Martin KruÅ¾Ã-k

List of Publications by Year
in descending order

85 papers	958 citations	516710 16 h-index	526287 27 g-index
88 all docs	88 docs citations	88 times ranked	408 citing authors

#	Article	IF	Citations
1	Relaxation of functionals with linear growth: Interactions of emerging measures and free discontinuities. Advances in Calculus of Variations, 2023, 16, 835-865.	1.2	0
2	Separately global solutions to rate-independent processes in large-strain inelasticity. Nonlinear Analysis: Theory, Methods & Applications, 2022, 215, 112668.	1.1	1
3	A theory of magneto-elastic nanorods obtained through rigorous dimension reduction. Applied Mathematical Modelling, 2022, 106, 426-447.	4.2	1
4	Crack Occurrence in Bodies with Gradient Polyconvex Energies. Journal of Nonlinear Science, 2022, 32, 1.	2.1	1
5	Linearization and computation for large-strain visco-elasticity. Mathematics in Engineering, 2022, 5, 1-15.	0.9	2
6	Modular-topology optimization of structures and mechanisms with free material design and clustering. Computer Methods in Applied Mechanics and Engineering, 2022, 395, 114977.	6.6	9
7	Modular-topology optimization with Wang tilings: an application to truss structures. Structural and Multidisciplinary Optimization, 2021, 63, 1099-1117.	3.5	7
8	Magnetoelastic thin films at large strains. Continuum Mechanics and Thermodynamics, 2021, 33, 327-341.	2.2	7
9	Equilibrium of immersed hyperelastic solids. Discrete and Continuous Dynamical Systems - Series S, 2021, 14, 4141.	1.1	0
10	Numerical approximation of von KÃ¡rmÃ¡n viscoelastic plates. Discrete and Continuous Dynamical Systems - Series S, 2021, 14, 299-319.	1.1	4
11	Global optimality in minimum compliance topology optimization of frames and shells by moment-sum-of-squares hierarchy. Structural and Multidisciplinary Optimization, 2021, 64, 1963.	3.5	2
12	Elastoplasticity of gradient-polyconvex materials. Zeitschrift Fur Angewandte Mathematik Und Physik, 2021, 72, 1.	1.4	0
13	Gradient Polyconvexity in Evolutionary Models of Shape-Memory Alloys. Journal of Optimization Theory and Applications, 2020, 184, 5-20.	1.5	4
14	Equilibrium for Multiphase Solids with Eulerian Interfaces. Journal of Elasticity, 2020, 142, 409-431.	1.9	4
15	Gradient polyconvex material models and their numerical treatment. International Journal of Solids and Structures, 2020, 195, 57-65.	2.7	5
16	Derivation of von KÃ¡rmÃ¡n Plate Theory in the Framework of Three-Dimensional Viscoelasticity. Archive for Rational Mechanics and Analysis, 2020, 238, 489-540.	2.4	9
17	Quasistatic evolution for dislocation-free finite plasticity. ESAIM - Control, Optimisation and Calculus of Variations, 2020, 26, 123.	1.3	10
18	Interfacial polyconvex energy-enhanced evolutionary model for shape memory alloys. Mathematics and Mechanics of Solids, 2019, 24, 2619-2635.	2.4	1

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19	A Phase-Field Approach to Eulerian Interfacial Energies. Archive for Rational Mechanics and Analysis, 2019, 234, 351-373.	2.4	13
20	Optimal control problems with oscillations, concentrations and discontinuities. Automatica, 2019, 103, 159-165.	5.0	8
21	Mathematical Methods in Continuum Mechanics of Solids. Interaction of Mechanics and Mathematics, 2019, , .	0.9	47
22	Generalized $W^{1,1}$-Young Measures and Relaxation of Problems with Linear Growth. SIAM Journal on Mathematical Analysis, 2018, 50, 1076-1119.	1.9	3
23	Computational modeling of magnetic hysteresis with thermal effects. Mathematics and Computers in Simulation, 2018, 145, 90-105.	4.4	3
24	On the existence of minimisers for strainâ€gradient singleâ€crystal plasticity. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2018, 98, 431-447.	1.6	2
25	Quasistatic elastoplasticity via Peridynamics: existence and localization. Continuum Mechanics and Thermodynamics, 2018, 30, 1155-1184.	2.2	8
26	On the Passage from Nonlinear to Linearized Viscoelasticity. SIAM Journal on Mathematical Analysis, 2018, 50, 4426-4456.	1.9	13
27	A note on locking materials and gradient polyconvexity. Mathematical Models and Methods in Applied Sciences, 2018, 28, 2367-2401.	3.3	17
28	Weak Lower Semicontinuity by Means of Anisotropic Parametrized Measures. Springer INdAM Series, 2018, , 23-51.	0.5	1
29	?$mathcal{A}$-quasiconvexity at the boundary and weak lower semicontinuity of integral functionals. Advances in Calculus of Variations, 2017, 10, 49-67.	1.2	8
30	Weak Lower Semicontinuity of Integral Functionals and Applications. SIAM Review, 2017, 59, 703-766.	9.5	30
31	Semi-definite relaxations for optimal control problems with oscillation and concentration effects. ESAIM - Control, Optimisation and Calculus of Variations, 2017, 23, 95-117.	1.3	6
32	A sharp interface evolutionary model for shape memory alloys. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2016, 96, 1347-1355.	1.6	2
33	Statistically motivated model of mechanisms controlling evolution of deformation band substructure. International Journal of Plasticity, 2016, 81, 196-208.	8.8	9
34	Characterization of gradient young measures generated by homeomorphisms in the plane. ESAIM - Control, Optimisation and Calculus of Variations, 2016, 22, 267-288.	1.3	10
35	Existence results for incompressible magnetoelasticity. Discrete and Continuous Dynamical Systems, 2015, 35, 2615-2623.	0.9	16
36	Quasistatic evolution of magnetoelastic plates via dimension reduction. Discrete and Continuous Dynamical Systems, 2015, 35, 5999-6013.	0.9	4

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37	Quasistatic adhesive contact delaminating in mixed mode and its numerical treatment. Mathematics and Mechanics of Solids, 2015, 20, 582-599.	2.4	12
38	Boundary effects and weak^{â†}lower semicontinuity for signed integral functionals on BV. ESAIM - Control, Optimisation and Calculus of Variations, 2015, 21, 513-534.	1.3	2
39	Young measures supported on invertible matrices. Applicable Analysis, 2014, 93, 105-123.	1.3	4
40	Sequential weak continuity of null Lagrangians at the boundary. Calculus of Variations and Partial Differential Equations, 2014, 49, 1263-1278.	1.7	8
41	A mesoscopic thermomechanically coupled model for thin-film shape-memory alloys by dimension reduction and scale transition. Continuum Mechanics and Thermodynamics, 2014, 26, 683-713.	2.2	1
42	A macroscopic model for magnetic shape-memory single crystals. Zeitschrift Fur Angewandte Mathematik Und Physik, 2013, 64, 343-359.	1.4	7
43	Thermodynamically consistent mesoscopic model of the ferro/paramagnetic transition. Zeitschrift Fur Angewandte Mathematik Und Physik, 2013, 64, 1-28.	1.4	4
44	Quasiconvexity at the boundary and concentration effects generated by gradients. ESAIM - Control, Optimisation and Calculus of Variations, 2013, 19, 679-700.	1.3	8
45	DELAMINATION AND ADHESIVE CONTACT MODELS AND THEIR MATHEMATICAL ANALYSIS AND NUMERICAL TREATMENT. Computational and Experimental Methods in Structures, 2013, , 349-400.	0.3	21
46	Domain patterns and hysteresis in phase-transforming solids: Analysis and numerical simulations of a sharp interface dissipative model via phase-field approximation. Networks and Heterogeneous Media, 2013, 8, 481-499.	1.1	3
47	Modelling of Thin Martensitic Films with Nonpolynomial Stored Energies. Springer Proceedings in Mathematics and Statistics, 2013, , 587-608.	0.2	0
48	Modelling of wheat-flour dough mixing as an open-loop hysteretic process. Discrete and Continuous Dynamical Systems - Series B, 2013, 18, 283-293.	0.9	0
49	Finite element approximation for time-dependent diffusion with measure-valued source. Numerische Mathematik, 2012, 122, 709-723.	1.9	11
50	Energetic Approach to Large Strain Gradient Crystal Plasticity. Acta Polytechnica, 2012, 52, .	0.6	2
51	Rate-independent processes with linear growth energies and time-dependent boundary conditions. Discrete and Continuous Dynamical Systems - Series S, 2012, 5, 591-604.	1.1	0
52	An Efficient Approach to the Numerical Solution of Rate-Independent Problems with Nonconvex Energies. Multiscale Modeling and Simulation, 2011, 9, 1276-1300.	1.6	9
53	On an Extension of the Space of Bounded Deformations. Zeitschrift Fur Analysis Und Ihre Anwendung, 2011, 31, 75-91.	0.6	0
54	Evolutionary problems in non-reflexive spaces. ESAIM - Control, Optimisation and Calculus of Variations, 2010, 16, 1-22.	1.3	4

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55	Instability origin of subgrain formation in plastically deformed materials. International Journal of Engineering Science, 2010, 48, 1401-1412.	5.0	11
56	Energetic approach to gradient plasticity. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2010, 90, 122-135.	1.6	6
57	Oscillations and concentrations generated by ${mathcal A}$-free mappings and weak lower semicontinuity of integral functionals. ESAIM - Control, Optimisation and Calculus of Variations, 2010, 16, 472-502.	1.3	19
58	Crystal plasticity model of shear and kink bandsâ€“energetic approach. Philosophical Magazine, 2010, 90, 3729-3742.	1.6	2
59	A model of ultrafine microstructure evolution in materials deformed by high-pressure torsion. Acta Materialia, 2009, 57, 739-748.	7.9	29
60	Energetic formulation of nonlocal crystal plasticity. International Journal of Materials Research, 2009, 100, 340-341.	0.3	0
61	Identification of Preisach-Type Hysteresis Operators. Numerical Functional Analysis and Optimization, 2008, 29, 149-160.	1.4	6
62	Oscillations and concentrations in sequences of gradients. ESAIM - Control, Optimisation and Calculus of Variations, 2008, 14, 71-104.	1.3	22
63	Statistically based continuum model of misoriented dislocation cell structure formation. Physical Review B, 2007, 75, .	3.2	20
64	Variational approach to formation of misoriented microstructures in plastic deformation. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 4080005-4080006.	0.2	0
65	On convergence of gradient-dependent integrands. Applications of Mathematics, 2007, 52, 529-543.	0.9	0
66	Recent Developments in the Modeling, Analysis, and Numerics of Ferromagnetism. SIAM Review, 2006, 48, 439-483.	9.5	134
67	Mesoscopic model of microstructure evolution in shape memory alloys, its numerical analysis and computer implementation. GAMM Mitteilungen, 2006, 29, 192-214.	5.5	7
68	On the control of an evolutionary equilibrium in micromagnetics. , 2006, , 143-168.		6
69	Mesoscopic model for ferromagnets with isotropic hardening. Zeitschrift Fur Angewandte Mathematik Und Physik, 2005, 56, 107-135.	1.4	13
70	Modelling of Microstructure and its Evolution in Shape-Memory-Alloy Single-Crystals, in Particular in CuAlNi. Meccanica, 2005, 40, 389-418.	2.0	86
71	Microstructure evolution model in micromagnetics. Zeitschrift Fur Angewandte Mathematik Und Physik, 2004, 55, 159-182.	1.4	23
72	A phenomenological model for hysteresis in polycrystalline shape memory alloys. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2004, 84, 835-842.	1.6	14

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73	Rate-independent behavior of ferromagnets. Proceedings in Applied Mathematics and Mechanics, 2004, 4, 67-70.	0.2	0
74	Interactions between demagnetizing field and minor-loop development in bulk ferromagnets. Journal of Magnetism and Magnetic Materials, 2004, 277, 192-200.	2.3	6
75	The Computation of Martensitic Microstructure with Piecewise Laminates. Journal of Scientific Computing, 2003, 19, 293-308.	2.3	25
76	Specimen shape influence on hysteretic response of bulk ferromagnets. Journal of Magnetism and Magnetic Materials, 2003, 256, 158-167.	2.3	8
77	Quasiconvex extreme points of convex sets. , 2002, , .		2
78	Young measure approximation in micromagnetics. Numerische Mathematik, 2001, 90, 291-307.	1.9	25
79	Bauer's maximum principle and hulls of sets. Calculus of Variations and Partial Differential Equations, 2000, 11, 321-332.	1.7	13
80	Weierstrass-Type Maximum Principle for Microstructure in Micromagnetics. Zeitschrift Fur Analysis Und Ihre Anwendung, 2000, 19, 415-428.	0.6	3
81	Optimization Problems With Concentration And Oscillation Effects: Relaxation Theory And Numerical Approximation. Numerical Functional Analysis and Optimization, 1999, 20, 511-530.	1.4	22
82	Some geometric properties of the set of generalized Young functionals. Proceedings of the Royal Society of Edinburgh Section A: Mathematics, 1999, 129, 601-616.	1.2	2
83	Numerical Approach to Double Well Problems. SIAM Journal on Numerical Analysis, 1998, 35, 1833-1849.	2.3	40
84	Explicit Characterization ofLp-Young Measures. Journal of Mathematical Analysis and Applications, 1996, 198, 830-843.	1.0	25
85	ON OPTIMUM DESIGN OF FRAME STRUCTURES. Acta Polytechnica CTU Proceedings, 0, 26, 117-125.	0.3	2