Tomasz P StefaÅ„ski

List of Publications by Year
in descending order

62 papers	334 citations	840119 11 h-index	996533 15 g-index
62 all docs	62 docs citations	62 times ranked	146 citing authors

#	Article	IF	Citations
1	Signal propagation in electromagnetic media described by fractional-order models. Communications in Nonlinear Science and Numerical Simulation, 2020, 82, 105029.	1.7	31
2	Electromagnetic-based derivation of fractional-order circuit theory. Communications in Nonlinear Science and Numerical Simulation, 2019, 79, 104897.	1.7	24
3	Electromagnetic Problems Requiring High-Precision Computations. IEEE Antennas and Propagation Magazine, 2013, 55, 344-353.	1.2	19
4	Acceleration of the 3D ADI-FDTD method using graphics processor units. , 2009, , .		18
5	IMPLEMENTATION OF FDTD-COMPATIBLE GREEN'S FUNCTION ON HETEROGENEOUS CPU-GPU PARALLEL PROCESSING SYSTEM. Progress in Electromagnetics Research, 2013, 135, 297-316.	1.6	17
6	Development of a high velocity accessory for atomic force microscopy-based friction measurements. Review of Scientific Instruments, 2005, 76, 083704.	0.6	13
7	Accuracy of the Discrete Green's Function Formulation of the FDTD Method. IEEE Transactions on Antennas and Propagation, 2013, 61, 829-835.	3.1	13
8	On Applications of Elements Modelled by Fractional Derivatives in Circuit Theory. Energies, 2020, 13, 5768.	1.6	13
9	Topological, nonreciprocal, and multiresonant slow light beyond the time-bandwidth limit. Applied Physics Letters, 2021, 119, .	1.5	13
10	Fast Implementation of FDTD-Compatible Green's Function on Multicore Processor. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 81-84.	2.4	12
11	Nonreciprocal cavities and the time-bandwidth limit: comment. Optica, 2020, 7, 1097.	4.8	12
12	Implementation of FDTD-Compatible Green's Function on Graphics Processing Unit. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 1422-1425.	2.4	11
13	Fundamental properties of solutions to fractional-order Maxwell's equations. Journal of Electromagnetic Waves and Applications, 2020, 34, 1955-1976.	1.0	11
14	APPLICATIONS OF THE DISCRETE GREEN'S FUNCTION IN THE FINITE-DIFFERENCE TIME-DOMAIN METHOD. Progress in Electromagnetics Research, 2013, 139, 479-498.	1.6	10
15	Magnetic switching of Kerker scattering in spherical microresonators. Nanophotonics, 2020, 9, 4033-4041.	2.9	10
16	COMPARISON OF CPML IMPLEMENTATIONS FOR THE GPU-ACCELERATED FDTD SOLVER. Progress in Electromagnetics Research M, 2011, 19, 61-75.	0.5	9
17	Hybrid Technique Combining the FDTD Method and Its Convolution Formulation Based on the Discrete Green's Function. IEEE Antennas and Wireless Propagation Letters, 2013, 12, 1448-1451.	2.4	9
18	A New Expression for the 3-D Dyadic FDTD-Compatible Green's Function Based on Multidimensional Z-Transform. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1002-1005.	2.4	9

#	Article	IF	Citations
19	Signal Propagation in Electromagnetic Media Modelled by the Two-Sided Fractional Derivative. Fractal and Fractional, 2021, 5, 10.	1.6	9
20	Generalization of Kramers-Krönig relations for evaluation of causality in power-law media. Communications in Nonlinear Science and Numerical Simulation, 2021, 95, 105664.	1.7	7
21	Formulation of Time-Fractional Electrodynamics Based on Riemann-Silberstein Vector. Entropy, 2021, 23, 987.	1.1	5
22	On possible applications of media described by fractional-order models in electromagnetic cloaking. Communications in Nonlinear Science and Numerical Simulation, 2021, 99, 105827.	1.7	5
23	Parallel ADI-BOR-FDTD Algorithm. IEEE Microwave and Wireless Components Letters, 2008, 18, 722-724.	2.0	4
24	OpenCL-based acceleration of the FDTD method in computational electromagnetics. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2013, 26, 355-365.	1.2	4
25	FPGA implementation of the multiplication operation in multiple-precision arithmetic. , 2017, , .		4
26	Experimental and Numerical Investigation of Crosstalk Effect in Coupled Coplanar Waveguides—Part II: Multimode Coupled Line Representation. IEEE Transactions on Electromagnetic Compatibility, 2006, 48, 677-684.	1.4	3
27	Analytical Expression for the Time-Domain Green's Function of a Discrete Plane Wave Propagating in a 3-D FDTD Grid. IEEE Transactions on Antennas and Propagation, 2017, 65, 3607-3614.	3.1	3
28	Numerical Test for Stability Evaluation of Discrete-Time Systems. , 2018, , .		3
29	IP Core of Coprocessor for Multiple-Precision-Arithmetic Computations. , 2018, , .		3
30	A New Approach to Stability Evaluation of Digital Filters. , 2018, , .		3
31	Open-Source Coprocessor for Integer Multiple Precision Arithmetic. Electronics (Switzerland), 2020, 9, 1141.	1.8	3
32	Testing Stability of Digital Filters Using Optimization Methods with Phase Analysis. Energies, 2021, 14, 1488.	1.6	3
33	Analytical Expression for the Time-Domain Discrete Green's Function of a Plane Wave Propagating in the 2-D FDTD Grid. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 887-890.	2.4	2
34	Reduction of Computational Complexity in Simulations of the Flow Process in Transmission Pipelines. Advances in Intelligent Systems and Computing, 2018, , 241-252.	0.5	2
35	Recurrence scheme for FDTD-compatible discrete Green's function derived based on properties of Gauss hypergeometric function. Journal of Electromagnetic Waves and Applications, 2019, 33, 637-653.	1.0	2
36	On Applications of Fractional Derivatives in Electromagnetic Theory. , 2020, , .		2

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37	Analytical Methods for Causality Evaluation of Photonic Materials. Materials, 2022, 15, 1536.	1.3	2
38	Large scale ADI-FDTD parallel computations. , 2008, , .		1
39	Novel implementation of the convolution perfectly matched layer in ADI-FDTD method. , 2008, , .		1
40	OpenGL accelerated method of the material matrix generation for FDTD simulations. , 2014, , .		1
41	Implementation of Addition and Subtraction Operations in Multiple Precision Arithmetic. , 2019, , .		1
42	Implementation of Coprocessor for Integer Multiple Precision Arithmetic on Zynq Ultrascale+ MPSoC. , 2021, , .		1
43	Performance Analysis of Convolutional Neural Networks on Embedded Systems. , 2020, , .		1
44	Multimodal Genetic Algorithm with Phase Analysis to Solve Complex Equations of Electromagnetic Analysis. , 2020, , .		1
45	Simulation of Wave Propagation in Media Described by Fractional-Order Models. , 2020, , .		1
46	Multimodal Particle Swarm Optimization with Phase Analysis to Solve Complex Equations of Electromagnetic Analysis. , 2020, , .		1
47	FPGA Acceleration of Matrix-Assembly Phase of RWG-Based MoM. IEEE Antennas and Wireless Propagation Letters, 2022, 21, 1847-1851.	2.4	1
48	Three-dimensional Weyl topology in one-dimensional photonic structures. Light: Science and Applications, 2022, 11, .	7.7	1
49	Experimental Frequency-Domain Characterization of Fundamental Guided Mode Parameters in Coupled Coplanar Waveguide. , 2006, , .		0
50	Application of mode transformers for characterization of symmetrical bi-modal planar transmission lines. , 2007, , .		0
51	Experience of implementing PML for parallel ADI-FDTD. , 2009, , .		0
52	Acceleration of the discrete Green's function computations. , 2012, , .		0
53	Accuracy of the discrete Green's function computations. , 2012, , .		0
54	Exact modal absorbing boundary condition for waveguide simulations - discrete Green's function approach. , 2014, , .		0

#	Article	IF	Citations
55	Hybridization of the FDTD method with use of the discrete Green's function. , 2014, , .		0
56	Hybrid technique combining the backward ray tracing and the FDTD method. , 2014, , .		0
57	Application of the discrete Green's function-based antenna simulations for excitation of the total-field/scattered-field interface in the FDTD method. Microwave and Optical Technology Letters, 2014, 56, 1949-1953.	0.9	0
58	FDTD simulations on disjoint domains with the use of discrete Green's function diakoptics. , 2016, , .		0
59	Parallel implementation of the DGF-FDTD method on GPU Using the CUDA technology. , 2016, , .		0
60	Intelligent Autonomous Robot Supporting Small Pets in Domestic Environment. IFAC-PapersOnLine, 2019, 52, 194-199.	0.5	0
61	Fractional Order Circuit Elements Derived from Electromagnetism. , 2019, , .		0
62	Finite-difference time-domain analyses of active cloaking for electrically-large objects. Optics Express, 2021, 29, 3055.	1.7	0