

Luis Vega

List of Publications by Year in descending order

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126
papers

6,384
citations

81900

39
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69250

77
g-index

129
all docs

129
docs citations

129
times ranked

1070
citing authors

#	ARTICLE	IF	CITATIONS
1	Well-posedness and scattering results for the generalized Korteweg-de Vries equation via the contraction principle. <i>Communications on Pure and Applied Mathematics</i> , 1993, 46, 527-620.	3.1	929
2	A bilinear estimate with applications to the KdV equation. <i>Journal of the American Mathematical Society</i> , 1996, 9, 573-603.	3.9	532
3	Well-posedness of the initial value problem for the Korteweg-de Vries equation. <i>Journal of the American Mathematical Society</i> , 1991, 4, 323-347.	3.9	450
4	Title is missing!. <i>Indiana University Mathematics Journal</i> , 1991, 40, 33.	0.9	434
5	The Cauchy problem for the Korteweg-de Vries equation in Sobolev spaces of negative indices. <i>Duke Mathematical Journal</i> , 1993, 71, 1.	1.5	289
6	On the ill-posedness of some canonical dispersive equations. <i>Duke Mathematical Journal</i> , 2001, 106, .	1.5	247
7	Small solutions to nonlinear Schrödinger equations. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 1993, 10, 255-288.	1.4	165
8	A bilinear approach to the restriction and Keakeya conjectures. <i>Journal of the American Mathematical Society</i> , 1998, 11, 967-1000.	3.9	158
9	Smoothing effects and local existence theory for the generalized nonlinear Schrödinger equations. <i>Inventiones Mathematicae</i> , 1998, 134, 489-545.	2.5	128
10	On the (generalized) Korteweg-de Vries equation. <i>Duke Mathematical Journal</i> , 1989, 59, 585.	1.5	116
11	Schrodinger Equations: Pointwise Convergence to the Initial Data. <i>Proceedings of the American Mathematical Society</i> , 1988, 102, 874.	0.8	100
12	Quadratic forms for the 1-D semilinear Schrödinger equation. <i>Transactions of the American Mathematical Society</i> , 1996, 348, 3323-3353.	0.9	97
13	Bilinear virial identities and applications. <i>Annales Scientifiques De L'Ecole Normale Superieure</i> , 2009, 42, 261-290.	0.8	90
14	The Cauchy problem for quasi-linear Schrödinger equations. <i>Inventiones Mathematicae</i> , 2004, 158, 343-388.	2.5	88
15	On the Zakharov and Zakharov-Schulman Systems. <i>Journal of Functional Analysis</i> , 1995, 127, 204-234.	1.4	83
16	Restriction theorems and maximal operators related to oscillatory integrals in \mathbb{R}^3 . <i>Duke Mathematical Journal</i> , 1999, 96, 547.	1.5	80
17	Morrey-Campanato Estimates for Helmholtz Equations. <i>Journal of Functional Analysis</i> , 1999, 164, 340-355.	1.4	74
18	Endpoint Strichartz estimates for the magnetic Schrödinger equation. <i>Journal of Functional Analysis</i> , 2010, 258, 3227-3240.	1.4	71

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19	On uniqueness properties of solutions of the k -generalized KdV equations. Journal of Functional Analysis, 2007, 244, 504-535.	1.4	68
20	A Semilinear Dirac Equation in $H^s(\mathbb{R}^3)$ for $s > 1$. SIAM Journal on Mathematical Analysis, 1997, 28, 338-362.	1.9	65
21	Formation of Singularities and Self-Similar Vortex Motion Under the Localized Induction Approximation. Communications in Partial Differential Equations, 2003, 28, 927-968.	2.2	65
22	On the generalized Benjamin-Ono equation. Transactions of the American Mathematical Society, 1994, 342, 155-172.	0.9	63
23	On the Ill-Posedness of the IVP for the Generalized Korteweg-De Vries and Nonlinear Schrödinger Equations. Journal of the London Mathematical Society, 1996, 53, 551-559.	1.0	61
24	Weighted Estimates for the Helmholtz Equation and Some Applications. Journal of Functional Analysis, 1997, 150, 356-382.	1.4	60
25	Higher-order nonlinear dispersive equations. Proceedings of the American Mathematical Society, 1994, 122, 157-166.	0.8	56
26	Global wellposedness for 1D non-linear Schrödinger equation for data with an infinite L^2 norm. Journal Des Mathematiques Pures Et Appliquees, 2001, 80, 1029-1044.	1.6	55
27	On Uniqueness Properties of Solutions of Schrödinger Equations. Communications in Partial Differential Equations, 2006, 31, 1811-1823.	2.2	55
28	Almost Everywhere Summability of Fourier Integrals. Journal of the London Mathematical Society, 1988, s2-38, 513-524.	1.0	50
29	On local regularity of Schrödinger equations. International Mathematics Research Notices, 1993, 1993, 13.	1.0	50
30	Well-Posedness of the Initial Value Problem for the Korteweg-de Vries Equation. Journal of the American Mathematical Society, 1991, 4, 323.	3.9	47
31	Nonlinear small data scattering for the generalized Korteweg-de Vries equation. Journal of Functional Analysis, 1990, 90, 445-457.	1.4	46
32	On unique continuation for nonlinear Schrödinger equations. Communications on Pure and Applied Mathematics, 2003, 56, 1247-1262.	3.1	45
33	Shell interactions for Dirac operators. Journal Des Mathematiques Pures Et Appliquees, 2014, 102, 617-639.	1.6	45
34	Global well-posedness for semi-linear wave equations. Communications in Partial Differential Equations, 2000, 25, 1741-1752.	2.2	44
35	On the Stability of a Singular Vortex Dynamics. Communications in Mathematical Physics, 2009, 286, 593-627.	2.2	44
36	The sharp Hardy uncertainty principle for Schrödinger evolutions. Duke Mathematical Journal, 2010, 155, .	1.5	44

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37	An analytical proof of Hardy-like inequalities related to the Dirac operator. <i>Journal of Functional Analysis</i> , 2004, 216, 1-21.	1.4	43
38	Hardy's uncertainty principle, convexity and Schrödinger evolutions. <i>Journal of the European Mathematical Society</i> , 2008, 10, 883-907.	1.4	41
39	Carleman inequalities and the heat operator II. <i>Indiana University Mathematics Journal</i> , 2001, 50, 0-0.	0.9	40
40	Some dispersive estimates for Schrödinger equations with repulsive potentials. <i>Journal of Functional Analysis</i> , 2006, 236, 1-24.	1.4	39
41	Unique continuation for Schrödinger operators with potential in Morrey spaces. <i>Publicacions Matemàtiques</i> , 1991, 35, 291-298.	0.5	38
42	On the support of solutions to the generalized KdV equation. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2002, 19, 191-208.	1.4	36
43	A strategy for self-adjointness of Dirac operators: Applications to the MIT bag model and δ -shell interactions. <i>Publicacions Matemàtiques</i> , 2018, 62, 397-437.	0.5	35
44	Magnetic virial identities, weak dispersion and Strichartz inequalities. <i>Mathematische Annalen</i> , 2009, 344, 249-278.	1.4	34
45	Local regularity of solutions to wave equations with time-dependent potentials. <i>Duke Mathematical Journal</i> , 1994, 76, 913.	1.5	30
46	Shell Interactions for Dirac Operators: On the Point Spectrum and the Confinement. <i>SIAM Journal on Mathematical Analysis</i> , 2015, 47, 1044-1069.	1.9	30
47	Bounds for the maximal function associated to periodic solutions of one-dimensional dispersive equations. <i>Bulletin of the London Mathematical Society</i> , 2008, 40, 117-128.	0.8	28
48	Spectral stability of Schrödinger operators with subordinated complex potentials. <i>Journal of Spectral Theory</i> , 2018, 8, 575-604.	0.8	28
49	Vortex filament equation for a regular polygon. <i>Nonlinearity</i> , 2014, 27, 3031-3057.	1.4	27
50	A real space method for averaging lemmas. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 2004, 83, 1309-1351.	1.6	26
51	A NOTE ON THE NONLINEAR SCHRÖDINGER EQUATION IN WEAK L_p SPACES. <i>Communications in Contemporary Mathematics</i> , 2001, 03, 153-162.	1.2	25
52	Variable coefficient Schrödinger flows for ultrahyperbolic operators. <i>Advances in Mathematics</i> , 2005, 196, 373-486.	1.1	25
53	An Isoperimetric-Type Inequality for Electrostatic Shell Interactions for Dirac Operators. <i>Communications in Mathematical Physics</i> , 2016, 344, 483-505.	2.2	25
54	On the unique continuation of solutions to the generalized KdV equation. <i>Mathematical Research Letters</i> , 2003, 10, 833-846.	0.5	25

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55	Scattering for 1D cubic NLS and singular vortex dynamics. Journal of the European Mathematical Society, 2011, 14, 209-253.	1.4	24
56	The Gardner equation and the \hat{A}^2 -stability of the \hat{A} -soliton solution of the Korteweg-de Vries equation. Transactions of the American Mathematical Society, 2013, 365, 195-212.	0.9	24
57	Existence of maximizers for Sobolev-Strichartz inequalities. Advances in Mathematics, 2012, 229, 1912-1923.	1.1	24
58	On the existence of maximizers for a family of restriction theorems. Bulletin of the London Mathematical Society, 2011, 43, 811-817.	0.8	23
59	The general quasilinear ultrahyperbolic Schrödinger equation. Advances in Mathematics, 2006, 206, 402-433.	1.1	22
60	Pointwise convergence of solutions to the nonelliptic Schrödinger equation. Indiana University Mathematics Journal, 2006, 55, 1893-1906.	0.9	22
61	Stability of the Self-similar Dynamics of a Vortex Filament. Archive for Rational Mechanics and Analysis, 2013, 210, 673-712.	2.4	21
62	On the Interaction of Nearly Parallel Vortex Filaments. Communications in Mathematical Physics, 2003, 243, 471-483.	2.2	20
63	Self-adjoint extensions of Dirac operators with Coulomb type singularity. Journal of Mathematical Physics, 2013, 54, .	1.1	20
64	Spherical Means and Weighted Inequalities. Journal of the London Mathematical Society, 1996, 53, 343-353.	1.0	19
65	Absence of eigenvalues of two-dimensional magnetic Schrödinger operators. Journal of Functional Analysis, 2018, 275, 2453-2472.	1.4	18
66	Energy Concentration and Sommerfeld Condition for Helmholtz Equation with Variable Index at Infinity. Geometric and Functional Analysis, 2008, 17, 1685-1707.	1.8	17
67	On the Dirac delta as initial condition for nonlinear Schrödinger equations. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2008, 25, 697-711.	1.4	17
68	Unique Continuation for Schrödinger Evolutions, with Applications to Profiles of Concentration and Traveling Waves. Communications in Mathematical Physics, 2011, 305, 487-512.	2.2	17
69	A Numerical Study of the Self-Similar Solutions of the Schrödinger Map. SIAM Journal on Applied Mathematics, 2009, 70, 1047-1077.	1.8	16
70	Stability in \hat{A}^1 of circular vortex patches. Proceedings of the American Mathematical Society, 2009, 137, 4199-4202.	0.8	16
71	Higher-Order Nonlinear Dispersive Equations. Proceedings of the American Mathematical Society, 1994, 122, 157.	0.8	16
72	The initial value problem for the Binormal Flow with rough data. Annales Scientifiques De L'Ecole Normale Supérieure, 2015, 48, 1423-1455.	0.8	16

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73	The forward problem for the electromagnetic Helmholtz equation with critical singularities. <i>Advances in Mathematics</i> , 2013, 240, 636-671.	1.1	15
74	On the Generalized Benjamin-Ono Equation. <i>Transactions of the American Mathematical Society</i> , 1994, 342, 155.	0.9	15
75	Global Solutions for the KdV Equation with Unbounded Data. <i>Journal of Differential Equations</i> , 1997, 139, 339-364.	2.2	14
76	The Effect of Surface Tension on the Moore Singularity of Vortex Sheet Dynamics. <i>Journal of Nonlinear Science</i> , 2008, 18, 463-484.	2.1	14
77	On the Initial Value Problem for the Ishimori System. <i>Annales Henri Poincare</i> , 2000, 1, 341-384.	1.7	13
78	Self-similar solutions of the localized induction approximation: singularity formation. <i>Nonlinearity</i> , 2004, 17, 2091-2136.	1.4	13
79	Hardy-type estimates for Dirac operators. <i>Annales Scientifiques De L'Ecole Normale Superieure</i> , 2007, 40, 885-900.	0.8	13
80	Self-similar planar curves related to modified Korteweg-de Vries equation. <i>Journal of Differential Equations</i> , 2007, 235, 56-73.	2.2	13
81	Uncertainty principle of Morgan type and Schrödinger evolutions. <i>Journal of the London Mathematical Society</i> , 2011, 83, 187-207.	1.0	13
82	Uniqueness properties of solutions to the Benjamin-Ono equation and related models. <i>Journal of Functional Analysis</i> , 2020, 278, 108396.	1.4	12
83	On the Hierarchy of the Generalized KdV Equations. <i>NATO ASI Series Series B: Physics</i> , 1994, , 347-356.	0.2	11
84	Discrete conservation laws and the convergence of long time simulations of the mKdV equation. <i>Journal of Computational Physics</i> , 2013, 235, 274-285.	3.8	11
85	On the Relationship Between the One-Corner Problem and the M-Corner Problem for the Vortex Filament Equation. <i>Journal of Nonlinear Science</i> , 2018, 28, 2275-2327.	2.1	11
86	Evolution of Polygonal Lines by the Binormal Flow. <i>Annals of PDE</i> , 2020, 6, 1.	1.8	11
87	Hardy Uncertainty Principle, Convexity and Parabolic Evolutions. <i>Communications in Mathematical Physics</i> , 2016, 346, 667-678.	2.2	10
88	The initial value problem for a class of nonlinear dispersive equations. <i>Lecture Notes in Mathematics</i> , 1990, , 141-156.	0.2	9
89	Averaging lemmas and the X-ray transform. <i>Comptes Rendus Mathematique</i> , 2003, 337, 505-510.	0.3	9
90	Some weighted Gagliardo-Nirenberg inequalities and applications. <i>Proceedings of the American Mathematical Society</i> , 2007, 135, 2795-2803.	0.8	9

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91	A Hardy-type inequality and some spectral characterizations for the Dirac–Coulomb operator. <i>Revista Matematica Complutense</i> , 2020, 33, 1-18.	1.2	9
92	On the local smoothing for the Schrödinger equation. <i>Proceedings of the American Mathematical Society</i> , 2006, 135, 119-128.	0.8	8
93	Uniqueness properties for discrete equations and Carleman estimates. <i>Journal of Functional Analysis</i> , 2017, 272, 4853-4869.	1.4	8
94	The dynamics of vortex filaments with corners. <i>Communications on Pure and Applied Analysis</i> , 2015, 14, 1581-1601.	0.8	8
95	Energy concentration and Sommerfeld condition for Helmholtz and Liouville equations. <i>Comptes Rendus Mathematique</i> , 2003, 337, 587-592.	0.3	7
96	Weak Dispersive Estimates for Schrödinger Equations with Long Range Potentials. <i>Communications in Partial Differential Equations</i> , 2009, 34, 74-105.	2.2	7
97	Schrodinger Maps and their Associated Frame Systems. <i>International Mathematics Research Notices</i> , 0, , .	1.0	7
98	On the stability of self-similar solutions of 1D cubic Schrödinger equations. <i>Mathematische Annalen</i> , 2013, 356, 259-300.	1.4	7
99	Singularity formation for the 1-D cubic NLS and the Schrödinger map on S^2 . <i>Communications on Pure and Applied Analysis</i> , 2018, 17, 1317-1329.	0.8	7
100	On the improvement of the Hardy inequality due to singular magnetic fields. <i>Communications in Partial Differential Equations</i> , 2020, 45, 1202-1212.	2.2	6
101	Asymptotic Lower Bounds for a Class of Schrödinger Equations. <i>Communications in Mathematical Physics</i> , 2008, 279, 429-453.	2.2	5
102	On the equipartition of energy for the critical NLW. <i>Journal of Functional Analysis</i> , 2008, 255, 726-754.	1.4	5
103	On the Evolution of the Vortex Filament Equation for Regular M -Polygons with Nonzero Torsion. <i>SIAM Journal on Applied Mathematics</i> , 2020, 80, 1034-1056.	1.8	5
104	On the unique continuation of solutions to non-local non-linear dispersive equations. <i>Communications in Partial Differential Equations</i> , 2020, 45, 872-886.	2.2	5
105	Unique continuation for the solutions of the laplacian plus a drift. <i>Annales De L'Institut Fourier</i> , 1991, 41, 651-663.	0.6	5
106	Riemann's Non-differentiable Function and the Binormal Curvature Flow. <i>Archive for Rational Mechanics and Analysis</i> , 2022, 244, 501-540.	2.4	5
107	On the energy of critical solutions of the binormal flow. <i>Communications in Partial Differential Equations</i> , 2020, 45, 820-845.	2.2	4
108	A theorem of Paley-Wiener type for Schrödinger evolutions. <i>Annales Scientifiques De L'Ecole Normale Superieure</i> , 2014, 47, 539-557.	0.8	4

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109	Carleman type inequalities for fractional relativistic operators. <i>Revista Matematica Complutense</i> , 2023, 36, 301-332.	1.2	4
110	Sommerfeld condition for a Liouville equation and concentration of trajectories. <i>Bulletin of the Brazilian Mathematical Society</i> , 2003, 34, 43-57.	0.8	3
111	On the local smoothing for a class of conformally invariant Schrodinger equations. <i>Indiana University Mathematics Journal</i> , 2007, 56, 2265-2304.	0.9	3
112	Scaling-sharp dispersive estimates for the Korteweg-de Vries group. <i>Comptes Rendus Mathematique</i> , 2008, 346, 845-848.	0.3	3
113	Lower bounds for non-trivial travelling wave solutions of equations of KdV type. <i>Nonlinearity</i> , 2012, 25, 1235-1245.	1.4	3
114	Carleman estimates and necessary conditions for the existence of waveguides. <i>Indiana University Mathematics Journal</i> , 2012, 61, 15-30.	0.9	2
115	The Vortex Filament Equation as a Pseudorandom Generator. <i>Acta Applicandae Mathematicae</i> , 2015, 138, 135-151.	1.0	2
116	Some Lower Bounds for Solutions of Schrödinger Evolutions. <i>SIAM Journal on Mathematical Analysis</i> , 2019, 51, 3324-3336.	1.9	2
117	Asymptotics in Fourier space of self-similar solutions to the modified Korteweg-de Vries equation. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 2020, 137, 101-142.	1.6	2
118	On the one dimensional cubic NLS in a critical space. <i>Discrete and Continuous Dynamical Systems</i> , 2022, 42, 2563.	0.9	2
119	Vortex Filament Equation for a Regular Polygon in the Hyperbolic Plane. <i>Journal of Nonlinear Science</i> , 2022, 32, 9.	2.1	2
120	Relativistic Hardy Inequalities in Magnetic Fields. <i>Journal of Statistical Physics</i> , 2014, 154, 866-876.	1.2	1
121	Bilinear identities involving the k -plane transform and Fourier extension operators. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 2020, 150, 3349-3377.	1.2	1
122	Self-Similar Dynamics for the Modified Korteweg-de Vries Equation. <i>International Mathematics Research Notices</i> , 2020, , .	1.0	1
123	The Evolution of the Local Induction Approximation for a Regular Polygon. <i>ESAIM Proceedings and Surveys</i> , 2014, 45, 447-455.	0.4	0
124	Opening note: third workshop on nonlinear dispersive equations, IMECC-UNICAMP, 2017. <i>Sao Paulo Journal of Mathematical Sciences</i> , 2019, 13, 381-382.	0.4	0
125	Kink solutions of the binormal flow. <i>Journées Équations Aux Dérivées Partielles</i> , 2003, , 1-10.	0.2	0
126	The initial value problem for nonlinear Schrödinger equations. , 2007, , 303-319.		0