

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	A Fast, High-Order Algorithm for the Solution of Surface Scattering Problems: Basic Implementation, Tests, and Applications. <i>Journal of Computational Physics</i> , 2001, 169, 80-110.	3.8	206
2	Numerical solution of diffraction problems: a method of variation of boundaries. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1993, 10, 1168.	1.5	119
3	Prescribed error tolerances within fixed computational times for scattering problems of arbitrarily high frequency: the convex case. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2004, 362, 629-645.	3.4	102
4	Numerical solution of diffraction problems: a method of variation of boundaries III Doubly periodic gratings. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1993, 10, 2551.	1.5	95
5	Numerical solution of diffraction problems: a method of variation of boundaries II Finitely conducting gratings, Padé approximants, and singularities. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1993, 10, 2307.	1.5	82
6	High-order unconditionally stable FC-AD solvers for general smooth domains I. Basic elements. <i>Journal of Computational Physics</i> , 2010, 229, 2009-2033.	3.8	81
7	Accurate, high-order representation of complex three-dimensional surfaces via Fourier continuation analysis. <i>Journal of Computational Physics</i> , 2007, 227, 1094-1125.	3.8	80
8	Solution of a boundary value problem for the Helmholtz equation via variation of the boundary into the complex domain. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 1992, 122, 317-340.	1.2	72
9	High-order unconditionally stable FC-AD solvers for general smooth domains II. Elliptic, parabolic and hyperbolic PDEs; theoretical considerations. <i>Journal of Computational Physics</i> , 2010, 229, 3358-3381.	3.8	66
10	Surface scattering in three dimensions: an accelerated high-order solver. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2001, 457, 2921-2934.	2.1	56
11	Regularized integral equations and fast high-order solvers for sound-hard acoustic scattering problems. <i>International Journal for Numerical Methods in Engineering</i> , 2012, 91, 1045-1072.	2.8	51
12	A spectral FC solver for the compressible Navier-Stokes equations in general domains I: Explicit time-stepping. <i>Journal of Computational Physics</i> , 2011, 230, 6248-6270.	3.8	49
13	Electromagnetic integral equations requiring small numbers of Krylov-subspace iterations. <i>Journal of Computational Physics</i> , 2009, 228, 6169-6183.	3.8	45
14	An  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
15	Boundary-variation solutions for bounded-obstacle scattering problems in three dimensions. <i>Journal of the Acoustical Society of America</i> , 1998, 104, 2579-2583.	1.1	33
16	Rapidly convergent two-dimensional quasi-periodic Green function throughout the spectrum including Wood anomalies. <i>Journal of Computational Physics</i> , 2014, 262, 262-290.	3.8	33
17	Windowed Green Function Method for Layered-Media Scattering. <i>SIAM Journal on Applied Mathematics</i> , 2016, 76, 1871-1898.	1.8	27
18	Fourier continuation methods for high-fidelity simulation of nonlinear acoustic beams. <i>Journal of the Acoustical Society of America</i> , 2012, 132, 2371-2387.	1.1	26

#	ARTICLE	IF	CITATIONS
19	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
20	A high-order integral algorithm for highly singular PDE solutions in Lipschitz domains. Computing (Vienna/New York), 2009, 84, 149-181.	4.8	24
21	Second-kind integral solvers for TE and TM problems of diffraction by open arcs. Radio Science, 2012, 47, .	1.6	24
22	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
23	Approximation of analytic functions: a method of enhanced convergence. Mathematics of Computation, 1994, 63, 195-213.	2.1	22
24	Regularity Theory and Superalgebraic Solvers for Wire Antenna Problems. SIAM Journal of Scientific Computing, 2007, 29, 1375-1402.	2.8	21
25	Multi-domain Fourier-continuation/WENO hybrid solver for conservation laws. Journal of Computational Physics, 2011, 230, 8779-8796.	3.8	21
26	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
27	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
28	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
29	An FC-based spectral solver for elastodynamic problems in general three-dimensional domains. Journal of Computational Physics, 2016, 307, 333-354.	3.8	19
30	Windowed Green Function Method for Nonuniform Open-Waveguide Problems. IEEE Transactions on Antennas and Propagation, 2017, 65, 4684-4692.	5.1	19
31	Ultrafast Simulation and Optimization of Nanophotonic Devices with Integral Equation Methods. ACS Photonics, 2019, 6, 3233-3240.	6.6	18
32	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
33	A fast, higher-order solver for scattering by penetrable bodies in three dimensions. Journal of Computational Physics, 2005, 202, 236-261.	3.8	16
34	Fourier continuation method for incompressible fluids with boundaries. Computer Physics Communications, 2020, 256, 107482.	7.5	16
35	Inverse scattering problem for optical coherence tomography. Optics Letters, 2003, 28, 2049.	3.3	15
36	Convergence analysis of a high-order Nyström integral-equation method for surface scattering problems. Numerische Mathematik, 2013, 124, 603-645.	1.9	15

#	ARTICLE	IF	CITATIONS
37	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
38	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
39	Rapidly convergent quasi-periodic Green functions for scattering by arrays of cylinders including Wood anomalies. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160802.	2.1	14
40	Spatially Dispersionless, Unconditionally Stable FDTD Solvers for Variable-Coefficient PDEs. Journal of Scientific Computing, 2014, 58, 331-366.	2.3	13
41	Regularized integral equation methods for elastic scattering problems in three dimensions. Journal of Computational Physics, 2020, 410, 109350.	3.8	13
42	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
43	A boundary integral algorithm for the Laplace Dirichlet-Neumann mixed eigenvalue problem. Journal of Computational Physics, 2015, 298, 1-28.	3.8	11
44	A generalized Calderón 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
45	Higher-order implicit-explicit multi-domain compressible Navier-Stokes solvers. Journal of Computational Physics, 2019, 391, 322-346.	3.8	11
46	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
47	Higher-order in time quasi-unconditionally stable ADI solvers for the compressible Navier-Stokes equations in 2D and 3D curvilinear domains. Journal of Computational Physics, 2016, 307, 476-495.	3.8	8
48	High-order, Dispersionless Fast-Hybrid 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
49	Interpolated Factored Green Function method for accelerated solution of scattering problems. Journal of Computational Physics, 2021, 430, 110095.	3.8	8
50	Two-Dimensional Fourier Continuation and Applications. SIAM Journal of Scientific Computing, 2022, 44, A964-A992.	2.8	8
51	Study of polarization dependent scattering anomalies with application to oceanic scattering. Radio Science, 1999, 34, 385-411.	1.6	7
52	High-order high-frequency solutions of rough surface scattering problems. Radio Science, 2002, 37, 2-1-2-13.	1.6	7
53	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
54	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

#	ARTICLE	IF	CITATIONS
55	Foundry-fabricated grating coupler demultiplexer inverse-designed via fast integral methods. Communications Physics, 2022, 5, .	5.3	7
56	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
57	Evaluation of EM wave propagation in fully three-dimensional atmospheric refractive index distributions. Radio Science, 2009, 44, .	1.6	5
58	Wave scattering by inhomogeneous media: efficient algorithms and applications. Physica B: Condensed Matter, 2003, 338, 67-73.	2.7	4
59	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
60	Wave Enhancement Through Optimization of Boundary Conditions. SIAM Journal of Scientific Computing, 2020, 42, B207-B224.	2.8	4
61	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
62	Regularized integral formulation of mixed Dirichlet-Neumann problems. Journal of Integral Equations and Applications, 2017, 29, .	0.6	3
63	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
64	Domains Without Dense Steklov Nodal Sets. Journal of Fourier Analysis and Applications, 2020, 26, 1.	1.0	3
65	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
66	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
67	Shifted equivalent sources and FFT acceleration for periodic scattering problems, including Wood anomalies. Journal of Computational Physics, 2019, 378, 548-572.	3.8	2
68	Skin effect in neutron transport theory. Physical Review E, 2021, 104, L032801.	2.1	1
69	A new Approach to the Solution of Problems of Scattering by Bounded Obstacles. , 1995, , 503-512.		1
70	Vector potential-based MHD solver for non-periodic flows using Fourier continuation expansions. Computer Physics Communications, 2022, 275, 108304.	7.5	1
71	Scattering by large periodic surfaces: Novel numerical method and applications. , 2014, , .		0