Thomas Neumann

List of Publications by Year in descending order

115 papers	5,083 citations	430874 18 h-index	189892 50 g-index
128 all docs	128 docs citations	128 times ranked	1648 citing authors

#	Article	IF	Citations
1	The RDF-3X engine for scalable management of RDF data. VLDB Journal, 2010, 19, 91-113.	4.1	478
2	HyPer: A hybrid OLTP&OLAP main memory database system based on virtual memory snapshots. , 2011, , .		384
3	RDF-3X. Proceedings of the VLDB Endowment, 2008, 1, 647-659.	3.8	370
4	Efficiently compiling efficient query plans for modern hardware. Proceedings of the VLDB Endowment, 2011, 4, 539-550.	3.8	309
5	How good are query optimizers, really?. Proceedings of the VLDB Endowment, 2015, 9, 204-215.	3.8	305
6	The adaptive radix tree: ARTful indexing for main-memory databases. , 2013, , .		242
7	Morsel-driven parallelism. , 2014, , .		166
8	Scalable join processing on very large RDF graphs. , 2009, , .		146
9	Fast Serializable Multi-Version Concurrency Control for Main-Memory Database Systems. , 2015, , .		138
10	Characteristic sets: Accurate cardinality estimation for RDF queries with multiple joins. , 2011, , .		132
11	Massively parallel sort-merge joins in main memory multi-core database systems. Proceedings of the VLDB Endowment, 2012, 5, 1064-1075.	3.8	132
12	Efficient top-k querying over social-tagging networks. , 2008, , .		106
13	x-RDF-3X. Proceedings of the VLDB Endowment, 2010, 3, 256-263.	3.8	96
14	Data Blocks. , 2016, , .		93
15	Preventing bad plans by bounding the impact of cardinality estimation errors. Proceedings of the VLDB Endowment, 2009, 2, 982-993.	3.8	92
16	The mixed workload CH-benCHmark. , 2011, , .		82
17	Managing Non-Volatile Memory in Database Systems. , 2018, , .		75
18	Exploiting hardware transactional memory in main-memory databases. , 2014, , .		74

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19	Query optimization through the looking glass, and what we found running the Join Order Benchmark. VLDB Journal, 2018, 27, 643-668.	4.1	74
20	TPC-H Analyzed: Hidden Messages and Lessons Learned from an Influential Benchmark. Lecture Notes in Computer Science, 2014, , 61-76.	1.3	74
21	A time machine for text search. , 2007, , .		64
22	Dynamic programming strikes back. , 2008, , .		61
23	RadixSpline. , 2020, , .		61
24	The more the merrier. Proceedings of the VLDB Endowment, 2014, 8, 449-460.	3.8	58
25	The ART of practical synchronization. , 2016, , .		57
26	The linked data benchmark council. SIGMOD Record, 2014, 43, 27-31.	1.2	56
27	Benchmarking learned indexes. Proceedings of the VLDB Endowment, 2020, 14, 1-13.	3.8	56
28	Exploiting social relations for query expansion and result ranking. , 2008, , .		52
29	Instant loading for main memory databases. Proceedings of the VLDB Endowment, 2013, 6, 1702-1713.	3.8	51
30	LeanStore: In-Memory Data Management beyond Main Memory. , 2018, , .		48
31	Persistent Memory I/O Primitives. , 2019, , .		46
32	High-speed query processing over high-speed networks. Proceedings of the VLDB Endowment, 2015, 9, 228-239.	3.8	43
33	Flow-Join: Adaptive skew handling for distributed joins over high-speed networks. , 2016, , .		37
34	Compacting transactional data in hybrid OLTP&OLAP databases. Proceedings of the VLDB Endowment, 2012, 5, 1424-1435.	3.8	32
35	Locality-sensitive operators for parallel main-memory database clusters. , 2014, , .		31
36	Everything you always wanted to know about compiled and vectorized queries but were afraid to ask. Proceedings of the VLDB Endowment, 2018, 11, 2209-2222.	3.8	31

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37	Adaptive Execution of Compiled Queries. , 2018, , .		31
38	Adaptive Optimization of Very Large Join Queries. , 2018, , .		30
39	Get Real. , 2018, , .		30
40	Active knowledge. , 2010, , .		26
41	Scalable garbage collection for in-memory MVCC systems. Proceedings of the VLDB Endowment, 2019, 13, 128-141.	3.8	24
42	CPU and cache efficient management of memory-resident databases. , 2013, , .		22
43	Estimating Cardinalities with Deep Sketches. , 2019, , .		22
44	Query simplification. , 2009, , .		21
45	Tidy Tuples and Flying Start: fast compilation and fast execution of relational queries in Umbra. VLDB Journal, 2021, 30, 883-905.	4.1	20
46	Near-optimal dynamic replication in unstructured peer-to-peer networks. , 2008, , .		19
47	Rethinking Logging, Checkpoints, and Recovery for High-Performance Storage Engines. , 2020, , .		19
48	Accelerating queries with group-by and join by groupjoin. Proceedings of the VLDB Endowment, 2011, 4, 843-851.	3.8	19
49	ScyPer. , 2013, , .		18
50	High-Performance Geospatial Analytics in HyPerSpace. , 2016, , .		18
51	On the Impact of Memory Allocation on High-Performance Query Processing. , 2019, , .		18
52	Heterogeneity-conscious parallel query execution. , 2014, , .		17
53	Automatic algorithm transformation for efficient multi-snapshot analytics on temporal graphs. Proceedings of the VLDB Endowment, 2017, 10, 877-888.	3.8	17
54	Building blocks for persistent memory. VLDB Journal, 2020, 29, 1223-1241.	4.1	17

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55	To Partition, or Not to Partition, That is the Join Question in a Real System. , 2021, , .		17
56	Distributed top-k aggregation queries at large. Distributed and Parallel Databases, 2009, 26, 3-27.	1.6	14
57	The Linked Data Benchmark Council Project. Datenbank-Spektrum, 2013, 13, 121-129.	1.3	13
58	How to efficiently snapshot transactional data. , 2011, , .		12
59	Effective and Robust Pruning for Top-Down Join Enumeration Algorithms. , 2012, , .		11
60	One DBMS for all. , 2014, , .		11
61	Scaling HTM-Supported Database Transactions to Many Cores. IEEE Transactions on Knowledge and Data Engineering, 2016, 28, 297-310.	5.7	11
62	Massively Parallel NUMA-Aware Hash Joins. Lecture Notes in Computer Science, 2015, , 3-14.	1.3	11
63	JSON Tiles: Fast Analytics on Semi-Structured Data. , 2021, , .		10
64	Smooth Interpolating Histograms with Error Guarantees. Lecture Notes in Computer Science, 2008, , 126-138.	1.3	10
65	DeltaNI. , 2013, , .		9
66	Supporting hierarchical data in SAP HANA. , 2015, , .		9
67	Fast approximation of steiner trees in large graphs. , 2012, , .		8
68	Indexing highly dynamic hierarchical data. Proceedings of the VLDB Endowment, 2015, 8, 986-997.	3.8	8
69	Building Advanced SQL Analytics From Low-Level Plan Operators. , 2021, , .		8
70	Scalable and robust latches for database systems. , 2020, , .		8
71	ANGIE. Proceedings of the VLDB Endowment, 2009, 2, 1570-1573.	3.8	7
72	User-defined operators. Proceedings of the VLDB Endowment, 2022, 15, 1119-1131.	3.8	7

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73	HyPerInsight. , 2017, , .		6
74	Scalable Analytics on Fast Data. ACM Transactions on Database Systems, 2019, 44, 1-35.	2.8	6
75	Make the most out of your SIMD investments: counter control flow divergence in compiled query pipelines. VLDB Journal, 2020, 29, 757-774.	4.1	6
76	Profiling dataflow systems on multiple abstraction levels. , 2021, , .		6
77	Self-Tuning Query Scheduling for Analytical Workloads. , 2021, , .		6
78	Concurrent online sampling for all, for free. , 2020, , .		6
79	Tree-Encoded Bitmaps. , 2020, , .		6
80	Engineering high-performance database engines. Proceedings of the VLDB Endowment, 2014, 7, 1734-1741.	3.8	5
81	Make the most out of your SIMD investments. , 2018, , .		5
82	MLearn. , 2019, , .		5
83	Scaling Up Mixed Workloads: A Battle of Data Freshness, Flexibility, and Scheduling. Lecture Notes in Computer Science, 2015, , 97-112.	1.3	5
84	One Size Fits all, Again! The Architecture of the Hybrid OLTP&OLAP Database Management System HyPer. Lecture Notes in Business Information Processing, 2011, , 7-23.	1.0	5
85	Making SENSE. Proceedings of the VLDB Endowment, 2008, 1, 1480-1483.	3.8	5
86	On-the-fly token similarity joins in relational databases. , 2014, , .		4
87	Efficient Batched Distance, Closeness and Betweenness Centrality Computation in Unweighted and Weighted Graphs. Datenbank-Spektrum, 2017, 17, 169-182.	1.3	4
88	Versioning in Main-Memory Database Systems. , 2019, , .		4
89	TardisDB. , 2021, , .		4
90	Freedom for the SQL-Lambda. , 2020, , .		4

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91	The mainframe strikes back. , 2012, , .		3
92	Main-memory database systems. , 2014, , .		3
93	High-Performance Main-Memory Database Systems and Modern Virtualization. , 2015, , .		3
94	In-Database Machine Learning with SQL on GPUs. , 2021, , .		3
95	Indexing Set-Valued Attributes with a Multi-level Extendible Hashing Scheme. Lecture Notes in Computer Science, 2007, , 98-108.	1.3	3
96	Elasticity in Cloud Databases and Their Query Processing. International Journal of Data Warehousing and Mining, 2013, 9, 1-20.	0.6	3
97	A practical approach to groupjoin and nested aggregates. Proceedings of the VLDB Endowment, 2021, 14, 2383-2396.	3.8	3
98	Adaptive Hybrid Indexes. , 2022, , .		3
99	Algebraic query optimization for distributed top-k queries. Computer Science - Research and Development, 2007, 21, 197-211.	0.9	2
100	Generating optimal DAG-structured query evaluation plans. Computer Science - Research and Development, 2009, 24, 103-117.	2.7	2
101	HyPer Beyond Software: Exploiting Modern Hardware for Main-Memory Database Systems. Datenbank-Spektrum, 2014, 14, 173-181.	1.3	2
102	Order Indexes: supporting highly dynamic hierarchical data in relational main-memory database systems. VLDB Journal, 2017, 26, 55-80.	4.1	2
103	B2-Tree: Page-Based String Indexing in Concurrent Environments. Datenbank-Spektrum, 2022, 22, 11-22.	1.3	2
104	Faster Join Enumeration for Complex Queries. , 2008, , .		1
105	Evaluation of parallel graph loading techniques. , 2016, , .		1
106	ArrayQL for Linear Algebra within Umbra. , 2021, , .		1
107	Optimizing Distributed Top-k Queries. Lecture Notes in Computer Science, 2008, , 337-349.	1.3	1
108	Query Optimization (in Relational Databases). , 2009, , 2273-2278.		1

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109	Recursive SQL and GPU-support for in-database machine learning. Distributed and Parallel Databases, 2022, 40, 205-259.	1.6	1
110	Social recommendations at work. , 2008, , .		0
111	Benchmarking Elastic Query Processing on Big Data. Lecture Notes in Computer Science, 2015, , 37-44.	1.3	0
112	System R (R*) Optimizer. , 2009, , 2900-2905.		0
113	The Database Group at TUM. SIGMOD Record, 2014, 43, 55-60.	1.2	0
114	ARTful Skyline Computation for In-Memory Database Systems. Communications in Computer and Information Science, 2020, , 3-12.	0.5	0
115	Efficient Evaluation of Arbitrarily-Framed Holistic SQL Aggregates and Window Functions. , 2022, , .		0