

Daniel Matthes

List of Publications by Year in descending order

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36
papers

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citations

623734

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526287

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docs citations

36
times ranked

263
citing authors

#	ARTICLE	IF	CITATIONS
1	Kinetic equations modelling wealth redistribution: A comparison of approaches. <i>Physical Review E</i> , 2008, 78, 056103.	2.1	100
2	A Family of Nonlinear Fourth Order Equations of Gradient Flow Type. <i>Communications in Partial Differential Equations</i> , 2009, 34, 1352-1397.	2.2	99
3	On Steady Distributions of Kinetic Models of Conservative Economies. <i>Journal of Statistical Physics</i> , 2008, 130, 1087-1117.	1.2	88
4	The Derrida-Lebowitz-Speer-Spohn Equation: Existence, NonUniqueness, and Decay Rates of the Solutions. <i>SIAM Journal on Mathematical Analysis</i> , 2008, 39, 1996-2015.	1.9	70
5	An algorithmic construction of entropies in higher-order nonlinear PDEs. <i>Nonlinearity</i> , 2006, 19, 633-659.	1.4	47
6	Cahn-Hilliard and thin film equations with nonlinear mobility as gradient flows in weighted-Wasserstein metrics. <i>Journal of Differential Equations</i> , 2012, 253, 814-850.	2.2	46
7	Convergence of a variational Lagrangian scheme for a nonlinear drift diffusion equation. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2014, 48, 697-726.	1.9	34
8	Central limit theorem for a class of one-dimensional kinetic equations. <i>Probability Theory and Related Fields</i> , 2011, 150, 77-109.	1.8	27
9	A Convergent Lagrangian Discretization for a Nonlinear Fourth-Order Equation. <i>Foundations of Computational Mathematics</i> , 2017, 17, 73-126.	2.5	24
10	A gradient flow scheme for nonlinear fourth order equations. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2010, 14, 935-959.	0.9	23
11	Transport distances and geodesic convexity for systems of degenerate diffusion equations. <i>Calculus of Variations and Partial Differential Equations</i> , 2015, 54, 3397-3438.	1.7	21
12	A Fully Discrete Variational Scheme for Solving Nonlinear Fokker-Planck Equations in Multiple Space Dimensions. <i>SIAM Journal on Numerical Analysis</i> , 2017, 55, 419-443.	2.3	19
13	A Lagrangian Scheme for the Solution of Nonlinear Diffusion Equations Using Moving Simplex Meshes. <i>Journal of Scientific Computing</i> , 2018, 75, 1463-1499.	2.3	19
14	Analysis of a model for wealth redistribution. <i>Kinetic and Related Models</i> , 2008, 1, 1-27.	0.9	18
15	Convex Sobolev Inequalities Derived from Entropy Dissipation. <i>Archive for Rational Mechanics and Analysis</i> , 2011, 199, 563-596.	2.4	16
16	Curves of steepest descent are entropy solutions for a class of degenerate convection-diffusion equations. <i>Calculus of Variations and Partial Differential Equations</i> , 2014, 50, 199-230.	1.7	14
17	Long-time behavior of a finite volume discretization for a fourth order diffusion equation. <i>Nonlinearity</i> , 2016, 29, 1992-2023.	1.4	12
18	A variational formulation of the BDF2 method for metric gradient flows. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2019, 53, 145-172.	1.9	12

#	ARTICLE	IF	CITATIONS
19	A multidimensional nonlinear sixth-order quantum diffusion equation. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2013, 30, 337-365.	1.4	10
20	Exponential convergence to equilibrium in a coupled gradient flow system modeling chemotaxis. <i>Analysis and PDE</i> , 2015, 8, 425-466.	1.4	10
21	A Two-Phase Two-Fluxes Degenerate Cahn-Hilliard Model as Constrained Wasserstein Gradient Flow. <i>Archive for Rational Mechanics and Analysis</i> , 2019, 233, 837-866.	2.4	9
22	Propagation of Sobolev regularity for a class of random kinetic models on the real line. <i>Nonlinearity</i> , 2010, 23, 2081-2100.	1.4	6
23	Existence of Weak Solutions to a Class of Fourth Order Partial Differential Equations with Wasserstein Gradient Structure. <i>Potential Analysis</i> , 2016, 45, 755-776.	0.9	6
24	Multi-dimensional smoothing transformations: Existence, regularity and stability of fixed points. <i>Stochastic Processes and Their Applications</i> , 2014, 124, 154-198.	0.9	5
25	Infinite energy solutions to inelastic homogeneous Boltzmann equations. <i>Electronic Journal of Probability</i> , 2015, 20, .	1.0	5
26	Entropies for radially symmetric higher-order nonlinear diffusion equations. <i>Communications in Mathematical Sciences</i> , 2011, 9, 353-382.	1.0	4
27	Existence of solutions for a class of fourth order cross-diffusion systems of gradient flow type. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 2017, 159, 316-338.	1.1	3
28	Convergent Lagrangian Discretization for Drift-Diffusion with Nonlocal Aggregation. <i>Springer INdAM Series</i> , 2017, , 313-351.	0.5	3
29	14. Convergence of a fully discrete variational scheme for a thin-film equation. , 2017, , 356-399.		2
30	Discretization of flux-limited gradient flows: Γ -convergence and numerical schemes. <i>Mathematics of Computation</i> , 2019, 89, 1027-1057.	2.1	2
31	The Waiting Time Phenomenon in Spatially Discretized Porous Medium and Thin Film Equations. <i>SIAM Journal on Numerical Analysis</i> , 2021, 59, 60-87.	2.3	2
32	A mathematical theory for wealth distribution. , 2010, , 81-113.		2
33	A Boltzmann-Type Approach to the Formation of Wealth Distribution Curves. <i>SSRN Electronic Journal</i> , 0, , .	0.4	2
34	Kinetic Equations Modelling Wealth Redistribution: A Comparison of Approaches. <i>SSRN Electronic Journal</i> , 0, , .	0.4	2
35	Lagrangian schemes for Wasserstein gradient flows. <i>Handbook of Numerical Analysis</i> , 2021, , 271-311.	1.8	1
36	Gradient flow structure of a multidimensional nonlinear sixth-order quantum-diffusion equation. <i>Pure and Applied Analysis</i> , 2021, 3, 727-764.	1.1	0