

# Matania Ben-Artzi

## List of Publications by Year in descending order

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51  
papers

1,514  
citations

394421

19  
h-index

330143

37  
g-index

55  
all docs

55  
docs citations

55  
times ranked

472  
citing authors

#	ARTICLE	IF	CITATIONS
1	A second-order Godunov-type scheme for compressible fluid dynamics. Journal of Computational Physics, 1984, 55, 1-32.	3.8	273
2	A direct Eulerian GRP scheme for compressible fluid flows. Journal of Computational Physics, 2006, 218, 19-43.	3.8	97
3	The local theory for viscous Hamilton-Jacobi equations in Lebesgue spaces. Journal Des Mathematiques Pures Et Appliquees, 2002, 81, 343-378.	1.6	92
4	The generalized Riemann problem for reactive flows. Journal of Computational Physics, 1989, 81, 70-101.	3.8	87
5	Decay and regularity for the schrödinger equation. Journal D'Analyse Mathematique, 1992, 58, 25-37.	0.8	84
6	Global solutions of two-dimensional Navier-Stokes and euler equations. Archive for Rational Mechanics and Analysis, 1994, 128, 329-358.	2.4	79
7	Hyperbolic balance laws: Riemann invariants and the generalized Riemann problem. Numerische Mathematik, 2007, 106, 369-425.	1.9	70
8	A pure-compact scheme for the streamfunction formulation of Navier-Stokes equations. Journal of Computational Physics, 2005, 205, 640-664.	3.8	69
9	An Upwind Second-Order Scheme for Compressible Duct Flows. SIAM Journal on Scientific and Statistical Computing, 1986, 7, 744-768.	1.5	67
10	Global existence and decay for viscous Hamilton-Jacobi equations. Nonlinear Analysis: Theory, Methods & Applications, 1998, 31, 621-628.	1.1	67
11	Well-posedness theory for geometry-compatible hyperbolic conservation laws on manifolds. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2007, 24, 989-1008.	1.4	41
12	A Fast Direct Solver for the Biharmonic Problem in a Rectangular Grid. SIAM Journal of Scientific Computing, 2008, 31, 303-333.	2.8	39
13	Global existence and decay for a nonlinear parabolic equation. Nonlinear Analysis: Theory, Methods & Applications, 1992, 19, 763-768.	1.1	35
14	Dispersion Estimates for Third Order Equations in Two Dimensions. Communications in Partial Differential Equations, 2003, 28, 1943-1974.	2.2	25
15	Vorticity dynamics and numerical Resolution of Navier-Stokes Equations. ESAIM: Mathematical Modelling and Numerical Analysis, 2001, 35, 313-330.	1.9	23
16	Application of the "Generalized Riemann Problem" method to 1-D compressible flows with material interfaces. Journal of Computational Physics, 1986, 65, 170-178.	3.8	22
17	Bacterial Flagellar Microhydrodynamics: Laminar Flow over Complex Flagellar Filaments, Analog Archimedean Screws and Cylinders, and Its Perturbations. Biophysical Journal, 2003, 85, 1345-1357.	0.5	22
18	Hyperbolic conservation laws on the sphere. A geometry-compatible finite volume scheme. Journal of Computational Physics, 2009, 228, 5650-5668.	3.8	21

#	ARTICLE	IF	CITATIONS
19	Remarks on a Nonlinear Parabolic Equation. Transactions of the American Mathematical Society, 1999, 352, 731-751.	0.9	20
20	The limiting absorption principle for partial differential operators. Memoirs of the American Mathematical Society, 1987, 66, 0-0.	0.9	19
21	Resolvent estimates for a sum of tensor products with applications to the spectral theory of differential operators. Journal D'Analyse Mathematique, 1983, 43, 215-250.	0.8	18
22	Sur la non-existence et la non-unicité des solutions du problème de Cauchy pour une équation parabolique semi-linéaire. Comptes Rendus Mathématique, 1999, 329, 371-376.	0.5	15
23	Global estimates for the Schrödinger equation. Journal of Functional Analysis, 1992, 107, 362-368.	1.4	13
24	On Spectral Properties of the Acoustic Propagator in a Layered Band. Journal of Differential Equations, 1997, 136, 115-135.	2.2	11
25	On the absolute continuity of Schrödinger operators with spherically symmetric, long-range potentials, I. Journal of Differential Equations, 1980, 38, 41-50.	2.2	10
26	Computation of reactive duct flows in external fields. Journal of Computational Physics, 1990, 86, 225-255.	3.8	10
27	On the absolute continuity of Schrödinger operators with spherically symmetric, long-range potentials, II. Journal of Differential Equations, 1980, 38, 51-60.	2.2	9
28	A limiting absorption principle for Schrödinger operators with spherically symmetric exploding potentials. Israel Journal of Mathematics, 1981, 40, 259-274.	0.8	8
29	EIGENFUNCTION EXPANSIONS AND SPACETIME ESTIMATES FOR GENERATORS IN DIVERGENCE-FORM. Reviews in Mathematical Physics, 2010, 22, 1209-1240.	1.7	8
30	Remarks on Schrödinger operators with an electric field and deterministic potentials. Journal of Mathematical Analysis and Applications, 1985, 109, 333-339.	1.0	6
31	Spline functions, the biharmonic operator and approximate eigenvalues. Numerische Mathematik, 2019, 141, 839-879.	1.9	6
32	An application of asymptotic techniques to certain problems of spectral and scattering theory of Stark-like Hamiltonians. Transactions of the American Mathematical Society, 1983, 278, 817-839.	0.9	5
33	Discrete fourth-order Sturm-Liouville problems. IMA Journal of Numerical Analysis, 2018, 38, 1485-1522.	2.9	5
34	Time evolution of discrete fourth-order elliptic operators. Numerical Methods for Partial Differential Equations, 2019, 35, 1429-1457.	3.6	5
35	Consistency of finite volume approximations to nonlinear hyperbolic balance laws. Mathematics of Computation, 2021, 90, 141-169.	2.1	5
36	SCALAR CONSERVATION LAWS ON A HALF-LINE: A PARABOLIC APPROACH. Journal of Hyperbolic Differential Equations, 2010, 07, 165-189.	0.5	4

#	ARTICLE	IF	CITATIONS
37	Smooth Spectral Calculus. , 2011, , 119-182.		4
38	Eigenfunction expansions for a class of differential operators. Journal of Mathematical Analysis and Applications, 1979, 69, 304-314.	1.0	3
39	Planar Navier-Stokes Equations: Vorticity Approach. Handbook of Mathematical Fluid Dynamics, 2003, 2, 143-167.	0.1	3
40	Spectral theory of first-order systems: From crystals to Dirac operators. Reviews in Mathematical Physics, 2021, 33, 2150014.	1.7	3
41	Spectral properties of linear ordinary differential operators with slowly decreasing coefficients. Journal of Mathematical Analysis and Applications, 1979, 68, 68-91.	1.0	2
42	A Cartesian Compact Scheme for the Navier-Stokes Equations in Streamfunction Formulation in Irregular Domains. Journal of Scientific Computing, 2019, 81, 1386-1408.	2.3	2
43	GRP - An analytic approach to high-resolution upwind schemes for compressible fluid flow. , 1985, , 87-91.		2
44	Resolvent Estimates for Schrödinger-Type and Maxwell Equations with Applications. , 1998, , 19-31.		2
45	On the Uniqueness of $L_2$ -solutions in half-space of certain differential equations. Applied Mathematics and Optimization, 1982, 9, 97-109.	1.6	1
46	Finite difference approach to fourth-order linear boundary-value problems. IMA Journal of Numerical Analysis, 2020, , .	2.9	1
47	Divergence-type Operators: Spectral Theory and Spacetime Estimates. , 2012, , 1-40.		1
48	An Embedded Compact Scheme for Biharmonic Problems in Irregular Domains. Studies in Computational Intelligence, 2018, , 11-23.	0.9	1
49	Viscous conservation laws in 1D with measure initial data. Quarterly of Applied Mathematics, 2021, 79, 103-124.	0.7	1
50	Numerical calculations of reacting flows. Lecture Notes in Mathematics, 1989, , 30-36.	0.2	0
51	GRP SCHEMES FOR TIME-DEPENDENT 2-D AND QUASI 1-D FLOWS. , 2002, , .		0