Dennis D Giannacopoulos

List of Publications by Year
in descending order

68	554	759233 12	713466 21
papers	citations	h-index	g-index

68	68	68	413
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Finite-Element Time-Domain Solution of the Vector Wave Equation in Doubly Dispersive Media Using MÃ¶bius Transformation Technique. IEEE Transactions on Antennas and Propagation, 2013, 61, 4158-4166.	5.1	61
2	Response surface space mapping for electromagnetic optimization. IEEE Transactions on Magnetics, 2006, 42, 1123-1126.	2.1	45
3	Finite-Element Sparse Matrix Vector Multiplication on Graphic Processing Units. IEEE Transactions on Magnetics, 2010, 46, 2982-2985.	2.1	42
4	Enhancing the Performance of Conjugate Gradient Solvers on Graphic Processing Units. IEEE Transactions on Magnetics, 2011, 47, 1162-1165.	2.1	30
5	Alternate Parallel Processing Approach for FEM. IEEE Transactions on Magnetics, 2012, 48, 399-402.	2.1	28
6	Parallel Sparse Approximate Inverse Preconditioning on Graphic Processing Units. IEEE Transactions on Parallel and Distributed Systems, 2013, 24, 1852-1862.	5.6	26
7	Towards optimal h-p adaptation near singularities in finite element electromagnetics. IEEE Transactions on Magnetics, 1994, 30, 3523-3526.	2.1	25
8	Optimal discretization based refinement criteria for finite element adaption. IEEE Transactions on Magnetics, 1996, 32, 1357-1360.	2.1	21
9	FPGA architecture and implementation of sparse matrixâ€“vector multiplication for the finite element method. Computer Physics Communications, 2008, 178, 558-570.	7.5	20
10	Hardware Acceleration for Finite-Element Electromagnetics: Efficient Sparse Matrix Floating-Point Computations With FPGAs. IEEE Transactions on Magnetics, 2007, 43, 1525-1528.	2.1	18
11	A Stable and Efficient Direct Time Integration of the Vector Wave Equation in the Finite-Element Time-Domain Method for Dispersive Media. IEEE Transactions on Antennas and Propagation, 2015, 63, 314-321.	5.1	17
12	Sparse Matrix-Vector Multiplication for Finite Element Method Matrices on FPGAs. , 2006, , .		13
13	Parallel mesh refinement for 3-D finite element electromagnetics with tetrahedra: Strategies for optimizing system communication. IEEE Transactions on Magnetics, 2006, 42, 1251-1254.	2.1	12
14	A Convolution-Free Mixed Finite-Element Time-Domain Method for General Nonlinear Dispersive Media. IEEE Transactions on Antennas and Propagation, 2019, 67, 324-334.	5.1	12
15	Efficient Implementation of Gaussian Belief Propagation Solver for Large Sparse Diagonally Dominant Linear Systems. IEEE Transactions on Magnetics, 2012, 48, 471-474.	2.1	11
16	Assessment-based use of CAD tools in electromagnetic field courses. IEEE Transactions on Magnetics, 2005, 41, 1824-1827.	2.1	8
17	Relaxed Gaussian Belief Propagation. , 2012, , .		8
18	Communication-Avoiding Krylov Techniques on Graphic Processing Units. IEEE Transactions on Magnetics, 2013, 49, 1749-1752.	2.1	8

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19	Parallel Multigrid Acceleration for the Finite-Element Gaussian Belief Propagation Algorithm. IEEE Transactions on Magnetics, 2014, 50, 581-584.	2.1	8
20	Parallel finite element technique using Gaussian belief propagation. Computer Physics Communications, 2015, 193, 38-48.	7.5	8
21	Functional derivatives and optimal discretization based refinement criteria for adaptive finite element analysis with scalar tetrahedra. IEEE Transactions on Magnetics, 1999, 35, 1326-1329.	2.1	7
22	Optimal discretizations in adaptive finite element electromagnetics. International Journal for Numerical Methods in Engineering, 2001, 52, 939-978.	2.8	7
23	Parallel and Distributed Processing for<tex>$hhbox-p$</tex>Adaptive Finite-Element Analysis: A Comparison of Simulated and Empirical Studies. IEEE Transactions on Magnetics, 2004, 40, 928-933.	2.1	7
24	Analysis and design of parallel 3-D mesh refinement dynamic load balancing algorithms for finite element electromagnetics with tetrahedra. IEEE Transactions on Magnetics, 2006, 42, 1235-1238.	2.1	7
25	The implications of parallel processing on h-p adaptive finite element analysis for electromagnetics. IEEE Transactions on Magnetics, 1998, 34, 3284-3287.	2.1	6
26	On the Development of Nonoverlapping and Stable Hybrid FETD-FDTD Formulations. IEEE Transactions on Antennas and Propagation, 2014, 62, 6299-6306.	5.1	6
27	A Parallel Finite-Element Time-Domain Method for Nonlinear Dispersive Media. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	6
28	Multicore Acceleration of CG Algorithms Using Blocked-Pipeline-Matching Techniques. IEEE Transactions on Magnetics, 2010, 46, 3057-3060.	2.1	5
29	A Provably Stable and Simple FDTD Formulation for Electromagnetic Modeling of Graphene Sheets. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	5
30	A Convolution-Free Finite-Element Time-Domain Method for the Nonlinear Dispersive Vector Wave Equation. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	5
31	Efficient Solver for a Simplified Model of the Multi-Physics Heat Transfer Problem in Radio Frequency Ablation of Hepatic Tumors. IEEE Transactions on Magnetics, 2021, 57, 1-4.	2.1	5
32	Optimal Discretization-Based Load Balancing for Parallel Adaptive Finite-Element Electromagnetic Analysis. IEEE Transactions on Magnetics, 2004, 40, 977-980.	2.1	4
33	Toward Optimal Mesh Quality Improvements for Adaptive Finite Element Electromagnetics With Tetrahedra. IEEE Transactions on Magnetics, 2004, 40, 989-992.	2.1	4
34	Evolution of Wire Antennas in Three Dimensions Using a Novel Growth Process. IEEE Transactions on Magnetics, 2007, 43, 1581-1584.	2.1	4
35	Designing a Measurement Method for the Portability Non-functional Requirement. , 2013, , .		4
36	Acceleration of the Finite-Element Gaussian Belief Propagation Solver Using Minimum Residual Techniques. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	4

#	Article	IF	Citations
37	An Unconditionally Stable and Energy-Preserving Domain-Decomposition Method for Transient Modeling of Large-Scale Electromagnetic Problems. IEEE Transactions on Antennas and Propagation, 2019, 67, 6989-7000.	5.1	4
38	Efficient load balancing for parallel adaptive finite-element electromagnetics with vector tetrahedra. IEEE Transactions on Magnetics, 2006, 42, 555-558.	2.1	3
39	Response clustering for electromagnetic modeling and optimization. IEEE Transactions on Magnetics, 2006, 42, 1127-1130.	2.1	3
40	Evolution of Two-Dimensional Electromagnetic Devices Using a Novel Genome Structure. IEEE Transactions on Magnetics, 2007, 43, 1585-1588.	2.1	3
41	Efficient Multicore Sparse Matrix-Vector Multiplication for FE Electromagnetics. IEEE Transactions on Magnetics, 2009, 45, 1392-1395.	2.1	3
42	Dispersive MÃ¶bius Transform Finite-Element Time-Domain Method on Graphics Processing Units. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	3
43	Solving Finite-Element Time-Domain Problems With GaBP. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	3
44	A Parallel Implementation of the Correction Function Method for Poissonâ€™s Equation With Immersed Surface Charges. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	3
45	A Perfectly Matched Layer for the Nonlinear Dispersive Finite-Element Time-Domain Method. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	3
46	An efficient multi-threaded Newtonâ€“Raphson algorithm for strong coupling modeling of multi-physics problems. Computer Physics Communications, 2021, 258, 107563.	7.5	3
47	An experimental study of superconvergence phenomena in finite element magnetics. IEEE Transactions on Magnetics, 1997, 33, 4137-4139.	2.1	2
48	Toward optimal error distributions in adaptive finite-element electromagnetic analysis for microelectronic interconnection structures. IEEE Transactions on Magnetics, 2002, 38, 401-404.	2.1	2
49	A Methodology for Performance Modeling and Simulation Validation of Parallel 3-D Finite Element Mesh Refinement With Tetrahedra. IEEE Transactions on Magnetics, 2008, 44, 1406-1409.	2.1	2
50	Implementation of a First-Order ABC in Mixed Finite-Element Time-Domain Formulations Using Equivalent Currents. IEEE Microwave and Wireless Components Letters, 2013, 23, 276-278.	3.2	2
51	The implications of second-order functional derivative on error estimation in adaptive finite element analysis for electromagnetics. IEEE Transactions on Magnetics, 1999, 35, 1330-1333.	2.1	1
52	Optimal discretization based adaptive finite element analysis for electromagnetics with vector tetrahedra. IEEE Transactions on Magnetics, 2001, 37, 3503-3506.	2.1	1
53	A preliminary approach to simulate parallel mesh refinement with Petri nets for 3-D finite element electromagnetics. , 2004, , .		1
54	A New Strategy for Reducing Communication Latency in Parallel 3-D Finite Element Tetrahedral Mesh Refinement. IEEE Transactions on Magnetics, 2008, 44, 1410-1413.	2.1	1

#	Article	IF	Citations
55	An optimized Dynamic Load Balancing method for parallel 3-D mesh refinement for finite element electromagnetics with Tetrahedra. , 2008, , .		1
56	Enhancing the performance of conjugate gradient solvers on graphic processing units. , 2010, , .		1
57	A Neural Network based Electromagnetic Simulator. , 2019, , .		1
58	GPU optimization and implementation of Gaussian belief propagation algorithm. , 2016, , .		1
59	Field discontinuity refinement criteria and optimal discretizations in adaptive finite-element electromagnetic analysis for microelectronic system interconnections. IEEE Transactions on Magnetics, 2003, 39, 1658-1661.	2.1	0
60	Enhancing the Performance of Electromagnetic Applications on Clustered Architectures. IEEE Transactions on Magnetics, 2009, 45, 1340-1343.	2.1	0
61	Power performance analysis of 3-D finite element mesh refinement with tetrahedra by CUDA/MPI on multi-core and GPU architecture. , 2010, , .		0
62	Novel Hybrid FETDâ€“FDTD Formulations for Dispersive Media. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	0
63	Solving finite-element time-domain problems with GaBP. , 2016, , .		0
64	A parallel implementation of the correction function method for poisson's equation with immersed surface charges. , 2016, , .		0
65	Efficient transient full-wave analysis of high-speed interconnects in multilayer PCBs. , 2016, , .		0
66	Wideband finite-difference time-domain modeling of graphene via recursive fast fourier transform. , 2016, , .		0
67	Finite-Element Gaussian Belief Propagation Solver for Multi-Physics Modeling of Radiofrequency Tumor Ablation. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	0
68	Non-Parametric Belief Propagation Solver for Stochastic Systems of Linear Equations. IEEE Transactions on Magnetics, 2022, 58, 1-4.	2.1	0