Dan Givoli

List of Publications by Year
in descending order

135 papers	4,485 citations	147566 31 h-index	110170 64 g-index
137 all docs	137 docs citations	137 times ranked	1491 citing authors

#	Article	IF	Citations
1	Elastodynamic 2D-1D coupling using the DtN method. Journal of Computational Physics, 2022, 448, 110722.	1.9	1
2	Shape identification of scatterers Using a time-dependent adjoint method. Computer Methods in Applied Mechanics and Engineering, 2022, 394, 114923.	3.4	6
3	Asymptotic Analysis for Plane Stress Problems. Journal of Elasticity, 2021, 144, 1-14.	0.9	2
4	A tutorial on the adjoint method for inverse problems. Computer Methods in Applied Mechanics and Engineering, 2021, 380, 113810.	3.4	28
5	The double absorbing boundary method for the Helmholtz equation. Applied Numerical Mathematics, 2021, 168, 182-200.	1.2	2
6	Scatterer identification in a 2D geophysical medium using an augmented computational time reversal method. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 867-892.	1.7	4
7	The Double Absorbing Boundary Method Incorporated in a High-Order Spectral Element Formulation. Journal of Theoretical and Computational Acoustics, 2020, 28, 2050007.	0.5	1
8	Obstacle segmentation based on the wave equation and deep learning. Journal of Computational Physics, 2020, 413, 109458.	1.9	19
9	Obstacle identification using the TRAC algorithm with a second€order ABC. International Journal for Numerical Methods in Engineering, 2019, 118, 61-92.	1.5	10
10	Mixed-dimensional coupling for time-dependent wave problems using the Nitsche method. Computer Methods in Applied Mechanics and Engineering, 2019, 349, 213-250.	3.4	4
11	Optimized first-order absorbing boundary conditions for anisotropic elastodynamics. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 719-749.	3.4	5
12	Mixed-Dimensional Modeling of Time-Dependent Wave Problems Using the Panasenko Construction. Journal of Theoretical and Computational Acoustics, 2018, 26, 1850034.	0.5	12
13	Convective Wave Equation and Time Reversal Process for Source Refocusing. Journal of Theoretical and Computational Acoustics, 2018, 26, 1850016.	0.5	0
14	An augmented time reversal method for source and scatterer identification. Journal of Computational Physics, 2018, 375, 99-119.	1.9	6
15	LATIN: A new view and an extension to wave propagation in nonlinear media. International Journal for Numerical Methods in Engineering, 2017, 112, 125-156.	1.5	1
16	Computational Time Reversal for NDT Applications Using Experimental Data. Journal of Nondestructive Evaluation, 2017, 36, 1.	1.1	8
17	The Double Absorbing Boundary method for a class of anisotropic elastic media. Computer Methods in Applied Mechanics and Engineering, 2017, 315, 190-221.	3.4	20
18	Combined arrival-time imaging and time reversal for scatterer identification. Computer Methods in Applied Mechanics and Engineering, 2017, 313, 279-302.	3.4	16

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19	Hybrid asymptotic-numerical modeling of thin layers for dynamic thermal analysis of structures. International Journal of Numerical Methods for Heat and Fluid Flow, 2016, 26, 818-853.	1.6	2
20	MIXED-DIMENSIONAL COUPLING VIA AN EXTENDED DIRICHLET-TO-NEUMANN METHOD. International Journal for Multiscale Computational Engineering, 2016, 14, 489-513.	0.8	5
21	The double absorbing boundary method for elastodynamics in homogeneous and layered media. Advanced Modeling and Simulation in Engineering Sciences, 2015, 2, .	0.7	15
22	DtN-based mixed-dimensional coupling using a Boundary Stress Recovery technique. Computer Methods in Applied Mechanics and Engineering, 2015, 287, 31-53.	3.4	5
23	Time Reversal for Elastic Wave Refocusing and Scatterer Location Recovery. Journal of Computational Acoustics, 2015, 23, 1450013.	1.0	20
24	Time Reversal as a Computational Tool in Acoustics and Elastodynamics. Journal of Computational Acoustics, 2014, 22, 1430001.	1.0	31
25	The Nitsche method applied to a class of mixed-dimensional coupling problems. Computer Methods in Applied Mechanics and Engineering, 2014, 274, 125-147.	3.4	9
26	Time reversal for crack identification. Computational Mechanics, 2014, 54, 443-459.	2.2	20
27	The Double Absorbing Boundary method. Journal of Computational Physics, 2014, 259, 220-241.	1.9	47
28	Double Absorbing Boundary Formulations for Acoustics and Elastodynamics. SIAM Journal of Scientific Computing, 2014, 36, A1277-A1312.	1.3	14
29	COMPARISON OF TWO-DIMENSIONAL-ONE-DIMENSIONAL COUPLING METHODS FOR TIME-HARMONIC ELASTICITY. International Journal for Multiscale Computational Engineering, 2014, 12, 485-506.	0.8	7
30	STRESS–VELOCITY COMPLETE RADIATION BOUNDARY CONDITIONS. Journal of Computational Acoustics, 2013, 21, 1350003.	1.0	9
31	COMPUTATIONAL METHODS FOR ANALYZING AIRCRAFT NOISE ABOVE GROUND WITH GENERAL TOPOGRAPHY AND IMPEDANCE. Journal of Computational Acoustics, 2012, 20, 1240001.	1.0	1
32	Long-time stable high-order absorbing boundary conditions for elastodynamics. Computer Methods in Applied Mechanics and Engineering, 2012, 241-244, 20-37.	3.4	39
33	Simple Procedure for Multifrequency Analysis. AIAA Journal, 2012, 50, 238-242.	1.5	1
34	Complete Radiation Boundary Conditions for Convective Waves. Communications in Computational Physics, 2012, 11, 610-628.	0.7	18
35	Time reversal with partial information for wave refocusing and scatterer identification. Computer Methods in Applied Mechanics and Engineering, 2012, 213-216, 223-242.	3.4	33
36	An axisymmetric parachute model with wrinkling. Journal of Mechanics of Materials and Structures, 2011, 6, 417-442.	0.4	1

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37	Combined asymptotic finite-element modeling of thin layers for scalar elliptic problems. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 3255-3269.	3.4	13
38	On the stability of the high-order Higdon Absorbing Boundary Conditions. Applied Numerical Mathematics, 2011, 61, 768-784.	1.2	13
39	Optimal modal reduction of dynamic subsystems: Extensions and improvements. International Journal for Numerical Methods in Engineering, 2011, 85, 1-30.	1.5	16
40	A finite element scheme with a high order absorbing boundary condition for elastodynamics. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 2048-2066.	3.4	36
41	Highâ€order absorbing boundary conditions incorporated in a spectral element formulation. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 1130-1143.	1.0	12
42	Comparison of highâ€order absorbing boundary conditions and perfectly matched layers in the frequency domain. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, 1351-1369.	1.0	76
43	High-order Absorbing Boundary Conditions for anisotropic and convective wave equations. Journal of Computational Physics, 2010, 229, 1099-1129.	1.9	69
44	High-order one-way model nesting in dispersive non-uniform media. Journal of Computational and Applied Mathematics, 2010, 234, 1663-1669.	1.1	2
45	Radiation boundary conditions for time-dependent waves based on complete plane wave expansions. Journal of Computational and Applied Mathematics, 2010, 234, 1988-1995.	1.1	41
46	Highâ€order globalâ€"regional model interaction: Extension of Carpenter's scheme. International Journal for Numerical Methods in Engineering, 2009, 77, 50-74.	1.5	8
47	Crack identification by â€˜arrival timeâ€™ using XFEM and a genetic algorithm. International Journal for Numerical Methods in Engineering, 2009, 77, 337-359.	1.5	56
48	Boundary transfer operators in oneâ€way nesting schemes for heat flow problems. International Journal of Numerical Methods for Heat and Fluid Flow, 2009, 19, 352-373.	1.6	2
49	Flaw Identification in Structures via Computationally Assisted NDT. Solid Mechanics and Its Applications, 2009, , 223-235.	0.1	0
50	Application of highâ€order Higdon nonâ€reflecting boundary conditions to linear shallow water models. Communications in Numerical Methods in Engineering, 2008, 24, 1459-1466.	1.3	14
51	High-order local absorbing conditions for the wave equation: Extensions and improvements. Journal of Computational Physics, 2008, 227, 3322-3357.	1.9	121
52	On the number of reliable finite-element eigenmodes. Communications in Numerical Methods in Engineering, 2008, 24, 1967-1977.	1.3	3
53	Framework for Flaw Detection: Application to Dynamic Crack Detection in Flat Membranes. , 2008, , .		0
54	LOCAL HIGH-ORDER ABSORBING BOUNDARY CONDITIONS FOR TIME-DEPENDENT WAVES IN GUIDES. Journal of Computational Acoustics, 2007, 15, 1-22.	1.0	42

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55	XFEM-based crack detection scheme using a genetic algorithm. International Journal for Numerical Methods in Engineering, 2007, 71, 1051-1080.	1.5	83
56	Finite element formulation with high-order absorbing boundary conditions for time-dependent waves. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 3666-3690.	3.4	69
57	Solution of non-linear dispersive wave problems using a moving finite element method. Communications in Numerical Methods in Engineering, 2006, 23, 253-262.	1.3	1
58	Neural network time series forecasting of finite-element mesh adaptation. Neurocomputing, 2005, 63, 447-463.	3.5	45
59	High-order Higdon-like boundary conditions for exterior transient wave problems. International Journal for Numerical Methods in Engineering, 2005, 63, 1041-1068.	1.5	30
60	A FINITE ELEMENT STRUCTURAL-ACOUSTIC MODEL OF COUPLED MEMBRANES. Journal of Computational Acoustics, 2004, 12, 605-618.	1.0	3
61	High-order boundary conditions for linearized shallow water equations with stratification, dispersion and advection. International Journal for Numerical Methods in Fluids, 2004, 46, 361-381.	0.9	7
62	Optimal shape of a grain or a fibre cross-section in a two-phase composite. Communications in Numerical Methods in Engineering, 2004, 21, 49-60.	1.3	3
63	Which are the important modes of a subsystem?. International Journal for Numerical Methods in Engineering, 2004, 59, 1657-1678.	1.5	31
64	High-order local non-reflecting boundary conditions: a review. Wave Motion, 2004, 39, 319-326.	1.0	384
65	Dirichlet-to-Neumann boundary condition for time-dependent dispersive waves in three-dimensional guides. Journal of Computational Physics, 2004, 199, 339-354.	1.9	13
66	A stratified dispersive wave model withhigh-order nonreflecting boundary conditions. Computers and Mathematics With Applications, 2004, 48, 1167-1180.	1.4	7
67	Optimal modal reduction of vibrating substructures. International Journal for Numerical Methods in Engineering, 2003, 57, 341-369.	1.5	34
68	Finite element analysis of time-dependent semi-infinite wave-guides with high-order boundary treatment. International Journal for Numerical Methods in Engineering, 2003, 58, 1955-1983.	1.5	38
69	High-order non-reflecting boundary scheme for time-dependent waves. Journal of Computational Physics, 2003, 186, 24-46.	1.9	180
70	High-order non-reflecting boundary conditions for dispersive waves. Wave Motion, 2003, 37, 257-271.	1.0	54
71	High-order nonreflecting boundary conditions for the dispersive shallow water equations. Journal of Computational and Applied Mathematics, 2003, 158, 49-60.	1.1	30
72	Towards automating the finite element method: a test-bed for soft computing. Applied Soft Computing Journal, 2003, 3, 37-51.	4.1	22

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73	High-order Non-reflecting Boundary Conditions for Dispersive Waves in Cartesian, Cylindrical and Spherical Coordinate Systems. International Journal of Computational Fluid Dynamics, 2003, 17, 263-274.	0.5	11
74	Exact and High-Order Non-Reflecting Computational Boundaries. , 2003, , 26-31.		0
75	Optimal control of radiating panels via sequential quadratic programming. International Journal of Numerical Methods for Heat and Fluid Flow, 2002, 12, 47-64.	1.6	0
76	An optimal high-order non-reflecting finite element scheme for wave scattering problems. International Journal for Numerical Methods in Engineering, 2002, 53, 2389-2411.	1.5	19
77	An adaptive finite element framework for fatigue crack propagation. International Journal for Numerical Methods in Engineering, 2002, 54, 111-135.	1.5	6
78	Analysis of pulled axisymmetric membranes with wrinkling. International Journal of Solids and Structures, 2002, 39, 1259-1274.	1.3	7
79	Finite-Element Mesh Adaptation via Time Series Prediction Using Neural Networks. , 2002, , 769-782.		2
80	Computation of open Willmore-type surfaces. Applied Numerical Mathematics, 2001, 37, 257-269.	1.2	5
81	Time-stepping schemes for systems of Volterra integro-differential equations. Computer Methods in Applied Mechanics and Engineering, 2001, 190, 5691-5718.	3.4	22
82	High-Order Nonreflecting Boundary Conditions without High-Order Derivatives. Journal of Computational Physics, 2001, 170, 849-870.	1.9	53
83	Harmonic finite element analysis for anisotropic viscoelasticity. AIAA Journal, 2001, 39, 349-352.	1.5	0
84	A boundary-perturbation finite element approach for shape optimization. International Journal for Numerical Methods in Engineering, 2000, 47, 801-819.	1.5	11
85	Solution of static optimal control problems in non-linear elasticity via quadratic programming. Communications in Numerical Methods in Engineering, 2000, 16, 877-890.	1.3	1
86	Stability and accuracy of optimal local non-reflecting boundary conditions. Applied Numerical Mathematics, 2000, 33, 327-340.	1.2	3
87	OPTIMAL LOCAL NONREFLECTING BOUNDARY CONDITIONS FOR TIME-DEPENDENT WAVES. Journal of Computational Acoustics, 2000, 08, 157-170.	1.0	3
88	Exact Representations on Artificial Interfaces and Applications in Mechanics. Applied Mechanics Reviews, 1999, 52, 333-349.	4.5	92
89	Generalized Finite Element-Harmonic Analysis for Nonlinear Heat Transfer. Journal of Thermophysics and Heat Transfer, 1999, 13, 100-109.	0.9	2
90	Scattering matrix of a nearly circular cylinder. Wave Motion, 1999, 30, 239-251.	1.0	4

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91	Thermoelastic stresses in a cylinder or disk with cubic anisotropy. International Journal of Solids and Structures, 1999, 36, 2109-2125.	1.3	7
92	Thermoelastic stresses in a crystal with weak anisotropy. Journal of Crystal Growth, 1999, 198-199, 125-128.	0.7	4
93	A direct approach to the finite element solution of elliptic optimal control problems. Numerical Methods for Partial Differential Equations, 1999, 15, 371-388.	2.0	7
94	Dirichlet-to-Neumann Maps for Unbounded Wave Guides. Journal of Computational Physics, 1998, 143, 200-223.	1.9	60
95	Finite-Element Solution of Nonlinear Time-Dependent Exterior Wave Problems. Journal of Computational Physics, 1998, 143, 241-258.	1.9	12
96	Finite element schemes for non-linear problems in infinite domains. International Journal for Numerical Methods in Engineering, 1998, 42, 341-360.	1.5	11
97	An adaptive finite element procedure for the image segmentation problem. Communications in Numerical Methods in Engineering, 1998, 14, 621-632.	1.3	6
98	A numerical method for problems in infinite strips with irregularities extending to infinity. Numerical Methods for Partial Differential Equations, 1998, 14, 233-249.	2.0	8
99	Discrete Dirichlet-to-Neumann maps for unbounded domains. Computer Methods in Applied Mechanics and Engineering, 1998, 164, 173-185.	3.4	25
100	Optimal local non-reflecting boundary conditions. Applied Numerical Mathematics, 1998, 27, 367-384.	1.2	25
101	Non-Reflecting Finite Element Schemes for Three-Dimensional Acoustic Waves. Journal of Computational Acoustics, 1997, 05, 95-115.	1.0	16
102	Parallel adaptive 3D finite element analysis of CZ melt flows. Journal of Crystal Growth, 1997, 174, 1-6.	0.7	7
103	Finite-Element Mesh Generation Using Self-Organizing Neural Networks. Computer-Aided Civil and Infrastructure Engineering, 1997, 12, 233-250.	6.3	26
104	High-order boundary conditions and finite elements for infinite domains. Computer Methods in Applied Mechanics and Engineering, 1997, 143, 13-39.	3.4	59
105	Analysis of InP LEC metl flows using a parallel adaptive finite element scheme. Journal of Crystal Growth, 1997, 180, 510-516.	0.7	8
106	Non‐local and local artificial boundary conditions for two‐dimensional flow in an infinite channel. International Journal of Numerical Methods for Heat and Fluid Flow, 1996, 6, 47-62.	1.6	10
107	Quadratic programming algorithms for obstacle problems. Communications in Numerical Methods in Engineering, 1996, 12, 249-256.	1.3	6
108	Simulation of Czochralski melt flows using parallel adaptive finite element procedures. Modelling and Simulation in Materials Science and Engineering, 1996, 4, 623-639.	0.8	8

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109	Nonreflecting Boundary Conditions Based on Kirchhoff-Type Formulae. Journal of Computational Physics, 1995, 117, 102-113.	1.9	82
110	Solution of unbounded domain problems using elliptic artificial boundaries. Communications in Numerical Methods in Engineering, 1995, 11, 735-741.	1.3	20
111	Incremental stresses in loaded orthotropic circular membrane tubes—I. Theory. International Journal of Solids and Structures, 1995, 32, 1907-1925.	1.3	3
112	Incremental stresses in loaded orthotropic circular membrane tubes—II. Numerical solution. International Journal of Solids and Structures, 1995, 32, 1927-1947.	1.3	6
113	Minimization of thermoelastic deformation in space structures undergoing periodic motion. Journal of Spacecraft and Rockets, 1995, 32, 662-669.	1.3	15
114	Dynamic thermoelastic coupling effects in a rod. AIAA Journal, 1995, 33, 776-778.	1.5	16
115	Finite element analysis of wave scattering from singularities. Wave Motion, 1994, 20, 165-176.	1.0	18
116	Special finite elements for use with high-order boundary conditions. Computer Methods in Applied Mechanics and Engineering, 1994, 119, 199-213.	3.4	37
117	A simple time-step control scheme. Communications in Numerical Methods in Engineering, 1993, 9, 873-881.	1.3	8
118	Artificial boundary conditions for 2D problems in geophysics. Computer Methods in Applied Mechanics and Engineering, 1993, 110, 87-101.	3.4	29
119	Heuristic finite element node numbering. Computing Systems in Engineering: an International Journal, 1993, 4, 159-167.	0.5	5
120	HARMONIC FINITE-ELEMENT THERMOELASTIC ANALYSIS OF SPACE FRAMES AND TRUSSES. Journal of Thermal Stresses, 1993, 16, 233-248.	1.1	12
121	Stress Concentration at a Nearly Circular Hole With Uncertain Irregularities. Journal of Applied Mechanics, Transactions ASME, 1992, 59, S65-S71.	1.1	39
122	A spatially exact non-reflecting boundary condition for time dependent problems. Computer Methods in Applied Mechanics and Engineering, 1992, 95, 97-113.	3.4	42
123	A boundary-perturbation finite element method for plane elasticity problems. Computer Methods in Applied Mechanics and Engineering, 1992, 96, 45-63.	3.4	5
124	A finite element method for domains with corners. International Journal for Numerical Methods in Engineering, 1992, 35, 1329-1345.	1.5	37
125	Thermoelastic analysis of space structures in periodic motion. Journal of Spacecraft and Rockets, 1991, 28, 457-464.	1.3	12
126	A finite element scheme based on the simplified Reissner equations for shells of revolution. Computer Methods in Applied Mechanics and Engineering, 1991, 93, 111-124.	3.4	2

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127	Non-reflecting boundary conditions. Journal of Computational Physics, 1991, 94, 1-29.	1.9	610
128	A finite element spectral method with application to the thermoelastic analysis of space structures. International Journal for Numerical Methods in Engineering, 1990, 30, 291-306.	1.5	8
129	A combined analytic-finite element method for elastic shells. International Journal of Solids and Structures, 1990, 26, 185-198.	1.3	9
130	Non-reflecting boundary conditions for elastic waves. Wave Motion, 1990, 12, 261-279.	1.0	178
131	Finite element analysis of long cylindrical shells. AIAA Journal, 1990, 28, 1331-1333.	1.5	4
132	STRESSES IN AN ABLATING CYLINDER. Journal of Thermal Stresses, 1990, 13, 263-279.	1.1	2
133	A finite element method for large domains. Computer Methods in Applied Mechanics and Engineering, 1989, 76, 41-66.	3.4	177
134	Exact non-reflecting boundary conditions. Journal of Computational Physics, 1989, 82, 172-192.	1.9	562
135	Non-local and semi-local optimal weighting functions for symmetric problems involving a small parameter. International Journal for Numerical Methods in Engineering, 1988, 26, 1281-1298.	1.5	8