Ozlem Ozgun

List of Publications by Year
in descending order

75 papers	900 citations	566801 15 h-index	500791 28 g-index
77 all docs	77 docs citations	77 times ranked	398 citing authors

#	Article	IF	Citations
1	PETOOL: MATLAB-based one-way and two-way split-step parabolic equation tool for radiowave propagation over variable terrain. Computer Physics Communications, 2011, 182, 2638-2654.	3.0	117
2	Recursive Two-Way Parabolic Equation Approach for Modeling Terrain Effects in Tropospheric Propagation. IEEE Transactions on Antennas and Propagation, 2009, 57, 2706-2714.	3.1	82
3	Electromagnetic metamorphosis: Reshaping scatterers via conformal anisotropic metamaterial coatings. Microwave and Optical Technology Letters, 2007, 49, 2386-2392.	0.9	63
4	Non-Maxwellian Locally-Conformal PML Absorbers for Finite Element Mesh Truncation. IEEE Transactions on Antennas and Propagation, 2007, 55, 931-937.	3.1	60
5	Utilization of Anisotropic Metamaterial Layers in Waveguide Miniaturization and Transitions. IEEE Microwave and Wireless Components Letters, 2007, 17, 754-756.	2.0	55
6	Design of dual-frequency probe-fed microstrip antennas with genetic optimization algorithm. IEEE Transactions on Antennas and Propagation, 2003, 51, 1947-1954.	3.1	37
7	Monte Carlo-Based Characteristic Basis Finite-Element Method (MC-CBFEM) for Numerical Analysis of Scattering From Objects On/Above Rough Sea Surfaces. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 769-783.	2.7	34
8	PETOOL v2.0: Parabolic Equation Toolbox with evaporation duct models and real environment data. Computer Physics Communications, 2020, 256, 107454.	3.0	30
9	Near-field performance analysis of locally-conformal perfectly matched absorbers via Monte Carlo simulations. Journal of Computational Physics, 2007, 227, 1225-1245.	1.9	29
10	A Novel Two-Way Finite-Element Parabolic Equation Groundwave Propagation Tool: Tests With Canonical Structures and Calibration. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2887-2899.	2.7	29
11	Form Invariance of Maxwell's Equations: The Pathway to Novel Metamaterial Specifications for Electromagnetic Reshaping. IEEE Antennas and Propagation Magazine, 2010, 52, 51-65.	1.2	24
12	A Transformation Media Based Approach for Efficient Monte Carlo Analysis of Scattering From Rough Surfaces With Objects. IEEE Transactions on Antennas and Propagation, 2013, 61, 1352-1362.	3.1	22
13	Finite Element Analysis of Electromagnetic Scattering Problems via Iterative Leap-Field Domain Decomposition Method. Journal of Electromagnetic Waves and Applications, 2008, 22, 251-266.	1.0	18
14	Software metamaterials: Transformation media based multiscale techniques for computational electromagnetics. Journal of Computational Physics, 2013, 236, 203-219.	1.9	18
15	Domain compression via anisotropic metamaterials designed by coordinate transformations. Journal of Computational Physics, 2010, 229, 921-932.	1.9	16
16	Form-Invariance of Maxwell's Equations in Waveguide Cross-Section Transformations. Electromagnetics, 2009, 29, 353-376.	0.3	15
17	Parallelized Characteristic Basis Finite Element Method (CBFEM-MPI)â€"A non-iterative domain decomposition algorithm for electromagnetic scattering problems. Journal of Computational Physics, 2009, 228, 2225-2238.	1.9	15
18	Two-way fourier split step algorithm over variable terrain with narrow and wide angle propagators. , 2010, , .		15

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19	Transformation-based metamaterials to eliminate the staircasing error in the finite difference time domain method. International Journal of RF and Microwave Computer-Aided Engineering, 2012, 22, 530-540.	0.8	12
20	CBFEM-MPI: A Parallelized Version of Characteristic Basis Finite Element Method for Extraction of 3-D Interconnect Capacitances. IEEE Transactions on Advanced Packaging, 2009, 32, 164-174.	1.7	11
21	Two-way split-step fourier and finite element based parabolic equation propagation tools: Comparisons and calibration. , 2010, , .		11
22	Transformation Electromagnetics Based Analysis of Waveguides With Random Rough or Periodic Grooved Surfaces. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 709-719.	2.9	11
23	A Domain Decomposition Finite-Element Method for Modeling Electromagnetic Scattering From Rough Sea Surfaces With Emphasis on Near-Forward Scattering. IEEE Transactions on Antennas and Propagation, 2019, 67, 335-345.	3.1	11
24	Efficient finite element solution of lowâ€frequency scattering problems via anisotropic metamaterial layers. Microwave and Optical Technology Letters, 2008, 50, 639-646.	0.9	10
25	New Software Tool (GO+UTD) for Visualization of Wave Propagation [Testing Ourselves]. IEEE Antennas and Propagation Magazine, 2016, 58, 91-103.	1.2	10
26	Forward backward domain decomposition method for finite element solution of electromagnetic boundary value problems. Microwave and Optical Technology Letters, 2007, 49, 2582-2590.	0.9	9
27	Multilevel Characteristic Basis Finite-Element Method (ML-CBFEM)â€"An Efficient Version of a Domain Decomposition Algorithm for Large-Scale Electromagnetic Problems. IEEE Transactions on Antennas and Propagation, 2009, 57, 3381-3387.	3.1	9
28	Cartesian Grid Mapper: Transformation Media for Modeling Arbitrary Curved Boundaries With Cartesian Grids. IEEE Antennas and Wireless Propagation Letters, 2014, 13, 1771-1774.	2.4	8
29	VectGUI: A MATLAB-Based Simulation Tool [Testing Ourselves]. IEEE Antennas and Propagation Magazine, 2015, 57, 113-118.	1.2	8
30	Locally-conformal perfectly matched layer implementation for finite element mesh truncation. Microwave and Optical Technology Letters, 2006, 48, 1836-1839.	0.9	7
31	Multicenter perfectly matched layer implementation for finite element mesh truncation. Microwave and Optical Technology Letters, 2007, 49, 827-832.	0.9	7
32	POâ€based characteristic basis finite element method (CBFEMâ€PO)â€"A parallel, iterationâ€free domain decomposition algorithm using perfectly matched layers for largeâ€scale electromagnetic scattering problems. Microwave and Optical Technology Letters, 2010, 52, 1053-1060.	0.9	7
33	Two-way split-step parabolic equation algorithm for tropospheric propagation: Tests and comparisons. , 2010, , .		7
34	Combining perturbation theory and transformation electromagnetics for finite element solution of Helmholtz-type scattering problems. Journal of Computational Physics, 2014, 274, 883-897.	1.9	7
35	Double-Tip Diffraction Modeling: 2-D Numerical Models versus High-Frequency Asymptotics. IEEE Transactions on Antennas and Propagation, 2015, 63, 2686-2693.	3.1	7
36	Iterative leap-field domain decomposition method: a domain decomposition finite element algorithm for 3D electromagnetic boundary value problems. IET Microwaves, Antennas and Propagation, 2010, 4, 543.	0.7	6

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37	Finite element/dipole moment method for efficient solution of multiscale electromagnetic problems. , 2010, , .		6
38	A coordinate transformation approach for efficient repeated solution of Helmholtz equation pertaining to obstacle scattering by shape deformations. Computer Physics Communications, 2014, 185, 1616-1627.	3.0	5
39	Approximation of transformation media-based reshaping action by genetic optimization. Applied Physics A: Materials Science and Processing, 2014, 117, 597-604.	1.1	4
40	Monte Carlo simulations of Helmholtz scattering from randomly positioned array of scatterers by utilizing coordinate transformations in finite element method. Wave Motion, 2015, 56, 165-182.	1.0	4
41	Implementation of coordinate transformations in periodic finite-element method for modeling rough surface scattering problems. International Journal of RF and Microwave Computer-Aided Engineering, 2016, 26, 322-329.	0.8	4
42	General-Purpose Characteristic Basis Finite Element Method for Multi-Scale Electrostatic and Electromagnetic Problems. Electromagnetics, 2010, 30, 205-221.	0.3	3
43	Monte Carlo analysis of ridged waveguides with transformation media. International Journal of RF and Microwave Computer-Aided Engineering, 2013, 23, 476-481.	0.8	3
44	Finite Element Modeling of Fringe Fields in Wedge Diffraction Problem. IEEE Antennas and Wireless Propagation Letters, 2017, 16, 369-372.	2.4	3
45	Coordinate transformation aided finite element method for contour detection of breast tumors in microwave imaging. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e3124.	1.0	3
46	Numerical Solution of Multi-scale Electromagnetic Boundary Value Problems by Utilizing Transformation-Based Metamaterials. Lecture Notes in Computer Science, 2011, , 11-25.	1.0	3
47	Characteristic Basis Finite Element Method (CBFEM) — A non-iterative domain decomposition finite element algorithm for solving electromagnetic scattering problems. , 2008, , .		2
48	Remesh-Free Shape Optimization by Transformation Optics. IEEE Transactions on Antennas and Propagation, 2016, 64, 5479-5482.	3.1	2
49	A novel CEM technique for modeling electromagnetic scattering from metasurfaces. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2020, 33, e2681.	1.2	2
50	Comments on â€œPropagation Modeling Over Irregular Terrain by the Improved Two-Way Parabolic Equation Methodâ€• IEEE Transactions on Antennas and Propagation, 2014, 62, 3894-3894.	3.1	1
51	Electromagnetic Propagation Modeling Over Irregular Terrain Using a New Hybrid Method. , 2018, , .		1
52	Physics-based modeling of sea clutter phenomenon by a full-wave numerical solver. Wave Motion, 2022, 109, 102872.	1.0	1
53	Correction to â€œNon-Maxwellian Locally-Conformal PML Absorbers for Finite Element Mesh Truncationâ€• IEEE Transactions on Antennas and Propagation, 2007, 55, 1472-1472.	3.1	0
54	Electromagnetic reshaping via anisotropic metamaterials. , 2008, , .		0

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55	A non-iterative domain decomposition method for finite element analysis of 3D electromagnetic scattering problems. , 2008, , .		0
56	A version of the Characteristic Basis Finite Element Method (CBFEM) by utilizing Physical Optics for large-scale electromagnetic problems. Digest / IEEE Antennas and Propagation Society International Symposium, 2009, , .	0.0	0
57	Solution of large scattering problems using a multilevel scheme in the context of Characteristic Basis Finite Element Method. , 2010, , .		0
58	Transformation media for efficient numerical modeling of finite methods. , 2010, , .		0
59	Transformation media for finite element solution of multi-scale electromagnetic boundary value problems. , 2011, , .		0
60	Comments on â€œParAFEMCap: A Parallel Adaptive Finite-Element Method for 3-D VLSI Interconnect Capacitance Extractionâ€• IEEE Transactions on Microwave Theory and Techniques, 2012, 60, 1744-1745.	2.9	0
61	Modeling and predicting surface roughness via transformation optics. , 2014, , .		0
62	Modeling electromagnetic scattering from random array of objects by form invariance of Maxwell'S equations. , 2015, , .		0
63	Finite element modeling of double-tip diffraction. , 2015, , .		0
64	Parabolic equation toolbox for radio wave propagation. , 2015, , .		0
65	A hybrid perturbational and transformational electromagnetics approach for modeling rough surface scattering problems. , 2015, , .		0
66	Numerical modeling of electromagnetic scattering from periodic structures by transformation electromagnetics. , 2016, , .		0
67	A microwave imaging method based on transformation electromagnetics. , 2016, , .		0
68	Finite element modeling of anisotropic half-space problems by a simple mesh truncation scheme. , 2017, , .		0
69	A microwave imaging model for biomedical applications. , 2017, , .		0
70	Advanced finite element analysis for EMC engineering. , 2017, , .		0
71	A numerical model for investigating the effect of rough surface parameters on radar cross section statistics. , 2017, , .		0
72	A Radar Cross Section Reduction Method Using the Concept of Coordinate Transformation and Isotropic Dielectric Layers. , 2018, , .		0

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73	A Novel Numerical Technique for Analyzing Metasurfaces. , 2019, , .		0
74	Finite Element Domain Decomposition Method for Rough Sea Surface Scattering. , 2019, , .		0
75	Multiscale Modeling of Thin-Wire Coupling Problems Using Hybridization of Finite Element and Dipole Moment Methods and GPU Acceleration. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2020, 5, 155-166.	1.4	0