Gianni Dal Maso

List of Publications by Year
in descending order

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114 papers	4,997 citations	126907 33 h-index	123424 61 g-index
116 all docs	116 docs citations	116 times ranked	1332 citing authors

#	Article	IF	Citations
1	An Introduction to Î“-Convergence. , 1993, , .		952
2	Quasistatic Crack Growth in Nonlinear Elasticity. Archive for Rational Mechanics and Analysis, 2005, 176, 165-225.	2.4	249
3	A Model for the Quasi-Static GrowthÂ¶of Brittle Fractures:Â¶Existence and Approximation Results. Archive for Rational Mechanics and Analysis, 2002, 162, 101-135.	2.4	234
4	An extension theorem from connected sets, and homogenization in general periodic domains. Nonlinear Analysis: Theory, Methods & Applications, 1992, 18, 481-496.	1.1	195
5	Quasistatic Evolution Problems for Linearly Elasticâ€“Perfectly Plastic Materials. Archive for Rational Mechanics and Analysis, 2006, 180, 237-291.	2.4	164
6	Fine Properties of Functions with Bounded Deformation. Archive for Rational Mechanics and Analysis, 1997, 139, 201-238.	2.4	162
7	A variational method in image segmentation: Existence and approximation results. Acta Mathematica, 1992, 168, 89-151.	3.9	128
8	An existence result for a class of shape optimization problems. Archive for Rational Mechanics and Analysis, 1993, 122, 183-195.	2.4	125
9	Wiener's criterion and Î“-convergence. Applied Mathematics and Optimization, 1987, 15, 15-63.	1.6	118
10	Variational Formulation of Softening Phenomena in Fracture Mechanics: The One-Dimensional Case. Archive for Rational Mechanics and Analysis, 1999, 146, 23-58.	2.4	117
11	On the relaxation in BV(Î©; Rm) of quasi-convex integrals. Journal of Functional Analysis, 1992, 109, 76-97.	1.4	102
12	Nonlinear Stochastic Homogenization. Annali Di Matematica Pura Ed Applicata, 1986, 144, 347-389.	1.0	96
13	Shape optimization for Dirichlet problems: Relaxed formulation and optimality conditions. Applied Mathematics and Optimization, 1991, 23, 17-49.	1.6	90
14	The calibration method for the Mumford-Shah functional and free-discontinuity problems. Calculus of Variations and Partial Differential Equations, 2003, 16, 299-333.	1.7	81
15	Î“-convergence and optimal control problems. Journal of Optimization Theory and Applications, 1982, 38, 385-407.	1.5	80
16	G-convergence of monotone operators. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 1990, 7, 123-160.	1.4	77
17	Compactness and lower semicontinuity properties in $SBD(Omega)$. Mathematische Zeitschrift, 1998, 228, 337-351.	0.9	77
18	Almost everywhere convergence of gradients of solutions to nonlinear elliptic systems. Nonlinear Analysis: Theory, Methods & Applications, 1998, 31, 405-412.	1.1	75

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19	Wiener criteria and energy decay for relaxed dirichlet problems. Archive for Rational Mechanics and Analysis, 1986, 95, 345-387.	2.4	73
20	Non-local approximation of the Mumford-Shah functional. Calculus of Variations and Partial Differential Equations, 1997, 5, 293-322.	1.7	73
21	Definition and existence of renormalized solutions of elliptic equations with general measure data. Comptes Rendus Mathematique, 1997, 325, 481-486.	0.5	71
22	Î³-limits of integral functionals. Journal D'Analyse Mathematique, 1980, 37, 145-185.	0.8	70
23	Generalised functions of bounded deformation. Journal of the European Mathematical Society, 2013, 15, 1943-1997.	1.4	64
24	NEW RESULTS ON THE ASYMPTOTIC BEHAVIOR OF DIRICHLET PROBLEMS IN PERFORATED DOMAINSDIRICHLET PROBLEMS IN PERFORATED DOMAINS. Mathematical Models and Methods in Applied Sciences, 1994, 04, 373-407.	3.3	60
25	Discrete approximation of the Mumford-Shah functional in dimension two. ESAIM: Mathematical Modelling and Numerical Analysis, 1999, 33, 651-672.	1.9	58
26	A Vanishing Viscosity Approach to Quasistatic Evolution in Plasticity with Softening. Archive for Rational Mechanics and Analysis, 2008, 189, 469-544.	2.4	57
27	Quasistatic evolution for Cam-Clay plasticity: a weak formulation via viscoplastic regularization and time rescaling. Calculus of Variations and Partial Differential Equations, 2011, 40, 125-181.	1.7	53
28	Integral representation and relaxation of local functionals. Nonlinear Analysis: Theory, Methods & Applications, 1985, 9, 515-532.	1.1	51
29	New lower semicontinuity results for polyconvex integrals. Calculus of Variations and Partial Differential Equations, 1994, 2, 329-371.	1.7	50
30	Quasistatic crack growth in finite elasticity with non-interpenetration. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2010, 27, 257-290.	1.4	50
31	A MODEL FOR THE QUASI-STATIC GROWTH OF BRITTLE FRACTURES BASED ON LOCAL MINIMIZATION. Mathematical Models and Methods in Applied Sciences, 2002, 12, 1773-1799.	3.3	48
32	Î"-Limits of obstacles. Annali Di Matematica Pura Ed Applicata, 1981, 128, 1-50.	1.0	39
33	Limits of nonlinear Dirichlet problems in varying domains. Manuscripta Mathematica, 1988, 61, 251-278.	0.6	37
34	Fracture models as $Gamma$-limits of damage models. Communications on Pure and Applied Analysis, 2012, 12, 1657-1686.	0.8	35
35	An Existence and Uniqueness Result for the Motion of Self-Propelled Microswimmers. SIAM Journal on Mathematical Analysis, 2011, 43, 1345-1368.	1.9	34
36	Weak lower semicontinuity of polyconvex integrals: a borderline case. Mathematische Zeitschrift, 1995, 218, 603-609.	0.9	33

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37	Quasi-static crack growth for a cohesive zone model with prescribed crack path. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2007, 137, 253-279.	1.2	33
38	A Higher Order Model for Image Restoration: The One-Dimensional Case. SIAM Journal on Mathematical Analysis, 2009, 40, 2351-2391.	1.9	33
39	Asymptotic behaviour of minimum problems with bilateral obstacles. Annali Di Matematica Pura Ed Applicata, 1981, 129, 327-366.	1.0	32
40	Î“ â€” Convergence and calculus of variations. Lecture Notes in Mathematics, 1983, , 121-143.	0.2	32
41	Further remarks on the lower semicontinuity of polyconvex integrals. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 1994, 11, 661-691.	1.4	31
42	Asymptotic behaviour and correctors for linear Dirichlet problems with simultaneously varying operators and domains. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2004, 21, 445-486.	1.4	30
43	Autonomous Integral Functionals with Discontinuous Nonconvex Integrands: Lipschitz Regularity of Minimizers, DuBois--Reymond Necessary Conditions, and Hamilton--Jacobi Equations. Applied Mathematics and Optimization, 2003, 48, 39-66.	1.6	28
44	Linear elasticity obtained from finite elasticity by Î“-convergence under weak coerciveness conditions. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2012, 29, 715-735.	1.4	27
45	Value functions for Bolza problems with discontinuous Lagrangians and Hamilton-Jacobi inequalities. ESAIM - Control, Optimisation and Calculus of Variations, 2000, 5, 369-393.	1.3	26
46	Existence for wave equations on domains with arbitrary growing cracks. Atti Della Accademia Nazionale Dei Lincei, Classe Di Scienze Fisiche, Matematiche E Naturali, Rendiconti Lincei Matematica E Applicazioni, 2011, 22, 387-408.	0.6	26
47	Some necessary and sufficient conditions for the convergence of sequences of unilateral convex sets. Journal of Functional Analysis, 1985, 62, 119-159.	1.4	25
48	A pointwise regularity theory for the two-obstacle problem. Acta Mathematica, 1989, 163, 57-107.	3.9	25
49	Quasistatic Evolution in Perfect Plasticity as Limit of Dynamic Processes. Journal of Dynamics and Differential Equations, 2014, 26, 915-954.	1.9	24
50	Fracture models for elasto-plastic materials as limits of gradient damage models coupled with plasticity: the antiplane case. Calculus of Variations and Partial Differential Equations, 2016, 55, 1.	1.7	22
51	A stability result for nonlinear Neumann problems under boundary variations. Journal Des Mathematiques Pures Et Appliquees, 2003, 82, 503-532.	1.6	21
52	Existence for constrained dynamic Griffith fracture with a weak maximal dissipation condition. Journal of the Mechanics and Physics of Solids, 2016, 95, 697-707.	4.8	21
53	Shape optimization for Dirichlet problems: Relaxed solutions and optimality conditions. Bulletin of the American Mathematical Society, 1990, 23, 531-535.	1.5	20
54	Stochastic Homogenisation of Free-Discontinuity Problems. Archive for Rational Mechanics and Analysis, 2019, 233, 935-974.	2.4	20

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55	Quasistatic evolution for Cam-Clay plasticity: properties of the viscosity solution. Calculus of Variations and Partial Differential Equations, 2012, 44, 495-541.	1.7	18
56	Singular perturbation models in phase transitions for second-order materials. Indiana University Mathematics Journal, 2011, 60, 367-410.	0.9	17
57	A derivation theorem for capacities with respect to a Radon measure. Journal of Functional Analysis, 1987, 71, 263-278.	1.4	16
58	Î“-convergence of free-discontinuity problems. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2019, 36, 1035-1079.	1.4	16
59	Variational inequalities for the biharmonic operator with variable obstacles. Annali Di Matematica Pura Ed Applicata, 1988, 153, 203-227.	1.0	15
60	Quasistatic Crack Growth in Elasto-Plastic Materials: The Two-Dimensional Case. Archive for Rational Mechanics and Analysis, 2010, 196, 867-906.	2.4	15
61	On a class of optimum problems in structural design. Journal of Optimization Theory and Applications, 1988, 56, 39-65.	1.5	14
62	QUASISTATIC EVOLUTION FOR CAM-CLAY PLASTICITY: EXAMPLES OF SPATIALLY HOMOGENEOUS SOLUTIONS. Mathematical Models and Methods in Applied Sciences, 2009, 19, 1643-1711.	3.3	14
63	Existence and uniqueness of dynamic evolutions for a peeling test in dimension one. Journal of Differential Equations, 2016, 261, 4897-4923.	2.2	14
64	Higher-Order Quasiconvexity Reduces to Quasiconvexity. Archive for Rational Mechanics and Analysis, 2004, 171, 55-81.	2.4	13
65	Analytical Validation of a Continuum Model for Epitaxial Growth with Elasticity on Vicinal Surfaces. Archive for Rational Mechanics and Analysis, 2014, 212, 1037-1064.	2.4	13
66	Derivation of a Linearised Elasticity Model from Singularly Perturbed Multiwell Energy Functionals. Archive for Rational Mechanics and Analysis, 2018, 230, 1-45.	2.4	13
67	Dirichlet problem for demi-coercive functionals. Nonlinear Analysis: Theory, Methods & Applications, 1986, 10, 603-613.	1.1	12
68	Quasistatic Evolution Problems for Pressure-sensitive Plastic Materials. Milan Journal of Mathematics, 2007, 75, 117-134.	1.1	12
69	Quasi-static crack growth in hydraulic fracture. Nonlinear Analysis: Theory, Methods & Applications, 2014, 109, 301-318.	1.1	12
70	Quasistatic evolution for Cam-Clay plasticity: The spatially homogeneous case. Networks and Heterogeneous Media, 2010, 5, 97-132.	1.1	12
71	Homogenization of Fiber Reinforced Brittle Materials: The Extremal Cases. SIAM Journal on Mathematical Analysis, 2009, 41, 1874-1889.	1.9	11
72	Capacity Theory for Monotone Operators. Potential Analysis, 1997, 7, 765-803.	0.9	10

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73	Attainment results for nematic elastomers. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2015, 145, 669-701.	1.2	10
74	Convergence of unilateral problems for monotone operators. Journal D'Analyse Mathematique, 1989, 53, 269-289.	0.8	9
75	Approximation of relaxed Dirichlet problems by boundary value problems in perforated domains. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1995, 125, 99-114.	1.2	9
76	A capacitary method for the asymptotic analysis of dirichlet problems for monotone operators. Journal D'Analyse Mathematique, 1997, 71, 263-313.	0.8	9
77	On the Cauchy problem for the wave equation on time-dependent domains. Journal of Differential Equations, 2019, 266, 3209-3246.	2.2	9
78	Asymptotic behaviour of nonlinear Dirichlet problems in perforated domains. Annali Di Matematica Pura Ed Applicata, 1998, 174, 13-72.	1.0	8
79	Local calibrations for minimizers of the Mumfordâ€“Shah functional with rectilinear discontinuity sets. Journal Des Mathematiques Pures Et Appliquees, 2000, 79, 141-162.	1.6	8
80	Gradient bounds for minimizers of free discontinuity problems related to cohesive zone models in fracture mechanics. Calculus of Variations and Partial Differential Equations, 2007, 31, 137-145.	1.7	8
81	One-dimensional swimmers in viscous fluids: dynamics, controllability, and existence of optimal controls. ESAIM - Control, Optimisation and Calculus of Variations, 2015, 21, 190-216.	1.3	8
82	An Approach to the Thin Obstacle Problem foÅ• Variational Functionals Depending on Vector Valued Functions. Communications in Partial Differential Equations, 1989, 14, 1717-1743.	2.2	7
83	Lower semicontinuity of a class of integral functionals on the space of functions of bounded deformation. Advances in Calculus of Variations, 2017, 10, 183-207.	1.2	7
84	The calibration method for the mumford-shah functional. Comptes Rendus Mathematique, 1999, 329, 249-254.	0.5	6
85	Asymptotic behaviour of nonlinear elliptic higher order equations in perforated domains. Journal D'Analyse Mathematique, 1999, 79, 63-112.	0.8	6
86	Î“-Limit of Periodic Obstacles. Acta Applicandae Mathematicae, 2001, 65, 207-215.	1.0	6
87	Î“-convergence and H-convergence of linear elliptic operators. Journal Des Mathematiques Pures Et Appliquees, 2013, 99, 321-329.	1.6	6
88	Laplace equation in a domain with a rectilinear crack: higher order derivatives of the energy with respect to the crack length. Nonlinear Differential Equations and Applications, 2015, 22, 449-476.	0.8	6
89	Existence for elastodynamic Griffith fracture with a weak maximal dissipation condition. Journal Des Mathematiques Pures Et Appliquees, 2019, 127, 160-191.	1.6	6
90	Crack growth with non-interpenetration: A simplified proof for the pure Neumann problem. Discrete and Continuous Dynamical Systems, 2011, 31, 1219-1231.	0.9	6

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91	New results on Î“-limits of integral functionals. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2014, 31, 185-202.	1.4	5
92	The Wave Equation on Domains with Cracks Growing on a Prescribed Path: Existence, Uniqueness, and Continuous Dependence on the Data. Applied Mathematics Research EXpress, 0, , .	1.0	5
93	A Lipschitz selection from the set of minimizers of a nonconvex functional of the gradient1. Nonlinear Analysis: Theory, Methods & Applications, 1999, 37, 707-717.	1.1	4
94	On a notion of unilateral slope for the Mumford-Shah functional. Nonlinear Differential Equations and Applications, 2007, 13, 713-734.	0.8	4
95	Second order asymptotic development for the anisotropic Cahnâ€“Hilliard functional. Calculus of Variations and Partial Differential Equations, 2015, 54, 1119-1145.	1.7	4
96	A lower semicontinuity result for a free discontinuity functional with a boundary term. Journal Des Mathematiques Pures Et Appliquees, 2017, 108, 952-990.	1.6	4
97	Transmission conditions obtained by homogenisation. Nonlinear Analysis: Theory, Methods & Applications, 2018, 177, 361-386.	1.1	4
98	Elastodynamic Griffith fracture on prescribed crack paths with kinks. Nonlinear Differential Equations and Applications, 2020, 27, 1.	0.8	4
99	Asymptotic Behaviour for Dirichlet Problems in Domains Bounded by Thin Layers. , 1989, , 193-249.		4
100	Some properties of a class of nonlinear variational Î¼-capacities. Journal of Functional Analysis, 1988, 79, 476-492.	1.4	3
101	A characterization ofC 1-convex sets in Sobolev spaces. Manuscripta Mathematica, 1992, 75, 247-272.	0.6	3
102	A minimization approach to the wave equation on time-dependent domains. Advances in Calculus of Variations, 2020, 13, 425-436.	1.2	3
103	Asymptotic Behaviour for Dirichlet Problems in Domains Bounded by Thin Layers. , 1989, , 193-249.		3
104	Homogenization of fiber reinforced brittle materials: the intermediate case. Advances in Calculus of Variations, 2010, 3, .	1.2	2
105	A model for the quasistatic growth of cracks with fractional dimension. Nonlinear Analysis: Theory, Methods & Applications, 2017, 154, 43-58.	1.1	2
106	Quasistatic Limit of a Dynamic Viscoelastic Model with Memory. Milan Journal of Mathematics, 2021, 89, 485-522.	1.1	2
107	A global method for deterministic and stochastic homogenisation in BV. Annals of PDE, 2022, 8, 8.	1.8	2
108	The Calibration Method for Free Discontinuity Problems. , 2001, , 317-326.		1

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109	Nonlocal character of the reduced theory of thin films with higher order perturbations. Advances in Calculus of Variations, 2010, 3, .	1.2	1
110	On the jerky crack growth in elastoplastic materials. Calculus of Variations and Partial Differential Equations, 2020, 59, 1.	1.7	1
111	Ennio De Giorgi and $mathbfGamma$-convergence. Discrete and Continuous Dynamical Systems, 2011, 31, 1017-1021.	0.9	1
112	On the pure jump nature of crack growth for a class of pressure-sensitive elasto-plastic materials. Nonlinear Analysis: Theory, Methods & Applications, 2022, 214, 112539.	1.1	0
113	Preface: Rate-independent evolutions. Discrete and Continuous Dynamical Systems - Series S, 2013, 6, i-ii.	1.1	0
114	Capacity and Dirichlet Problems in varying Domains. , 1996, , 105-110.		0