing Environment. , 2011, , .		52
80	CABdedupe: A Causality-Based Deduplication Performance Booster for Cloud Backup Services. , 2011, , .		38
81	Improving Availability of RAID-Structured Storage Systems by Workload Outsourcing. IEEE Transactions on Computers, 2011, 60, 64-79.	2.4	18
82	Lessons Learned from Comprehensive Deployments of Multiagent CSCL Applications I-MINDS and ClassroomWiki. IEEE Transactions on Learning Technologies, 2011, 4, 47-58.	2.2	9
83	Performance impact and interplay of SSD parallelism through advanced commands, allocation strategy and data granularity. , 2011, , .		276
84	DBA: A Dynamic Bloom Filter Array for Scalable Membership Representation of Variable Large Data Sets. , 2011, , .		8
85	TRIP: Temporal Redundancy Integrated Performance Booster for Parity-Based RAID Storage Systems. , 2010, , .		5
86	MAD2: A scalable high-throughput exact deduplication approach for network backup services. , 2010, , .		64
87	SAM: A Semantic-Aware Multi-tiered Source De-duplication Framework for Cloud Backup. , 2010, , .		54
88	RoLo: A Rotated Logging Storage Architecture for Enterprise Data Centers. , 2010, , .		8
89	A Novel Weighted-Graph-Based Grouping Algorithm for Metadata Prefetching. IEEE Transactions on Computers, 2010, 59, 1-15.	2.4	22
90	Communication-Aware Load Balancing for Parallel Applications on Clusters. IEEE Transactions on Computers, 2010, 59, 42-52.	2.4	18

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91	PUD-LRU: An Erase-Efficient Write Buffer Management Algorithm for Flash Memory SSD. , 2010, , .		42
92	STEM: Spatiotemporal Management of Capacity for Intra-core Last Level Caches. , 2010, , .		23
93	HPDA: A hybrid parity-based disk array for enhanced performance and reliability. , 2010, , .		21
94	DSFS: Decentralized security for large parallel file systems. , 2010, , .		0
95	DEBAR: A scalable high-performance de-duplication storage system for backup and archiving. , 2010, , .		58
96	JOR: A Journal-guided Reconstruction Optimization for RAID-Structured Storage Systems. , 2009, , .		9
97	An adaptive steganography scheme for voice over IP. , 2009, , .		24
98	Accurate Performance Modeling and Guidance to the Adoption of an Inconsistency Detection Framework. , 2008, , .		1
99	Adaptive Consistency Guarantees for Large-Scale Replicated Services. , 2008, , .		7
100	GRAID: A Green RAID Storage Architecture with Improved Energy Efficiency and Reliability. , 2008, , .		25
101	AMP: An Affinity-Based Metadata Prefetching Scheme in Large-Scale Distributed Storage Systems. , 2008, , .		18
102	HBA: Distributed Metadata Management for Large Cluster-Based Storage Systems. IEEE Transactions on Parallel and Distributed Systems, 2008, 19, 750-763.	4.0	60
103	Adaptive Load-Balancing for Force-Decomposition Based 3-Body Molecular Dynamics Simulations in A Heterogeneous Distributed Environment with Variable Number of Processors. Parallel Processing (ICPP), Proceedings of the International Symposium, 2007, , .	0.0	1
104	Statistics and analysis tools for a computer-supported collaborative learning system. Proceedings - Frontiers in Education Conference, FIE, 2007, , .	0.0	2
105	Implementation and Evaluation of a Popularity-Based Reconstruction Optimization Algorithm in Availability-Oriented Disk Arrays. , 2007, , .		6
106	Data Grids: Supporting Data-Intensive Applications in Wide-Area Networks. , 2006, , 481-494.		7
107	Exploiting redundancy to boost performance in a RAID-10 style cluster-based file system. Cluster Computing, 2006, 9, 433-447.	3.5	5
108	Improving the performance of I/O-intensive applications on clusters of workstations. Cluster Computing, 2006, 9, 297-311.	3.5	10

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109	Nexus: a novel weighted-graph-based prefetching algorithm for metadata servers in petabyte-scale storage systems. , 2006, , .		11
110	Adaptive Load Balancing for Long-Range MD Simulations in A Distributed Environment. , 2006, , .		3
111	PUSH THE BOTTLENECK OF STREAMING MEDIA SYSTEM FROM STREAMING MEDIA SERVER TO NETWORK. International Journal of Image and Graphics, 2005, 05, 859-869.	1.2	3
112	I/O performance of an RAID-10 style parallel file system. Journal of Computer Science and Technology, 2004, 19, 965-972.	0.9	0
113	Improved read performance in a cost-effective, fault-tolerant parallel virtual file system (CEFT-PVFS). , 2003, , .		8
114	A comparative study of parallel and distributed Java projects for heterogeneous systems. , 2002, , .		7
115	Comparisons between mesh and hierarchical ring networks for shared-memory multiprocessors. Canadian Journal of Electrical and Computer Engineering, 1998, 23, 119-125.	1.5	0
116	Modeling of domain pinning effect in polycrystalline ferroelectric ceramics. Ferroelectrics, 1996, 182, 61-68.	0.3	9
117	Reconfigurable optical bus and performance optimization. Journal of Computer Science and Technology, 1996, 11, 296-312.	0.9	0
118	Comparison of Mesh and Hierarchical Networks for Multiprocessors. , 1994, , .		10
119	On some architectural issues of optical hierarchical ring networks for shared-memory multiprocessors. , 0, , .		4
120	The role of partitioning in Time Warp simulation. , 0, , .		0
121	Performance and configuration of hierarchical ring networks for multiprocessors. , 0, , .		5
122	An efficient fault-tolerant scheduling algorithm for real-time tasks with precedence constraints in heterogeneous systems. , 0, , .		29
123	A dynamic load balancing scheme for I/O-intensive applications in distributed systems. , 0, , .		13
124	I-MINDS: an application of multiagent system intelligence to on-line education. , 0, , .		5
125	Performance properties of combined heterogeneous networks. , 0, , .		1
126	Distributed systems middleware architecture from a software engineering perspective. , 0, , .		6



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127	Modeling parallel applications performance on heterogeneous systems. , 0, , .		15
128	Performance and cost effectiveness of a cluster of workstations and MD-GRAPE 2 for MD simulations. , 0, , .		5
129	Hierarchical Bloom filter arrays (HBA): a novel, scalable metadata management system for large cluster-based storage. , 0, , .		14
130	A distributed shared object model based on a hierarchical consistency protocol for heterogeneous clusters. , 0, , .		5
131	Flexible mechanisms for performance enhancements of cluster networks. , 0, , .		1
132	Improving the performance of communication-intensive parallel applications executing on clusters. , 0, , .		1
133	Intelligent Collaborating Agents to Support Teaching and Learning. , 0, , .		1
134	A framework for efficient inconsistency detection in a grid and internet-scale distributed environment. , 0, , .		3
135	Design and evaluation of a new and effective fairness scheme for multicasting in internet-scale distributed systems. , 0, , .		1
136	False Rate Analysis of Bloom Filter Replicas in Distributed Systems. , 0, , .		6
137	A reconfigurable optical bus structure for shared memory multiprocessors with improved performance. , 0, , .		1