John R Gilbert

List of Publications by Year
in descending order

39 papers	3,313 citations	279487 23 h-index	344852 36 g-index
42 all docs	42 docs citations	42 times ranked	1894 citing authors

#	Article	IF	Citations
1	A Supernodal Approach to Sparse Partial Pivoting. SIAM Journal on Matrix Analysis and Applications, 1999, 20, 720-755.	0.7	618
2	Sparse Matrices in MATLAB: Design and Implementation. SIAM Journal on Matrix Analysis and Applications, 1992, 13, 333-356.	0.7	410
3	A separator theorem for graphs of bounded genus. Journal of Algorithms, 1984, 5, 391-407.	0.9	199
4	An Asynchronous Parallel Supernodal Algorithm for Sparse Gaussian Elimination. SIAM Journal on Matrix Analysis and Applications, 1999, 20, 915-952.	0.7	193
5	A column approximate minimum degree ordering algorithm. ACM Transactions on Mathematical Software, 2004, 30, 353-376.	1.6	159
6	Sparse Partial Pivoting in Time Proportional to Arithmetic Operations. SIAM Journal on Scientific and Statistical Computing, 1988, 9, 862-874.	1.5	142
7	Parallel Sparse Matrix-Matrix Multiplication and Indexing: Implementation and Experiments. SIAM Journal of Scientific Computing, 2012, 34, C170-C191.	1.3	132
8	On the representation and multiplication of hypersparse matrices. Parallel and Distributed Processing Symposium (IPDPS), Proceedings of the International Conference on, 2008, , .	1.0	107
9	Predicting Structure in Sparse Matrix Computations. SIAM Journal on Matrix Analysis and Applications, 1994, 15, 62-79.	0.7	97
10	Algorithm 836. ACM Transactions on Mathematical Software, 2004, 30, 377-380.	1.6	90
11	The analysis of a nested dissection algorithm. Numerische Mathematik, 1986, 50, 377-404.	0.9	88
12	Geometric Mesh Partitioning: Implementation and Experiments. SIAM Journal of Scientific Computing, 1998, 19, 2091-2110.	1.3	79
13	Solving path problems on the GPU. Parallel Computing, 2010, 36, 241-253.	1.3	77
14	A parallel graph partitioning algorithm for a message-passing multiprocessor. International Journal of Parallel Programming, 1987, 16, 427-449.	1.1	71
15	Support-Graph Preconditioners. SIAM Journal on Matrix Analysis and Applications, 2006, 27, 930-951.	0.7	64
16	A Unified Framework for Numerical and Combinatorial Computing. Computing in Science and Engineering, 2008, 10, 20-25.	1.2	60
17	Challenges and Advances in Parallel Sparse Matrix-Matrix Multiplication. , 2008, , .		58
18	Predicting fill for sparse orthogonal factorization. Journal of the ACM, 1986, 33, 517-532.	1.8	54

#	Article	IF	Citations
19	Elimination Structures for Unsymmetric Sparse LU Factors. SIAM Journal on Matrix Analysis and Applications, 1993, 14, 334-352.	0.7	50
20	A Separator Theorem for Chordal Graphs. SIAM Journal on Algebraic and Discrete Methods, 1984, 5, 306-313.	0.8	48
21	An Efficient Algorithm to Compute Row and Column Counts for Sparse Cholesky Factorization. SIAM Journal on Matrix Analysis and Applications, 1994, 15, 1075-1091.	0.7	42
22	Optimal evaluation of array expressions on massively parallel machines. ACM Transactions on Programming Languages and Systems, 1995, 17, 123-156.	1.7	33
23	Optimal expression evaluation for data parallel architectures. Journal of Parallel and Distributed Computing, 1991, 13, 58-64.	2.7	29
24	A parallel algorithm for sparse symbolic Cholesky factorization on a multiprocessor. Parallel Computing, 1988, 7, 199-210.	1.3	19
25	Parallel symbolic factorization of sparse linear systems. Parallel Computing, 1990, 14, 151-162.	1.3	14
26	Sparse Matrices in Matlab*P: Design and Implementation. Lecture Notes in Computer Science, 2004, , 144-155.	1.0	12
27	Efficient Distribution Analysis via Graph Contraction. International Journal of Parallel Programming, 1996, 24, 599-620.	1.1	10
28	Separators and structure prediction in sparse orthogonal factorization. Linear Algebra and Its Applications, 1997, 262, 83-97.	0.4	9
29	An empirical study of the performance and productivity of two parallel programming models. Parallel and Distributed Processing Symposium (IPDPS), Proceedings of the International Conference on, 2008, , .	1.0	8
30	Parallel Modeling of Fish Interaction. , 2008, , .		5
31	Symbolic and Exact Structure Prediction for Sparse Gaussian Elimination with Partial Pivoting. SIAM Journal on Matrix Analysis and Applications, 2009, 30, 1520-1545.	0.7	5
32	Efficient and accurate clustering for large-scale genetic mapping. , 2014, , .		5
33	Optimal evaluation of array expressions on massively parallel machines (extended abstract). ACM SIGPLAN Notices, 1993, 28, 68-71.	0.2	4
34	Algorithms for Automatic Alignment of Arrays. Journal of Parallel and Distributed Computing, 1996, 38, 145-157.	2.7	4
35	An Interactive Environment to Manipulate Large Graphs. , 2007, , .		3
36	An Empirical Comparison of Graph Laplacian Solvers. , 2016, , .		2

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37	A Note on the Column Elimination Tree. SIAM Journal on Matrix Analysis and Applications, 2003, 25, 143-151.	0.7	1
38	Distributed Sparse Matrices for Very High Level Languages. Advances in Computers, 2008, 72, 225-252.	1.2	1
39	Linear Representation of Network Traffic. Mobile Networks and Applications, 2009, 14, 368-386.	2.2	0