

Eric Michielssen

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73
papers

1,285
citations

17
h-index

33
g-index

92
ext. papers

1,678
ext. citations

3.1
avg, IF

4.42
L-index

#	Paper	IF	Citations
73	A Multiplicative Calderon Preconditioner for the Electric Field Integral Equation. <i>IEEE Transactions on Antennas and Propagation</i> , 2008 , 56, 2398-2412	4.9	249
72	Stable Electric Field TDIE Solvers via Quasi-Exact Evaluation of MOT Matrix Elements. <i>IEEE Transactions on Antennas and Propagation</i> , 2011 , 59, 574-585	4.9	83
71	Time Domain Integral Equation Analysis of Scattering From Composite Bodies via Exact Evaluation of Radiation Fields. <i>IEEE Transactions on Antennas and Propagation</i> , 2009 , 57, 1506-1520	4.9	80
70	Time Domain Calderon Identities and Their Application to the Integral Equation Analysis of Scattering by PEC Objects Part II: Stability. <i>IEEE Transactions on Antennas and Propagation</i> , 2009 , 57, 2365-2375	4.9	59
69	Analysis of transient wave scattering from rigid bodies using a Burton-Miller approach. <i>Journal of the Acoustical Society of America</i> , 1999 , 106, 2396-2404	2.2	59
68	A Fast Stroud-Based Collocation Method for Statistically Characterizing EMI/EMC Phenomena on Complex Platforms. <i>IEEE Transactions on Electromagnetic Compatibility</i> , 2009 , 51, 301-311	2	52
67	A Calderon Multiplicative Preconditioner for the Combined Field Integral Equation. <i>IEEE Transactions on Antennas and Propagation</i> , 2009 , 57, 3387-3392	4.9	47
66	Nullspaces of MFIE and Calderon Preconditioned EFIE Operators Applied to Toroidal Surfaces. <i>IEEE Transactions on Antennas and Propagation</i> , 2009 , 57, 3205-3215	4.9	46
65	A Butterfly-Based Direct Integral-Equation Solver Using Hierarchical LU Factorization for Analyzing Scattering From Electrically Large Conducting Objects. <i>IEEE Transactions on Antennas and Propagation</i> , 2017 , 65, 4742-4750	4.9	43
64	An ME-PC Enhanced HDMR Method for Efficient Statistical Analysis of Multiconductor Transmission Line Networks. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2015 , 5, 685-696	1.7	42
63	Time Domain Calderon Identities and Their Application to the Integral Equation Analysis of Scattering by PEC Objects Part I: Preconditioning. <i>IEEE Transactions on Antennas and Propagation</i> , 2009 , 57, 2352-2364	4.9	41
62	Temporal acceleration of time-domain integral-equation solvers for electromagnetic scattering from objects residing in lossy media. <i>Microwave and Optical Technology Letters</i> , 2005 , 44, 223-230	1.2	33
61	On MLMDA/Butterfly Compressibility of Inverse Integral Operators. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2013 , 12, 31-34	3.8	28
60	Analysis and Regularization of the TD-EFIE Low-Frequency Breakdown. <i>IEEE Transactions on Antennas and Propagation</i> , 2009 , 57, 2034-2046	4.9	21
59	Fast transient analysis of acoustic wave scattering from rigid bodies using a two-level plane wave time domain algorithm. <i>Journal of the Acoustical Society of America</i> , 1999 , 106, 2405-2416	2.2	21
58	Analysis of Low-Frequency Electromagnetic Transients by an Extended Time-Domain Adaptive Integral Method. <i>IEEE Transactions on Advanced Packaging</i> , 2007 , 30, 301-312		20
57	Nonuniform grid time domain (NGTD) algorithm for fast evaluation of transient wave fields. <i>IEEE Transactions on Antennas and Propagation</i> , 2006 , 54, 1943-1951	4.9	20

56	A Marching-on-in-Time Hierarchical Scheme for the Solution of the Time Domain Electric Field Integral Equation. <i>IEEE Transactions on Antennas and Propagation</i> , 2007 , 55, 3734-3738	4.9	17
55	An HSS Matrix-Inspired Butterfly-Based Direct Solver for Analyzing Scattering From Two-Dimensional Objects. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2017 , 16, 1179-1183	3.8	16
54	A Calderón-Preconditioned Single Source Combined Field Integral Equation for Analyzing Scattering From Homogeneous Penetrable Objects. <i>IEEE Transactions on Antennas and Propagation</i> , 2011 , 59, 2315-2328	4.9	16
53	Fast-Multipole Analysis of Electromagnetic Scattering by Photonic Crystal Slabs. <i>Journal of Lightwave Technology</i> , 2007 , 25, 2847-2863	4	15
52	High-order Div- and Quasi Curl-Conforming Basis Functions for Calderón Multiplicative Preconditioning of the EFIE. <i>IEEE Transactions on Antennas and Propagation</i> , 2011 , 59, 1321-1337	4.9	14
51	Controlling Light Transmission Through Highly Scattering Media Using Semi-Definite Programming as a Phase Retrieval Computation Method. <i>Scientific Reports</i> , 2017 , 7, 2518	4.9	13
50	A Wavelet-Enhanced PSTD-Accelerated Time-Domain Integral Equation Solver for Analysis of Transient Scattering From Electrically Large Conducting Objects. <i>IEEE Transactions on Antennas and Propagation</i> , 2018 , 66, 2458-2470	4.9	10
49	Comparison of Experimental and Modeled EMI Shielding Properties of Periodic Porous xGNP/PLA Composites. <i>Polymers</i> , 2019 , 11,	4.5	10
48	A High-Performance Upgrade of the Perfectly Matched Layer Multilevel Fast Multipole Algorithm for Large Planar Microwave Structures. <i>IEEE Transactions on Antennas and Propagation</i> , 2009 , 57, 1728-1739	4.9	10
47	A rank-revealing preconditioner for the fast integral-equation-based characterization of electromagnetic crystal devices. <i>Microwave and Optical Technology Letters</i> , 2006 , 48, 783-789	1.2	10
46	A memory-efficient, adaptive algorithm for multipole-accelerated capacitance computation in a stratified dielectric medium. <i>The International Executive</i> , 1996 , 6, 381-390		10
45	A Calderón Multiplicative Preconditioner for Coupled Surface-Volume Electric Field Integral Equations. <i>IEEE Transactions on Antennas and Propagation</i> , 2010 , 58, 2680-2690	4.9	9
44	An Electromagnetic Crystal Green Function Multiple Scattering Technique for Arbitrary Polarizations, Lattices, and Defects. <i>Journal of Lightwave Technology</i> , 2007 , 25, 571-583	4	9
43	Floquet wave-based analysis of transient scattering from doubly periodic, discretely planar, perfectly conducting structures. <i>Radio Science</i> , 2005 , 40, n/a-n/a	1.4	9
42	A butterfly-based direct solver using hierarchical LU factorization for Poggio-Miller-Chang-Harrington-Wu-Tsai equations. <i>Microwave and Optical Technology Letters</i> , 2018 , 60, 1381-1387	1.2	9
41	An FMM-FFT Accelerated SIE Simulator for Analyzing EM Wave Propagation in Mine Environments Loaded With Conductors. <i>IEEE Journal on Multiscale and Multiphysics Computational Techniques</i> , 2018 , 3, 3-15	1.5	8
40	Compression of Translation Operator Tensors in FMM-FFT-Accelerated SIE Solvers via Tucker Decomposition. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2017 , 16, 2667-2670	3.8	8
39	Multilevel plane wave time domain-based global boundary kernels for two-dimensional finite difference time domain simulations. <i>Radio Science</i> , 2004 , 39, n/a-n/a	1.4	8

38	Internally Combined Volume-Surface Integral Equation for EM Analysis of Inhomogeneous Negative Permittivity Plasma Scatterers. <i>IEEE Transactions on Antennas and Propagation</i> , 2018 , 66, 1903-1913	4.9	7
37	Statistical Characterization of Electromagnetic Wave Propagation in Mine Environments. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2013 , 12, 1602-1605	3.8	7
36	Computation of Electromagnetic Fields Scattered From Objects With Uncertain Shapes Using Multilevel Monte Carlo Method. <i>IEEE Journal on Multiscale and Multiphysics Computational Techniques</i> , 2019 , 4, 37-50	1.5	7
35	Low-Frequency Stable Internally Combined Volume-Surface Integral Equation for High-Contrast Scatterers. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2015 , 14, 1423-1426	3.8	6
34	Time-Domain Single-Source Integral Equations for Analyzing Scattering From Homogeneous Penetrable Objects. <i>IEEE Transactions on Antennas and Propagation</i> , 2013 , 61, 1239-1254	4.9	6
33	Volume-Surface Combined Field Integral Equation for Plasma Scatterers. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2015 , 14, 1064-1067	3.8	6
32	Transmission through and wave guidance on metal plates perforated by periodic arrays of through-holes of subwavelength coaxial cross-section. <i>Microwave and Optical Technology Letters</i> , 2007 , 49, 1554-1558	1.2	6
31	Integral-equation-based analysis of transient scattering from surfaces with an impedance boundary condition. <i>Microwave and Optical Technology Letters</i> , 2004 , 42, 213-220	1.2	6
30	Efficient electromagnetic analysis of two-dimensional finite quasi-random gratings for quantum well infrared photodetectors. <i>Journal of Applied Physics</i> , 1998 , 83, 3360-3363	2.5	6
29	A fast algorithm for the analysis of radiation and scattering from microstrip arrays on finite substrates. <i>Microwave and Optical Technology Letters</i> , 1999 , 23, 306-310	1.2	6
28	An h-adaptive stochastic collocation method for stochastic EMC/EMI analysis 2010 ,		5
27	Efficient stochastic EMC/EMI analysis using HDMR-generated surrogate models 2011 ,		5
26	Recovering the global loops by randomized projections 2011 ,		5
25	The Bottrick TDFIE—a DC stable integral equation for analyzing transient scattering from PEC bodies 2008 ,		5
24	Design of Multilayer, Dualband Metasurface Reflectarrays 2020 ,		5
23	Statistical characterization of wave propagation in mine environments 2012 ,		4
22	A fast and parallel stroud-based stochastic collocation method for statistical EMI/EMC analysis 2008 ,		4
21	A Leapfrogging-in-Time Integral Equation Solver. <i>IEEE Antennas and Wireless Propagation Letters</i> , 2007 , 6, 203-206	3.8	4

20	Fast Time Domain Integral Equation Solvers for Analyzing Two-Dimensional Scattering Phenomena; Part I: Temporal Acceleration. <i>Electromagnetics</i> , 2004 , 24, 425-449	0.8	4
19	Calderon preconditioned time-domain integral equation solvers 2007 ,		3
18	Stable and Accurate Marching-on-in-Time Solvers of Time Domain EFIE, MFIE, and CFIE Based on Quasi-Exact Integration Technique. <i>IEEE Transactions on Antennas and Propagation</i> , 2021 , 69, 2218-2229	4.9	3
17	Sensitivity of TMS-induced electric fields to the uncertainty in coil placement and brain anatomy 2014 ,		2
16	A parallel MLMMDA-based direct integral equation solver 2013 ,		2
15	A simulation of focal brain stimulation using metamaterial lenses 2010 ,		2
14	A Calderon Multiplicative Preconditioner for the PMCHWT integral equation 2009 ,		2
13	Calderon multiplicative preconditioner for the PMCHWT equation applied to chiral media 2011 ,		2
12	Calderon stabilized time domain integral equation solvers 2007 ,		2
11	Fast Time Domain Integral Equation Solvers for Analyzing Two-Dimensional Scattering Phenomena; Part II: Full PWTD Acceleration. <i>Electromagnetics</i> , 2004 , 24, 451-470	0.8	2
10	Time-domain integral-equation based analysis of scattering from conducting surfaces including the singular edge behavior. <i>Microwave and Optical Technology Letters</i> , 2002 , 34, 327-332	1.2	2
9	Wigner-Smith Time-Delay Matrix for Electromagnetics: Theory and Phenomenology. <i>IEEE Transactions on Antennas and Propagation</i> , 2021 , 69, 902-917	4.9	2
8	Computational design of composite EMI shields through the control of pore morphology. <i>MRS Communications</i> , 2018 , 8, 1153-1157	2.7	2
7	A domain decomposition based surface integral equation solver for characterizing electromagnetic wave propagation in mine environments 2016 ,		1
6	Explicit solution of Calderon preconditioned time domain integral equations 2013 ,		1
5	A time-domain volume-integral equation approach for analyzing scattering from 2-D nonlinear objects under TM illumination. <i>Microwave and Optical Technology Letters</i> , 2000 , 26, 419-423	1.2	1
4	The Design of Dual Band Stacked Metasurfaces Using Integral Equations. <i>IEEE Transactions on Antennas and Propagation</i> , 2022 , 1-1	4.9	1
3	Wigner-Smith Time Delay Matrix for Electromagnetics: Computational Aspects for Radiation and Scattering Analysis. <i>IEEE Transactions on Antennas and Propagation</i> , 2021 , 69, 3995-4010	4.9	0

- 2 Graphics Processing Unit Implementation of Multilevel Plane-Wave Time-Domain Algorithm. *IEEE Antennas and Wireless Propagation Letters*, **2014**, 13, 1671-1675 3.8
- 1 Community genetic algorithm design of symmetric E-plane microwave filters. *Microwave and Optical Technology Letters*, **1999**, 21, 28-35 1.2