

# Filippo Gazzola

## List of Publications by Year in descending order

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120  
papers

2,844  
citations

218381

26  
h-index

197535

49  
g-index

130  
all docs

130  
docs citations

130  
times ranked

826  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polyharmonic Boundary Value Problems. Lecture Notes in Mathematics, 2010, , .	0.1	337
2	Existence of Solutions for Singular Critical Growth Semilinear Elliptic Equations. Journal of Differential Equations, 2001, 177, 494-522.	1.1	191
3	Global solutions and finite time blow up for damped semilinear wave equations. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2006, 23, 185-207.	0.7	189
4	Existence and nonexistence results for anisotropic quasilinear elliptic equations. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2004, 21, 715-734.	0.7	136
5	Hardy inequalities with optimal constants and remainder terms. Transactions of the American Mathematical Society, 2003, 356, 2149-2168.	0.5	110
6	Radial entire solutions for supercritical biharmonic equations. Mathematische Annalen, 2006, 334, 905-936.	0.7	100
7	Existence and nonexistence results for critical growth biharmonic elliptic equations. Calculus of Variations and Partial Differential Equations, 2003, 18, 117-143.	0.9	90
8	A Semilinear Fourth Order Elliptic Problem with Exponential Nonlinearity. SIAM Journal on Mathematical Analysis, 2005, 36, 1226-1258.	0.9	74
9	A new mathematical explanation of what triggered the catastrophic torsional mode of the Tacoma Narrows Bridge. Applied Mathematical Modelling, 2015, 39, 901-912.	2.2	67
10	A partially hinged rectangular plate as a model for suspension bridges. Discrete and Continuous Dynamical Systems, 2015, 35, 5879-5908.	0.5	63
11	Mathematical Models for Suspension Bridges. Modeling, Simulation and Applications, 2015, , .	1.3	56
12	Positivity preserving property for a class of biharmonic elliptic problems. Journal of Differential Equations, 2006, 229, 1-23.	1.1	51
13	Overdetermined problems with possibly degenerate ellipticity, a geometric approach. Mathematische Zeitschrift, 2006, 254, 117-132.	0.4	51
14	Torsional instability in suspension bridges: The Tacoma Narrows Bridge case. Communications in Nonlinear Science and Numerical Simulation, 2017, 42, 342-357.	1.7	48
15	Bending and stretching energies in a rectangular plate modeling suspension bridges. Nonlinear Analysis: Theory, Methods & Applications, 2014, 106, 18-34.	0.6	43
16	Structural instability of nonlinear plates modelling suspension bridges: Mathematical answers to some long-standing questions. Nonlinear Analysis: Real World Applications, 2016, 28, 91-125.	0.9	42
17	A qualitative explanation of the origin of torsional instability in suspension bridges. Nonlinear Analysis: Theory, Methods & Applications, 2015, 121, 54-72.	0.6	41
18	Partially overdetermined elliptic boundary value problems. Journal of Differential Equations, 2008, 245, 1299-1322.	1.1	40

#	ARTICLE	IF	CITATIONS
19	On Positivity for the Biharmonic Operator under Steklov Boundary Conditions. <i>Archive for Rational Mechanics and Analysis</i> , 2008, 188, 399-427.	1.1	37
20	Decay and local eventual positivity for biharmonic parabolic equations. <i>Discrete and Continuous Dynamical Systems</i> , 2008, 21, 1129-1157.	0.5	35
21	Critical growth problems for polyharmonic operators. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 1998, 128, 251-263.	0.8	32
22	On a fourth order Steklov eigenvalue problem. <i>Analysis (Germany)</i> , 2005, 25, .	0.2	32
23	SOME REMARKS ON THE EQUATION FOR VARYING $\hat{\nu}_p$ AND VARYING DOMAINS*. <i>Communications in Partial Differential Equations</i> , 2002, 27, 809-845.	1.0	31
24	On the first eigenvalue of a fourth order Steklov problem. <i>Calculus of Variations and Partial Differential Equations</i> , 2009, 35, 103-131.	0.9	29
25	Global existence versus blow-up results for a fourth order parabolic PDE involving the Hessian. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 2015, 103, 924-957.	0.8	29
26	Critical dimensions and higher order Sobolev inequalities with remainder terms. <i>Nonlinear Differential Equations and Applications</i> , 2001, 8, 35-44.	0.4	28
27	Classification of radial solutions to the Emden-Fowler equation on the hyperbolic space. <i>Calculus of Variations and Partial Differential Equations</i> , 2013, 46, 375-401.	0.9	27
28	Hardy-Rellich inequalities with boundary remainder terms and applications. <i>Manuscripta Mathematica</i> , 2010, 131, 427-458.	0.3	26
29	Wide Oscillation Finite Time Blow Up for Solutions to Nonlinear Fourth Order Differential Equations. <i>Archive for Rational Mechanics and Analysis</i> , 2013, 207, 717-752.	1.1	24
30	Entire solutions for a semilinear fourth order elliptic problem with exponential nonlinearity. <i>Journal of Differential Equations</i> , 2006, 230, 743-770.	1.1	23
31	Optimal Sobolev and Hardy-Rellich constants under Navier boundary conditions. <i>Annali Di Matematica Pura Ed Applicata</i> , 2010, 189, 475-486.	0.5	23
32	A Sharp Upper Bound for the Torsional Rigidity of Rods by Means of Web Functions. <i>Archive for Rational Mechanics and Analysis</i> , 2002, 164, 189-211.	1.1	22
33	Positivity, symmetry and uniqueness for minimizers of second-order Sobolev inequalities. <i>Annali Di Matematica Pura Ed Applicata</i> , 2007, 186, 565-578.	0.5	22
34	The First Biharmonic Steklov Eigenvalue: Positivity Preserving and Shape Optimization. <i>Milan Journal of Mathematics</i> , 2011, 79, 247-258.	0.7	22
35	Existence and stability of entire solutions to a semilinear fourth order elliptic problem. <i>Journal of Differential Equations</i> , 2012, 252, 2596-2616.	1.1	21
36	Minimization properties of Hill's orbits and applications to some N -body problems. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2000, 17, 617-650.	0.7	20

#	ARTICLE	IF	CITATIONS
37	On a long-standing conjecture by P. Szegő and related topics. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2005, 56, 763-782.	0.7	20
38	Global solutions for superlinear parabolic equations involving the biharmonic operator for initial data with optimal slow decay. <i>Calculus of Variations and Partial Differential Equations</i> , 2007, 30, 389-415.	0.9	19
39	Radial symmetry of positive solutions to nonlinear polyharmonic Dirichlet problems. <i>Journal Fur Die Reine Und Angewandte Mathematik</i> , 2008, 2008, .	0.4	19
40	Qualitative behavior of global solutions to some nonlinear fourth order differential equations. <i>Journal of Differential Equations</i> , 2011, 251, 2696-2727.	1.1	19
41	Blow up oscillating solutions to some nonlinear fourth order differential equations. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 2011, 74, 6696-6711.	0.6	19
42	Periodic Solutions and Torsional Instability in a Nonlinear Nonlocal Plate Equation. <i>SIAM Journal on Mathematical Analysis</i> , 2019, 51, 3052-3091.	0.9	19
43	Existence of Minima for Nonconvex Functionals in Spaces of Functions Depending on the Distance from the Boundary. <i>Archive for Rational Mechanics and Analysis</i> , 1999, 150, 57-75.	1.1	17
44	Instability of modes in a partially hinged rectangular plate. <i>Journal of Differential Equations</i> , 2016, 261, 6302-6340.	1.1	16
45	Energy transfer between modes in a nonlinear beam equation. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 2017, 108, 885-917.	0.8	16
46	Steady Navier-Stokes Equations in Planar Domains with Obstacle and Explicit Bounds for Unique Solvability. <i>Archive for Rational Mechanics and Analysis</i> , 2020, 238, 1283-1347.	1.1	15
47	Modeling suspension bridges through the von Kármán quasilinear plate equations. <i>Progress in Nonlinear Differential Equations and Their Application</i> , 2015, , 269-297.	0.4	15
48	Asymptotic behavior of ground states of quasilinear elliptic problems with two vanishing parameters. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2002, 19, 477-504.	0.7	14
49	Some new properties of biharmonic heat kernels. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , 2009, 70, 2965-2973.	0.6	14
50	On a Nonlinear Nonlocal Hyperbolic System Modeling Suspension Bridges. <i>Milan Journal of Mathematics</i> , 2015, 83, 211-236.	0.7	13
51	Weak solutions of quasilinear elliptic PDE's at resonance. <i>Annales De La Faculté Des Sciences De Toulouse</i> , 1997, 6, 573-589.	0.3	13
52	Quasilinear elliptic equations at critical growth. <i>Nonlinear Differential Equations and Applications</i> , 1998, 5, 83-97.	0.4	12
53	Gelfand type elliptic problems under Steklov boundary conditions. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2010, 27, 315-335.	0.7	12
54	Eventual local positivity for a biharmonic heat equation in $\mathbb{R}^n$ . <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2008, 1, 83-87.	0.6	12

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55	Some estimates of the minimizing properties of web functions. <i>Calculus of Variations and Partial Differential Equations</i> , 2002, 15, 45-66.	0.9	11
56	The second bifurcation branch for radial solutions of the Brezis-Nirenberg problem in dimension four. <i>Nonlinear Differential Equations and Applications</i> , 2008, 15, 69-90.	0.4	11
57	Which Residual Mode Captures the Energy of the Dominating Mode in Second Order Hamiltonian Systems?. <i>SIAM Journal on Applied Dynamical Systems</i> , 2016, 15, 338-355.	0.7	11
58	Loss of Energy Concentration in Nonlinear Evolution Beam Equations. <i>Journal of Nonlinear Science</i> , 2017, 27, 1789-1827.	1.0	11
59	On the moments of solutions to linear parabolic equations involving the biharmonic operator. <i>Discrete and Continuous Dynamical Systems</i> , 2013, 33, 3583-3597.	0.5	11
60	Existence and multiplicity results for quasilinear elliptic differential systems. <i>Communications in Partial Differential Equations</i> , 2000, 25, 125-153.	1.0	10
61	Best constants and minimizers for embeddings of second order Sobolev spaces. <i>Journal of Mathematical Analysis and Applications</i> , 2006, 320, 718-735.	0.5	10
62	On an isoperimetric inequality for capacity conjectured by Păşălyu and Szegő. <i>Journal of Differential Equations</i> , 2011, 250, 1500-1520.	1.1	10
63	On the variation of longitudinal and torsional frequencies in a partially hinged rectangular plate. <i>ESAIM - Control, Optimisation and Calculus of Variations</i> , 2018, 24, 63-87.	0.7	10
64	Linear theory for beams with intermediate piers. <i>Communications in Contemporary Mathematics</i> , 2020, 22, 1950081.	0.6	10
65	Sharp Bounds for the p-Torsion of Convex Planar Domains. <i>Springer INdAM Series</i> , 2013, , 97-115.	0.4	10
66	Variational formulation of the Melan equation. <i>Mathematical Methods in the Applied Sciences</i> , 2018, 41, 943-951.	1.2	9
67	Resonance tongues for the Hill equation with Duffing coefficients and instabilities in a nonlinear beam equation. <i>Communications in Contemporary Mathematics</i> , 2018, 20, 1750022.	0.6	9
68	Inflow-outflow problems for Euler equations in a rectangular cylinder. <i>Nonlinear Differential Equations and Applications</i> , 2001, 8, 195-217.	0.4	8
69	On the role of energy convexity in the web function approximation. <i>Nonlinear Differential Equations and Applications</i> , 2005, 12, 93-109.	0.4	8
70	Convex shape optimization for the least biharmonic Steklov eigenvalue. <i>ESAIM - Control, Optimisation and Calculus of Variations</i> , 2013, 19, 385-403.	0.7	8
71	Existence of Torsional Solitons in a Beam Model of Suspension Bridge. <i>Archive for Rational Mechanics and Analysis</i> , 2017, 226, 559-585.	1.1	8
72	ON THE ROLE OF SPACE DIMENSION [xxx] IN THE SEMILINEAR BREZIS-NIRENBERG EIGENVALUE PROBLEM. <i>Analysis (Germany)</i> , 2000, 20, 395-400.	0.2	7

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73	Asymptotic behavior of ground states of quasilinear elliptic problems with two vanishing parameters, Part II. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2003, 20, 947-974.	0.7	7
74	Counterexamples to symmetry for partially overdetermined elliptic problems. <i>Analysis (Germany)</i> , 2009, 29, .	0.2	7
75	On the Melan equation for suspension bridges. <i>Journal of Fixed Point Theory and Applications</i> , 2014, 16, 159-188.	0.6	7
76	A Minimax Problem for Improving the Torsional Stability of Rectangular Plates. <i>Journal of Optimization Theory and Applications</i> , 2018, 177, 64-92.	0.8	7
77	Eight(y) mathematical questions on fluids and structures. <i>Atti Della Accademia Nazionale Dei Lincei, Classe Di Scienze Fisiche, Matematiche E Naturali, Rendiconti Lincei Matematica E Applicazioni</i> , 2019, 30, 759-815.	0.3	7
78	A new model for suspension bridges involving the convexification of the cables. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2020, 71, 1.	0.7	7
79	An Explicit Threshold for the Appearance of Lift on the Deck of a Bridge. <i>Journal of Mathematical Fluid Mechanics</i> , 2022, 24, 1.	0.4	7
80	Asymptotic behavior of ground states of quasilinear elliptic problems with two vanishing parameters, Part III. <i>Journal of Differential Equations</i> , 2004, 198, 53-90.	1.1	6
81	Nonlinear Equations for Beams and Degenerate Plates with Piers. <i>SpringerBriefs in Applied Sciences and Technology</i> , 2019, , .	0.2	6
82	Solenoidal extensions in domains with obstacles: explicit bounds and applications to Navier-Stokes equations. <i>Calculus of Variations and Partial Differential Equations</i> , 2020, 59, 1.	0.9	6
83	Uniqueness and Bifurcation Branches for Planar Steady Navier-Stokes Equations Under Navier Boundary Conditions. <i>Journal of Mathematical Fluid Mechanics</i> , 2021, 23, 1.	0.4	6
84	Stability analysis in some strongly prestressed rectangular plates. <i>Evolution Equations and Control Theory</i> , 2020, 9, 275-299.	0.7	6
85	Some estimates for the torsional rigidity of composite rods. <i>Mathematische Nachrichten</i> , 2007, 280, 242-255.	0.4	5
86	Refined blow-up results for nonlinear fourth order differential equations. <i>Communications on Pure and Applied Analysis</i> , 2015, 14, 677-693.	0.4	5
87	Linear Problems. <i>Lecture Notes in Mathematics</i> , 2010, , 27-60.	0.1	5
88	A model of synchronisation in crowd dynamics. <i>Applied Mathematical Modelling</i> , 2018, 59, 305-318.	2.2	4
89	Thresholds for hanger slackening and cable shortening in the Melan equation for suspension bridges. <i>Nonlinear Analysis: Real World Applications</i> , 2018, 39, 520-536.	0.9	4
90	Some solutions of minimax problems for the torsional displacements of rectangular plates. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2018, 98, 1974-1991.	0.9	4

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91	The impact of nonlinear restoring forces acting on hinged elastic beams. Bulletin of the Belgian Mathematical Society - Simon Stevin, 2015, 22, .	0.1	4
92	Nodal solutions to critical growth elliptic problems under Steklov boundary conditions. Communications on Pure and Applied Analysis, 2009, 8, 533-557.	0.4	4
93	Equilibrium configuration of a rectangular obstacle immersed in a channel flow. Comptes Rendus Mathematique, 2020, 358, 887-896.	0.1	4
94	Long-time behavior of partially damped systems modeling degenerate plates with piers. Nonlinearity, 2021, 34, 7705-7727.	0.6	4
95	Remainder terms in a higher order Sobolev inequality. Archiv Der Mathematik, 2010, 95, 381-388.	0.3	3
96	Hexagonal design for stiffening trusses. Annali Di Matematica Pura Ed Applicata, 2015, 194, 87-108.	0.5	3
97	Boundary Conditions for Planar Stokes Equations Inducing Vortices Around Concave Corners. Milan Journal of Mathematics, 2019, 87, 169-199.	0.7	3
98	Positive solutions to a linearly perturbed critical growth biharmonic problem. Discrete and Continuous Dynamical Systems - Series S, 2011, 4, 809-823.	0.6	3
99	Remarks on the 3D Stokes eigenvalue problem under Navier boundary conditions. Annali Di Matematica Pura Ed Applicata, 2022, 201, 1481-1488.	0.5	3
100	A Connection Between Symmetry Breaking for Sobolev Minimizers and Stationary Navier-Stokes Flows Past a Circular Obstacle. Applied Mathematics and Optimization, 2022, 85, 1.	0.8	3
101	On Radially Symmetric Minima of Nonconvex Functionals. Journal of Mathematical Analysis and Applications, 2001, 258, 490-511.	0.5	2
102	Regularity for the 3D evolution Navier-Stokes equations under Navier boundary conditions in some Lipschitz domains. Discrete and Continuous Dynamical Systems, 2022, 42, 1185.	0.5	2
103	On a decomposition of the Hilbert space $L^2$ and its applications to Stokes problem. Annali Dell'Universita Di Ferrara, 1995, 41, 95-115.	0.7	2
104	Positive solutions to critical growth biharmonic elliptic problems under Steklov boundary conditions. Nonlinear Analysis: Theory, Methods & Applications, 2009, 71, 232-238.	0.6	1
105	Prices in the utility function and demand monotonicity. Kodai Mathematical Journal, 2014, 37, .	0.3	1
106	Bounds for Sobolev Embedding Constants in Non-simply Connected Planar Domains. Springer INdAM Series, 2021, , 103-125.	0.4	1
107	Remarks on radial symmetry and monotonicity for solutions of semilinear higher order elliptic equations. Mathematics in Engineering, 2021, 4, 1-24.	0.5	1
108	Models of Higher Order. Lecture Notes in Mathematics, 2010, , 1-25.	0.1	1

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109	Brief History of Suspension Bridges. Modeling, Simulation and Applications, 2015, , 1-41.	1.3	1
110	The role of aerodynamic forces in a mathematical model for suspension bridges. , 2015, , .		1
111	A conformal Yamabe problem with potential on the Euclidean space. Annali Di Matematica Pura Ed Applicata, 2021, 200, 1987-1998.	0.5	0
112	Positivity and Lower Order Perturbations. Lecture Notes in Mathematics, 2010, , 147-185.	0.1	0
113	Dominance of Positivity in Linear Equations. Lecture Notes in Mathematics, 2010, , 187-226.	0.1	0
114	l.8. Ground States " Existence. , 2014, , 469-520.		0
115	Models with Interacting Oscillators. Modeling, Simulation and Applications, 2015, , 149-176.	1.3	0
116	A Fish-Bone Beam Model. Modeling, Simulation and Applications, 2015, , 105-147.	1.3	0
117	One Dimensional Models. Modeling, Simulation and Applications, 2015, , 43-103.	1.3	0
118	The Physical Models. SpringerBriefs in Applied Sciences and Technology, 2019, , 1-8.	0.2	0
119	Nonlinear Evolution Equations for Degenerate Plates. SpringerBriefs in Applied Sciences and Technology, 2019, , 69-98.	0.2	0
120	Nonlinear Evolution Equations for Symmetric Beams. SpringerBriefs in Applied Sciences and Technology, 2019, , 19-67.	0.2	0