Andrea Braides

List of Publications by Year
in descending order

115 papers	2,592 citations	304368 22 h-index	288905 40 g-index
123 all docs	123 docs citations	123 times ranked	803 citing authors

#	Article	IF	Citations
1	Variational Formulation of Softening Phenomena in Fracture Mechanics: The One-Dimensional Case. Archive for Rational Mechanics and Analysis, 1999, 146, 23-58.	1.1	117
2	Asymptotic expansions by Γ-convergence. Continuum Mechanics and Thermodynamics, 2008, 20, 21-62.	1.4	84
3	3D-2D Asymptotic Analysis for Inhomogeneous Thin Films. Indiana University Mathematics Journal, 2000, 49, 0-0.	0.4	80
4	Homogenization of free discontinuity problems. Archive for Rational Mechanics and Analysis, 1996, 135, 297-356.	1.1	77
5	Chapter 2 A handbook of Γ-convergence. Handbook of Differential Equations: Stationary Partial Differential Equations, 2006, 3, 101-213.	0.7	74
6	Non-local approximation of the Mumford-Shah functional. Calculus of Variations and Partial Differential Equations, 1997, 5, 293-322.	0.9	73
7	Continuum Limits of Discrete Systems without Convexity Hypotheses. Mathematics and Mechanics of Solids, 2002, 7, 41-66.	1.5	61
8	Effective Cohesive Behavior of Layers of Interatomic Planes. Archive for Rational Mechanics and Analysis, 2006, 180, 151-182.	1.1	59
9	APPROXIMATION OF FREE-DISCONTINUITY PROBLEMS. , 2002, , 121-131.		58
10	Local Minimization, Variational Evolution and Γ-Convergence. Lecture Notes in Mathematics, 2014, , .	0.1	57
11	A-Quasiconvexity: Relaxation and Homogenization. ESAIM - Control, Optimisation and Calculus of Variations, 2000, 5, 539-577.	0.7	55
12	Phase and anti-phase boundaries in binary discrete systems: a variational viewpoint. Networks and Heterogeneous Media, 2006, 1, 85-107.	0.5	53
13	SURFACE ENERGIES IN NONCONVEX DISCRETE SYSTEMS. Mathematical Models and Methods in Applied Sciences, 2007, 17, 985-1037.	1.7	43
14	A derivation of linear elastic energies from pair-interaction atomistic systems. Networks and Heterogeneous Media, 2007, 2, 551-567.	0.5	38
15	Brittle Thin Films. Applied Mathematics and Optimization, 2001, 44, 299-323.	0.8	36
16	Asymptotic analysis of periodically-perforated nonlinear media. Journal Des Mathematiques Pures Et Appliquees, 2002, 81, 439-451.	0.8	31
17	Homogenization of surface and length energies for spin systems. Journal of Functional Analysis, 2013, 264, 1296-1328.	0.7	31
18	REITERATED HOMOGENIZATION OF INTEGRAL FUNCTIONALS. Mathematical Models and Methods in Applied Sciences, 2000, 10, 47-71.	1.7	30

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19	Homogenization of oscillating boundaries and applications to thin films. Journal D'Analyse Mathematique, 2001, 83, 151-182.	0.4	30
20	A relaxation result for energies defined on pairs set-function and applications. ESAIM - Control, Optimisation and Calculus of Variations, 2007, 13, 717-734.	0.7	27
21	Interfaces, Modulated Phases and Textures in Lattice Systems. Archive for Rational Mechanics and Analysis, 2017, 223, 977-1017.	1.1	26
22	Approximation by Γ-convergence of a curvature-depending functional in visual reconstruction. Communications on Pure and Applied Mathematics, 2006, 59, 71-121.	1.2	24
23	Continuum limits of discrete thin films with superlinear growth densities. Calculus of Variations and Partial Differential Equations, 2008, 33, 267-297.	0.9	23
24	The interaction between bulk energy and surface energy in multiple integrals. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1994, 124, 737-756.	0.8	22
25	Homogenization of almost periodic monotone operators. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 1992, 9, 399-432.	0.7	21
26	Relaxation results for some free discontinuity problems.. Journal Fur Die Reine Und Angewandte Mathematik, 1995, 1995, 1-18.	0.4	21
27	Gradient theory of phase transitions in composite media. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2003, 133, 265-296.	0.8	21
28	Homogenization by blow-up. Applicable Analysis, 2008, 87, 1341-1356.	0.6	21
29	NON-LOCAL VARIATIONAL LIMITS OF DISCRETE SYSTEMS. Communications in Contemporary Mathematics, 2000, 02, 285-297.	0.6	19
30	HOMOGENIZATION OF PERIODIC NONLINEAR MEDIA WITH STIFF AND SOFT INCLUSIONS. Mathematical Models and Methods in Applied Sciences, 1995, 05, 543-564.	1.7	18
31	Motion and Pinning of Discrete Interfaces. Archive for Rational Mechanics and Analysis, 2010, 195, 469-498.	1.1	18
32	From discrete systems to continuous variational problems: an introduction. , 2006, , 3-77.		17
33	Overall Properties of a Discrete Membrane with Randomly Distributed Defects. Archive for Rational Mechanics and Analysis, 2008, 189, 301-323.	1.1	16
34	Density of polyhedral partitions. Calculus of Variations and Partial Differential Equations, 2017, 56, 1.	0.9	16
35	Multiscale analysis of a prototypical model for the interaction between microstructure and surface energy. Interfaces and Free Boundaries, 2009, 11, 61-118.	0.2	15
36	Free-discontinuity problems generated by singular perturbation. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1998, 128, 1115-1129.	0.8	14

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37	Bounds on the effective behaviour of a square conducting lattice. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 1755-1769.	1.0	14
38	Asymptotic analysis of Lennard-Jones systems beyond the nearest-neighbour setting: A one-dimensional prototypical case. Mathematics and Mechanics of Solids, 2016, 21, 915-930.	1.5	13
39	Almost periodic methods in the theory of homogenization. Applicable Analysis, 1992, 47, 259-277.	0.6	12
40	A SINGULAR PERTURBATION APPROACH TO VARIATIONAL PROBLEMS IN FRACTURE MECHANICS. Mathematical Models and Methods in Applied Sciences, 1993, 03, 303-340.	1.7	12
41	Loss of polyconvexity by Homogenization. Archive for Rational Mechanics and Analysis, 1994, 127, 183-190.	1.1	12
42	On the non-local approximation of free-discontinuity problems. Communications in Partial Differential Equations, 1998, 23, 817-829.	1.0	12
43	Homogenization of Penrose tilings. Comptes Rendus Mathematique, 2009, 347, 697-700.	0.1	12
44	Q-Tensor Continuum Energies as Limits of Head-to-Tail Symmetric Spin Systems. SIAM Journal on Mathematical Analysis, 2015, 47, 2832-2867.	0.9	12
45	Continuum limit and stochastic homogenization of discrete ferromagnetic thin films. Analysis and PDE, 2018, 11, 499-553.	0.6	12
46	Homogenization of Discrete High-Contrast Energies. SIAM Journal on Mathematical Analysis, 2015, 47, 3064-3091.	0.9	11
47	Title is missing!. Acta Applicandae Mathematicae, 2001, 65, 59-81.	0.5	10
48	Variational approximation of anisotropic functionals on partitions. Annali Di Matematica Pura Ed Applicata, 2005, 184, 75-93.	0.5	10
49	A Quantitative Description of Mesh Dependence for the Discretization of Singularly Perturbed Nonconvex Problems. SIAM Journal on Numerical Analysis, 2012, 50, 1883-1898.	1.1	10
50	Remarks on the homogenization of connected media. Nonlinear Analysis: Theory, Methods & Applications, 1994, 22, 391-407.	0.6	9
51	A Relaxation Approach to Hencky's Plasticity. Applied Mathematics and Optimization, 1997, 35, 45-68.	0.8	9
52	Curvature theory of boundary phases: the two-dimensional case. Interfaces and Free Boundaries, 2002, 4, 345-370.	0.2	9
53	Homogenization of non-uniformly bounded periodic diffusion energies in dimension two. Nonlinearity, 2009, 22, 1459-1480.	0.6	9
54	INTERFACIAL ENERGIES ON PENROSE LATTICES. Mathematical Models and Methods in Applied Sciences, 2011, 21, 1193-1210.	1.7	9

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55	Variational Problems with Percolation: Dilute Spin Systems at Zero Temperature. Journal of Statistical Physics, 2012, 149, 846-864.	0.5	9
56	Quantitative analysis of finite-difference approximations of free-discontinuity problems. Interfaces and Free Boundaries, 2020, 22, 317-381.	0.2	9
57	Motion of discrete interfaces in periodic media. Interfaces and Free Boundaries, 2013, 15, 451-476.	0.2	9
58	Special functions with bounded variation and with weakly differentiable traces on the jump set. Nonlinear Differential Equations and Applications, 1998, 5, 219-243.	0.4	8
59	A note on equi-integrability in dimension reduction problems. Calculus of Variations and Partial Differential Equations, 2007, 29, 231-238.	0.9	8
60	Minimizing movements along a sequence of functionals and curves of maximal slope. Comptes Rendus Mathematique, 2016, 354, 685-689.	0.1	8
61	Motion of Discrete Interfaces Through Mushy Layers. Journal of Nonlinear Science, 2016, 26, 1031-1053.	1.0	8
62	Homogenization of random convolution energies. Journal of the London Mathematical Society, 2021, 104, 295-319.	0.5	8
63	Discrete-to-Continuum Limits of Multibody Systems with Bulk and Surface Long-Range Interactions. SIAM Journal on Mathematical Analysis, 2020, 52, 3600-3665.	0.9	8
64	A homogenization result for interacting elastic and brittle media. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180118.	1.0	7
65	Design of lattice surface energies. Calculus of Variations and Partial Differential Equations, 2018, 57, 1.	0.9	7
66	Homogenization of networks in domains with oscillating boundaries. Applicable Analysis, 2019, 98, 45-63.	0.6	7
67	Homogenization of cohesive fracture in masonry structures. Mathematics and Mechanics of Solids, 2020, 25, 181-200.	1.5	7
68	Relaxation of functionals with constraints on the divergence. Annali Dell'Universita Di Ferrara, 1987, 33, 157-177.	0.7	7
69	Thin films with many small cracks. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 823-840.	1.0	6
70	A compactness result for a second-order variational discrete model. ESAIM: Mathematical Modelling and Numerical Analysis, 2012, 46, 389-410.	0.8	6
71	An Example of Non-Existence of Plane-Like Minimizers for an Almost-Periodic Ising System. Journal of Statistical Physics, 2014, 157, 295-302.	0.5	6
72	An Integral-Representation Result for Continuum Limits of Discrete Energies with MultiBody Interactions. SIAM Journal on Mathematical Analysis, 2018, 50, 1485-1520.	0.9	6

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73	Correctors for the homogenization of almost periodic monotone operators. Asymptotic Analysis, 1991, 5, 47-74.	0.2	5
74	Multiscale Analysis by Γ‐Convergence of a One‐Dimensional Nonlocal Functional Related to a Shell‐Membrane Transition. SIAM Journal on Mathematical Analysis, 2006, 38, 944-976.	0.9	5
75	A variational model in image processing with focal points. ESAIM: Mathematical Modelling and Numerical Analysis, 2008, 42, 729-748.	0.8	5
76	Crystalline Motion of Interfaces Between Patterns. Journal of Statistical Physics, 2016, 165, 274-319.	0.5	5
77	Discrete double-porosity models for spin systems. Mathematics and Mechanics of Complex Systems, 2016, 4, 79-102.	0.5	5
78	Homogenization of quadratic convolution energies in periodically perforated domains. Advances in Calculus of Variations, 2022, 15, 351-368.	0.7	5
79	Γ-Convergence of nonconvex functionals defined on measures. Nonlinear Analysis: Theory, Methods & Applications, 1998, 34, 953-978.	0.6	4
80	Homogenization of Non-Linear Variational Problems with Thin Low-Conducting Layers. Applied Mathematics and Optimization, 2007, 55, 1-29.	0.8	4
81	Minimizing movements for oscillating energies: the critical regime. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 2019, 149, 719-737.	0.8	4
82	Non convex homogenization problems for singular structures. Networks and Heterogeneous Media, 2008, 3, 489-508.	0.5	4
83	Γ-limit of the cut functional on dense graph sequences. ESAIM - Control, Optimisation and Calculus of Variations, 2020, 26, 26.	0.7	4
84	Topological Singularities in Periodic Media: Ginzburg‐Landau and Core-Radius Approaches. Archive for Rational Mechanics and Analysis, 2022, 243, 559-609.	1.1	4
85	Lower Semicontinuity Conditions for Functionals on Jumps and Creases. SIAM Journal on Mathematical Analysis, 1995, 26, 1184-1198.	0.9	3
86	Nucleation and backward motion of discrete interfaces. Comptes Rendus Mathematique, 2013, 351, 803-806.	0.1	3
87	Interfacial Energies of Systems of Chiral Molecules. Multiscale Modeling and Simulation, 2016, 14, 1037-1062.	0.6	3
88	Analytical treatment for the asymptotic analysis of microscopic impenetrability constraints for atomistic systems. ESAIM: Mathematical Modelling and Numerical Analysis, 2017, 51, 1903-1929.	0.8	3
89	An extension theorem from connected sets and homogenization of non-local functionals. Nonlinear Analysis: Theory, Methods & Applications, 2021, 208, 112316.	0.6	3
90	Compactness by Coarse-Graining in Long-Range Lattice Systems. Advanced Nonlinear Studies, 2020, 20, 783-794.	0.7	3

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91	Variational evolution of one-dimensional Lennard-Jones systems. Networks and Heterogeneous Media, 2014, 9, 217-238.	0.5	3
92	Fractal relaxed Dirichlet problems. Manuscripta Mathematica, 1993, 81, 41-56.	0.3	2
93	Models of defects in atomistic systems. Calculus of Variations and Partial Differential Equations, 2011, 41, 71-109.	0.9	2
94	Asymptotic analysis of a ferromagnetic Ising system with â€œdiffuseâ€•interfacial energy. Annali Di Matematica Pura Ed Applicata, 2018, 197, 583-604.	0.5	2
95	Asymptotic Behaviour of Ground States for Mixtures of Ferromagnetic and Antiferromagnetic Interactions in a Dilute Regime. Journal of Statistical Physics, 2018, 171, 1096-1111.	0.5	2
96	Global Minimization. Lecture Notes in Mathematics, 2014, , 7-24.	0.1	2
97	Nucleation and Growth of Lattice Crystals. Journal of Nonlinear Science, 2021, 31, 1.	1.0	2
98	Homogenization of Ferromagnetic Energies on Poisson Random Sets in the Plane. Archive for Rational Mechanics and Analysis, 0, , 1.	1.1	2
99	Perimeter on fractal sets. Manuscripta Mathematica, 1991, 72, 5-25.	0.3	1
100	Asymptotic analysis of periodically-perforated nonlinear media at and close to the critical exponent. Comptes Rendus Mathematique, 2008, 346, 363-367.	0.1	1
101	Exact Bounds on the Effective Behavior of a Conducting Discrete Polycrystal. Multiscale Modeling and Simulation, 2008, 6, 1198-1216.	0.6	1
102	Quasi-static damage evolution and homogenization: A case study of non-commutability. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2016, 33, 309-328.	0.7	1
103	Optimal bounds for periodic mixtures of nearest-neighbour ferromagnetic interactions. Atti Della Accademia Nazionale Dei Lincei, Classe Di Scienze Fisiche, Matematiche E Naturali, Rendiconti Lincei Matematica E Applicazioni, 2017, 28, 103-117.	0.3	1
104	Static, Quasistatic and Dynamic Analysis for Scaled Perona-Malik Functionals. Acta Applicandae Mathematicae, 2018, 156, 79-107.	0.5	1
105	Another Brick in the Wall. Progress in Nonlinear Differential Equations and Their Application, 2006, , 13-24.	0.4	1
106	Homogenization of metrics in oscillating manifolds. ESAIM - Control, Optimisation and Calculus of Variations, 2017, 23, 889-912.	0.7	1
107	The Lavrentiev Phenomenon for Free Discontinuity Problems. Journal of Functional Analysis, 1995, 127, 1-20.	0.7	0
108	Perspectives: Evolutions with Microstructure. Pathways in Mathematics, 2021, , 103-118.	0.1	0

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109	Evolution of Planar Lattices. Pathways in Mathematics, 2021, , 53-101.	0.1	0
110	Discrete-to-Continuum Limits of Planar Lattice Energies. Pathways in Mathematics, 2021, , 31-51.	0.1	0
111	Introduction: Motion on Lattices. Pathways in Mathematics, 2021, , 1-6.	0.1	0
112	Two geometric lemmas for ?Nâˇ1-valued maps and an application to the homogenization of spin systems. ESAIM - Control, Optimisation and Calculus of Variations, 2021, 27, 11.	0.7	0
113	Parameterized Motion Driven by Global Minimization. Lecture Notes in Mathematics, 2014, , 25-52.	0.1	0
114	Rigidity Effects for Antiferromagnetic Thin Films: A Prototypical Example. Springer INdAM Series, 2018, , 205-216.	0.4	0
115	Homogenization of discrete thin structures. Nonlinear Analysis: Theory, Methods & Applications, 2022, , 112951.	0.6	0