Oscar Bruno

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/1614210/publications.pdf

Version: 2024-02-01

71 papers	1,847 citations	304743 22 h-index	276875 41 g-index
71 all docs	71 docs citations	71 times ranked	629 citing authors

#	Article	IF	Citations
1	Vector potential-based MHD solver for non-periodic flows using Fourier continuation expansions. Computer Physics Communications, 2022, 275, 108304.	7.5	1
2	Foundry-fabricated grating coupler demultiplexer inverse-designed via fast integral methods. Communications Physics, 2022, 5, .	5.3	7
3	Two-Dimensional Fourier Continuation and Applications. SIAM Journal of Scientific Computing, 2022, 44, A964-A992.	2.8	8
4	Weighted integral solvers for elastic scattering by open arcs in two dimensions. International Journal for Numerical Methods in Engineering, 2021, 122, 2733-2750.	2.8	3
5	â€œInterpolated Factored Green Functionâ€•method for accelerated solution of scattering problems. Journal of Computational Physics, 2021, 430, 110095.	3.8	8
6	A windowed Green function method for elastic scattering problems on a half-space. Computer Methods in Applied Mechanics and Engineering, 2021, 376, 113651.	6.6	6
7	Skin effect in neutron transport theory. Physical Review E, 2021, 104, L032801.	2.1	1
8	A Chebyshev-based rectangular-polar integral solver for scattering by geometries described by non-overlapping patches. Journal of Computational Physics, 2020, 421, 109740.	3.8	18
9	On the evaluation of quasi-periodic Green functions and wave-scattering at and around Rayleigh-Wood anomalies. Journal of Computational Physics, 2020, 410, 109352.	3.8	3
10	Regularized integral equation methods for elastic scattering problems in three dimensions. Journal of Computational Physics, 2020, 410, 109350.	3.8	13
11	Domains Without Dense Steklov Nodal Sets. Journal of Fourier Analysis and Applications, 2020, 26, 1.	1.0	3
12	Fourier continuation method for incompressible fluids with boundaries. Computer Physics Communications, 2020, 256, 107482.	7.5	16
13	Wave Enhancement Through Optimization of Boundary Conditions. SIAM Journal of Scientific Computing, 2020, 42, B207-B224.	2.8	4
14	High-order, Dispersionless â€œFast-Hybridâ€•Wave Equation Solver. Part I: O(1) Sampling Cost via Incident-Field Windowing and Recentering. SIAM Journal of Scientific Computing, 2020, 42, A1348-A1379.	2.8	8
15	Shifted equivalent sources and FFT acceleration for periodic scattering problems, including Wood anomalies. Journal of Computational Physics, 2019, 378, 548-572.	3.8	2
16	Higher-order implicit-explicit multi-domain compressible Navier-Stokes solvers. Journal of Computational Physics, 2019, 391, 322-346.	3.8	11
17	Ultrafast Simulation and Optimization of Nanophotonic Devices with Integral Equation Methods. ACS Photonics, 2019, 6, 3233-3240.	6.6	18
18	On the Quasi-unconditional Stability of BDF-ADI Solvers for the Compressible Navier–Stokes Equations and Related Linear Problems. SIAM Journal on Numerical Analysis, 2017, 55, 892-922.	2.3	3

#	Article	IF	Citations
19	Windowed Green function method for the Helmholtz equation in the presence of multiply layered media. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170161.	2.1	15
20	Rapidly convergent quasi-periodic Green functions for scattering by arrays of cylindersâ€"including Wood anomalies. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160802.	2.1	14
21	Windowed Green Function Method for Nonuniform Open-Waveguide Problems. IEEE Transactions on Antennas and Propagation, 2017, 65, 4684-4692.	5.1	19
22	Regularized integral formulation of mixed Dirichlet-Neumann problems. Journal of Integral Equations and Applications, 2017, 29, .	0.6	3
23	Three-dimensional quasi-periodic shifted Green function throughout the spectrum, including Wood anomalies. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170242.	2.1	7
24	Superalgebraically convergent smoothly windowed lattice sums for doubly periodic Green functions in three-dimensional space. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160255.	2.1	14
25	Higher-order in time â€œquasi-unconditionally stableâ€•ADI solvers for the compressible Navierâ€“Stokes equations in 2D and 3D curvilinear domains. Journal of Computational Physics, 2016, 307, 476-495.	3.8	8
26	Windowed Green Function Method for Layered-Media Scattering. SIAM Journal on Applied Mathematics, 2016, 76, 1871-1898.	1.8	27
27	An FC-based spectral solver for elastodynamic problems in general three-dimensional domains. Journal of Computational Physics, 2016, 307, 333-354.	3.8	19
28	A Fourier Continuation Method for the Solution of Elliptic Eigenvalue Problems in General Domains. Mathematical Problems in Engineering, 2015, 2015, 1-15.	1.1	7
29	Integral equations requiring small numbers of Krylov-subspace iterations for two-dimensional smooth penetrable scattering problems. Applied Numerical Mathematics, 2015, 95, 82-98.	2.1	19
30	A boundary integral algorithm for the Laplace Dirichletâ€“Neumann mixed eigenvalue problem. Journal of Computational Physics, 2015, 298, 1-28.	3.8	11
31	A generalized CalderÃ³n formula for open-arc diffraction problems: theoretical considerations. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2015, 145, 331-364.	1.2	11
32	High-order integral equation methods for problems of scattering by bumps and cavities on half-planes. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2014, 31, 1738.	1.5	20
33	Spatially Dispersionless, Unconditionally Stable FCâ€“AD Solvers for Variable-Coefficient PDEs. Journal of Scientific Computing, 2014, 58, 331-366.	2.3	13
34	Scattering by large periodic surfaces: Novel numerical method and applications. , 2014, , .		0
35	Rapidly convergent two-dimensional quasi-periodic Green function throughout the spectrumâ€"including Wood anomalies. Journal of Computational Physics, 2014, 262, 262-290.	3.8	33
36	Higher-Order Linear-Time Unconditionally Stable Alternating Direction Implicit Methods for Nonlinear Convection-Diffusion Partial Differential Equation Systems. Journal of Fluids Engineering, Transactions of the ASME, 2014, 136, .	1.5	10

#	Article	IF	Citations
37	Convergence analysis of a high-order NystrÃ¶m integral-equation method for surface scattering problems. Numerische Mathematik, 2013, 124, 603-645.	1.9	15
38	A high-order integral solver for scalar problems of diffraction by screens and apertures in three-dimensional space. Journal of Computational Physics, 2013, 252, 250-274.	3.8	23
39	Secondâ€kind integral solvers for TE and TM problems of diffraction by open arcs. Radio Science, 2012, 47, .	1.6	24
40	Fourier continuation methods for high-fidelity simulation of nonlinear acoustic beams. Journal of the Acoustical Society of America, 2012, 132, 2371-2387.	1.1	26
41	Regularized integral equations and fast highâ€order solvers for soundâ€hard acoustic scattering problems. International Journal for Numerical Methods in Engineering, 2012, 91, 1045-1072.	2.8	51
42	Multi-domain Fourier-continuation/WENO hybrid solver for conservation laws. Journal of Computational Physics, 2011, 230, 8779-8796.	3.8	21
43	A spectral FC solver for the compressible Navierâ€“Stokes equations in general domains I: Explicit time-stepping. Journal of Computational Physics, 2011, 230, 6248-6270.	3.8	49
44	High-order unconditionally stable FC-AD solvers for general smooth domains I. Basic elements. Journal of Computational Physics, 2010, 229, 2009-2033.	3.8	81
45	High-order unconditionally stable FC-AD solvers for general smooth domains II. Elliptic, parabolic and hyperbolic PDEs; theoretical considerations. Journal of Computational Physics, 2010, 229, 3358-3381.	3.8	66
46	Efficient high-order evaluation of scattering by periodic surfaces: vector-parametric gratings and geometric singularities. Waves in Random and Complex Media, 2010, 20, 530-550.	2.7	4
47	A high-order integral algorithm for highly singular PDE solutions in Lipschitz domains. Computing (Vienna/New York), 2009, 84, 149-181.	4.8	24
48	Electromagnetic integral equations requiring small numbers of Krylov-subspace iterations. Journal of Computational Physics, 2009, 228, 6169-6183.	3.8	45
49	Efficient high-order evaluation of scattering by periodic surfaces: deep gratings, high frequencies, and glancing incidences. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 658.	1.5	20
50	Evaluation of EMâ€wave propagation in fully threeâ€dimensional atmospheric refractive index distributions. Radio Science, 2009, 44, .	1.6	5
51	Regularity Theory and Superalgebraic Solvers for Wire Antenna Problems. SIAM Journal of Scientific Computing, 2007, 29, 1375-1402.	2.8	21
52	An <mml:math altimg="si31.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.com/x	2.0	34
53	Accurate, high-order representation of complex three-dimensional surfaces via Fourier continuation analysis. Journal of Computational Physics, 2007, 227, 1094-1125.	3.8	80
54	A fast, higher-order solver for scattering by penetrable bodies in three dimensions. Journal of Computational Physics, 2005, 202, 236-261.	3.8	16

#	Article	IF	Citations
55	Prescribed error tolerances within fixed computational times for scattering problems of arbitrarily high frequency: the convex case. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2004, 362, 629-645.	3.4	102
56	A fast algorithm for the simulation of polycrystalline misfits. II. Martensitic transformations in three space dimensions. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 1613-1630.	2.1	2
57	Wave scattering by inhomogeneous media: efficient algorithms and applications. Physica B: Condensed Matter, 2003, 338, 67-73.	2.7	4
58	Inverse scattering problem for optical coherence tomography. Optics Letters, 2003, 28, 2049.	3.3	15
59	Fast, High-Order, High-Frequency Integral Methods for Computational Acoustics and Electromagnetics. Lecture Notes in Computational Science and Engineering, 2003, , 43-82.	0.3	25
60	High-order high-frequency solutions of rough surface scattering problems. Radio Science, 2002, 37, 2-1-2-13.	1.6	7
61	Surface scattering in three dimensions: an accelerated highâ€“order solver. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 2921-2934.	2.1	56
62	A Fast, High-Order Algorithm for the Solution of Surface Scattering Problems: Basic Implementation, Tests, and Applications. Journal of Computational Physics, 2001, 169, 80-110.	3.8	206
63	Study of polarization dependent scattering anomalies with application to oceanic scattering. Radio Science, 1999, 34, 385-411.	1.6	7
64	Boundary-variation solutions for bounded-obstacle scattering problems in three dimensions. Journal of the Acoustical Society of America, 1998, 104, 2579-2583.	1.1	33
65	A new Approach to the Solution of Problems of Scattering by Bounded Obstacles. , 1995, , 503-512.		1
66	Approximation of analytic functions: a method of enhanced convergence. Mathematics of Computation, 1994, 63, 195-213.	2.1	22
67	On the stiffness of materials containing a disordered array of microscopic holes or hard inclusions. Archive for Rational Mechanics and Analysis, 1993, 121, 303-338.	2.4	11
68	Numerical solution of diffraction problems: a method of variation of boundaries. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1993, 10, 1168.	1.5	119
69	Numerical solution of diffraction problems: a method of variation of boundaries II Finitely conducting gratings, PadÃ© approximants, and singularities. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1993, 10, 2307.	1.5	82
70	Numerical solution of diffraction problems: a method of variation of boundaries III Doubly periodic gratings. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1993, 10, 2551.	1.5	95
71	Solution of a boundary value problem for the Helmholtz equation via variation of the boundary into the complex domain. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1992, 122, 317-340.	1.2	72