Ansgar JÃ¼ngel

List of Publications by Year
in descending order

207 papers	4,405 citations	117625 34 h-index	155660 55 g-index
218 all docs	218 docs citations	218 times ranked	1242 citing authors

#	Article	IF	Citations
1	A discrete boundedness-by-entropy method for finite-volume approximations of cross-diffusion systems. IMA Journal of Numerical Analysis, 2023, 43, 560-589.	2.9	3
2	A minimizing-movements approach to GENERIC systems. Mathematics in Engineering, 2022, 4, 1-18.	0.9	1
3	Nonlocal cross-diffusion systems for multi-species populations and networks. Nonlinear Analysis: Theory, Methods & Applications, 2022, 219, 112800.	1.1	6
4	Formal derivation of quantum drift-diffusion equations with spin-orbit interaction. Kinetic and Related Models, 2022, 15, 257.	0.9	0
5	Analysis of a fractional cross-diffusion system for multi-species populations. Journal of Differential Equations, 2022, 322, 237-267.	2.2	1
6	Existence analysis of a stationary compressible fluid model for heat-conducting and chemically reacting mixtures. Journal of Mathematical Physics, 2022, 63, 051501.	1.1	2
7	Random-batch method for multi-species stochastic interacting particle systems. Journal of Computational Physics, 2022, 463, 111220.	3.8	0
8	Weak-Strong Uniqueness for Maxwell–Stefan Systems. SIAM Journal on Mathematical Analysis, 2022, 54, 3215-3252.	1.9	6
9	Convergence of a finite-volume scheme for a degenerate-singular cross-diffusion system for biofilms. IMA Journal of Numerical Analysis, 2021, 41, 935-973.	2.9	5
10	Analysis of Maxwellâ€“Stefan systems for heat conducting fluid mixtures. Nonlinear Analysis: Real World Applications, 2021, 59, 103263.	1.7	2
11	Entropy-dissipating finite-difference schemes for nonlinear fourth-order parabolic equations. Discrete and Continuous Dynamical Systems - Series B, 2021, 26, 3335.	0.9	0
12	A Convergent Structure-Preserving Finite-Volume Scheme for the Shigesada–Kawasaki–Teramoto Population System. SIAM Journal on Numerical Analysis, 2021, 59, 2286-2309.	2.3	4
13	Global martingale solutions for quasilinear SPDEs via the boundedness-by-entropy method. Annales De L'institut Henri Poincare (B) Probability and Statistics, 2021, 57, .	1.1	2
14	When do cross-diffusion systems have an entropy structure?. Journal of Differential Equations, 2021, 278, 60-72.	2.2	6
15	Existence analysis of a degenerate diffusion system for heat-conducting gases. Nonlinear Differential Equations and Applications, 2021, 28, 1.	0.8	1
16	Rigorous Derivation of Population Cross-Diffusion Systems from Moderately Interacting Particle Systems. Journal of Nonlinear Science, 2021, 31, 1.	2.1	6
17	Exponential Time Decay of Solutions to Reaction-Cross-Diffusion Systems of Maxwellâ€“Stefan Type. Archive for Rational Mechanics and Analysis, 2020, 235, 1059-1104.	2.4	8
18	Cross-diffusion systems and fast-reaction limits. Bulletin Des Sciences Mathematiques, 2020, 159, 102824.	1.0	5

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19	Vanishing cross-diffusion limit in a Kellerâ€“Segel system with additional cross-diffusion. Nonlinear Analysis: Theory, Methods & Applications, 2020, 192, 111698.	1.1	4
20	A structure-preserving discontinuous Galerkin scheme for the Fisherâ€“KPP equation. Numerische Mathematik, 2020, 146, 119-157.	1.9	6
21	Analysis of Cross-Diffusion Systems for Fluid Mixtures Driven by a Pressure Gradient. SIAM Journal on Mathematical Analysis, 2020, 52, 2179-2197.	1.9	6
22	Large-time asymptotics for a matrix spin drift-diffusion model. Journal of Mathematical Analysis and Applications, 2020, 486, 123887.	1.0	2
23	A Finite-Volume Scheme for a Cross-Diffusion Model Arising from Interacting Many-Particle Population Systems. Springer Proceedings in Mathematics and Statistics, 2020, , 223-231.	0.2	3
24	Rigorous mean-field limit and cross-diffusion. Zeitschrift Fur Angewandte Mathematik Und Physik, 2019, 70, 1.	1.4	17
25	High-friction limits of Euler flows for multicomponent systems. Nonlinearity, 2019, 32, 2875-2913.	1.4	8
26	Homogenization of degenerate cross-diffusion systems. Journal of Differential Equations, 2019, 267, 5543-5575.	2.2	3
27	Two Structure-Preserving Time Discretizations for Gradient Flows. Applied Mathematics and Optimization, 2019, 80, 733-764.	1.6	3
28	Global renormalized solutions to reaction-cross-diffusion systems with self-diffusion. Journal of Differential Equations, 2019, 267, 5901-5937.	2.2	5
29	Comparison of a finite-element and finite-volume scheme for a degenerate cross-diffusion system for ion transport. Computational and Applied Mathematics, 2019, 38, 1.	2.2	5
30	Convergence of an implicit Euler Galerkin scheme for Poissonâ€“Maxwellâ€“Stefan systems. Advances in Computational Mathematics, 2019, 45, 1469-1498.	1.6	9
31	Finiteâ€volume scheme for a degenerate crossâ€diffusion model motivated from ion transport. Numerical Methods for Partial Differential Equations, 2019, 35, 545-575.	3.6	13
32	Global martingale solutions for a stochastic population cross-diffusion system. Stochastic Processes and Their Applications, 2019, 129, 3792-3820.	0.9	10
33	Weakâ€“strong uniqueness of renormalized solutions to reactionâ€“cross-diffusion systems. Mathematical Models and Methods in Applied Sciences, 2019, 29, 237-270.	3.3	13
34	Large-time asymptotics of a fractional driftâ€“diffusionâ€“Poisson system via the entropy method. Nonlinear Analysis: Theory, Methods & Applications, 2019, 179, 270-293.	1.1	2
35	Displacement convexity for the entropy in semi-discrete non-linear Fokkerâ€“Planck equations. European Journal of Applied Mathematics, 2019, 30, 1103-1122.	2.9	2
36	Energy-transport systems for optical lattices: Derivation, analysis, simulation. Mathematical Models and Methods in Applied Sciences, 2018, 28, 579-614.	3.3	3

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37	A note on the uniqueness of weak solutions to a class of cross-diffusion systems. Journal of Evolution Equations, 2018, 18, 805-820.	1.1	11
38	Analysis of a degenerate parabolic cross-diffusion system for ion transport. Journal of Mathematical Analysis and Applications, 2018, 461, 523-543.	1.0	12
39	Existence Analysis of a Single-Phase Flow Mixture with van der Waals Pressure. SIAM Journal on Mathematical Analysis, 2018, 50, 1367-1395.	1.9	7
40	Global Existence Analysis of Cross-Diffusion Population Systems for Multiple Species. Archive for Rational Mechanics and Analysis, 2018, 227, 715-747.	2.4	38
41	Pipelined Iterative Solvers with Kernel Fusion for Graphics Processing Units. ACM Transactions on Mathematical Software, 2017, 43, 1-27.	2.9	12
42	Analysis of degenerate cross-diffusion population models with volume filling. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2017, 34, 1-29.	1.4	33
43	A cross-diffusion system derived from a Fokkerâ€“Planck equation with partial averaging. Zeitschrift Fur Angewandte Mathematik Und Physik, 2017, 68, 1.	1.4	4
44	A meeting point of entropy and bifurcations in cross-diffusion herding. European Journal of Applied Mathematics, 2017, 28, 317-356.	2.9	6
45	Corrigendum to â€œAnalysis of degenerate cross-diffusion population models with volume fillingâ€• [Ann. Inst. Henri PoincarÃ© 34 (1) (2017) 1â€“29]. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2017, 34, 789-792.	1.4	4
46	Discrete Beckner inequalities via the Bochnerâ€“Bakryâ€“Emery approach for Markov chains. Annals of Applied Probability, 2017, 27, .	1.3	7
47	Uniform $$L^{infty }$$ Estimates for Approximate Solutions of the Bipolar Drift-Diffusion System. Springer Proceedings in Mathematics and Statistics, 2017, , 381-389.	0.2	3
48	A kinetic equation for economic value estimation with irrationality and herding. Kinetic and Related Models, 2017, 10, 239-261.	0.9	11
49	Entropy-dissipating semi-discrete Rungeâ€“Kutta schemes for nonlinear diffusion equations. Communications in Mathematical Sciences, 2017, 15, 27-53.	1.0	10
50	Energy-transport models for spin transport in ferromagnetic semiconductors. Communications in Mathematical Sciences, 2017, 15, 1527-1563.	1.0	0
51	Blow-up of solutions to semi-discrete parabolic-elliptic Keller-Segel models. Discrete and Continuous Dynamical Systems - Series B, 2017, 22, 1-28.	0.9	0
52	A discrete Bakry-Emery method and its application to the porous-medium equation. Discrete and Continuous Dynamical Systems, 2017, 37, 5541-5560.	0.9	0
53	A finite-volume scheme for a spinorial matrix drift-diffusion model for semiconductors. Numerical Methods for Partial Differential Equations, 2016, 32, 819-846.	3.6	6
54	Entropy-dissipative discretization of nonlinear diffusion equations and discrete Beckner inequalities. ESAIM: Mathematical Modelling and Numerical Analysis, 2016, 50, 135-162.	1.9	18

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55	Qualitative behavior of solutions to cross-diffusion systems from population dynamics. Journal of Mathematical Analysis and Applications, 2016, 440, 794-809.	1.0	7
56	ViennaCL---Linear Algebra Library for Multi- and Many-Core Architectures. SIAM Journal of Scientific Computing, 2016, 38, S412-S439.	2.8	64
57	Entropy Methods for Diffusive Partial Differential Equations. SpringerBriefs in Mathematics, 2016, , .	0.3	81
58	A review of recent advances in the spherical harmonics expansion method for semiconductor device simulation. Journal of Computational Electronics, 2016, 15, 939-958.	2.5	20
59	Fokkerâ€“Planck Equations. SpringerBriefs in Mathematics, 2016, , 19-44.	0.3	0
60	Analysis of a coupled spin driftâ€“diffusion Maxwellâ€“Landauâ€“Lifshitz system. Journal of Differential Equations, 2016, 260, 6828-6854.	2.2	6
61	Hypocoercivity for a Linearized Multispecies Boltzmann System. SIAM Journal on Mathematical Analysis, 2016, 48, 538-568.	1.9	20
62	Cross-Diffusion Systems. SpringerBriefs in Mathematics, 2016, , 69-108.	0.3	2
63	Asymptotic stability of a boundary layer to the Euler--Poisson equations for a multicomponent plasma. Kinetic and Related Models, 2016, 9, 587-603.	0.9	8
64	Towards Discrete Entropy Methods. SpringerBriefs in Mathematics, 2016, , 109-130.	0.3	0
65	Systematic Integration by Parts. SpringerBriefs in Mathematics, 2016, , 45-68.	0.3	0
66	A Degenerate Fourth-Order Parabolic Equation Modeling Boseâ€“Einstein Condensation. Part I: Local Existence of Solutions. Archive for Rational Mechanics and Analysis, 2015, 217, 935-973.	2.4	3
67	Entropy dissipative oneâ€leg multistep time approximations of nonlinear diffusive equations. Numerical Methods for Partial Differential Equations, 2015, 31, 1119-1149.	3.6	8
68	The boundedness-by-entropy method for cross-diffusion systems. Nonlinearity, 2015, 28, 1963-2001.	1.4	125
69	Global existence analysis for degenerate energy-transport models for semiconductors. Journal of Differential Equations, 2015, 258, 2339-2363.	2.2	10
70	Bounded weak solutions to a matrix driftâ€“diffusion model for spin-coherent electron transport in semiconductors. Mathematical Models and Methods in Applied Sciences, 2015, 25, 929-958.	3.3	8
71	A Degenerate Fourth-Order Parabolic Equation Modeling Bose-Einstein Condensation Part II: Finite-Time Blow-Up. Communications in Partial Differential Equations, 2015, 40, 1748-1786.	2.2	3
72	Analysis of an Incompressible Navierâ€“Stokesâ€“Maxwellâ€“Stefan System. Communications in Mathematical Physics, 2015, 340, 471-497.	2.2	35

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73	Performance portability study of linear algebra kernels in OpenCL. , 2014, , .		5
74	A Note on Aubin-Lions-DubinskiÄ-Lemmas. Acta Applicandae Mathematicae, 2014, 133, 33-43.	1.0	50
75	Entropy-stable and entropy-dissipative approximations of a fourth-order quantum diffusion equation. Numerische Mathematik, 2014, 127, 365-396.	1.9	12
76	A finite volume scheme for a Keller-Segel model with additional cross-diffusion. IMA Journal of Numerical Analysis, 2014, 34, 96-122.	2.9	31
77	Cell-centered finite volume schemes for semiconductor device simulation. , 2014, , .		3
78	Perfectly Matched Layers versus discrete transparent boundary conditions in quantum device simulations. Journal of Computational Physics, 2014, 275, 1-24.	3.8	14
79	An Asymptotic Limit of a Navierâ€“Stokes System with Capillary Effects. Communications in Mathematical Physics, 2014, 329, 725-744.	2.2	18
80	On the Lagrangian structure of quantum fluid models. Discrete and Continuous Dynamical Systems, 2014, 34, 1375-1396.	0.9	4
81	Achieving Portable High Performance for Iterative Solvers on Accelerators. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 963-964.	0.2	0
82	Existence Analysis of Maxwell--Stefan Systems for Multicomponent Mixtures. SIAM Journal on Mathematical Analysis, 2013, 45, 2421-2440.	1.9	59
83	BLOW-UP IN TWO-COMPONENT NONLINEAR SCHRÃ–DINGER SYSTEMS WITH AN EXTERNAL DRIVEN FIELD. Mathematical Models and Methods in Applied Sciences, 2013, 23, 1699-1727.	3.3	18
84	A multidimensional nonlinear sixth-order quantum diffusion equation. Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire, 2013, 30, 337-365.	1.4	10
85	Transient SchrÃ¶dingerâ€“Poisson simulations of a high-frequency resonant tunneling diode oscillator. Journal of Computational Physics, 2013, 239, 187-205.	3.8	24
86	Flatness of Semilinear Parabolic PDEsâ€”A Generalized Cauchyâ€“Kowalevski Approach. IEEE Transactions on Automatic Control, 2013, 58, 2277-2291.	5.7	16
87	Existence analysis for a simplified transient energyâ€transport model for semiconductors. Mathematical Methods in the Applied Sciences, 2013, 36, 1701-1712.	2.3	10
88	A note on the GPU acceleration of eigenvalue computations. , 2013, , .		1
89	Two spinorial drift-diffusion models for quantum electron transport in graphene. Communications in Mathematical Sciences, 2013, 11, 807-830.	1.0	9
90	ENTROPY STRUCTURE OF A CROSS-DIFFUSION TUMOR-GROWTH MODEL. Mathematical Models and Methods in Applied Sciences, 2012, 22, 1250009.	3.3	19

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91	Flatness-based trajectory planning for semilinear parabolic PDEs. , 2012, , .		1
92	Inclusion of carrier-carrier-scattering into arbitrary-order spherical harmonics expansions of the Boltzmann transport equation. , 2012, , .		6
93	CROSS DIFFUSION AND NONLINEAR DIFFUSION PREVENTING BLOW UP IN THE KELLERâ€“SEGEL MODEL. Mathematical Models and Methods in Applied Sciences, 2012, 22, .	3.3	29
94	Lyapunov functionals, weak sequential stability, and uniqueness analysis for energy-transport systems. Annali Dell'Universita Di Ferrara, 2012, 58, 89-100.	1.3	1
95	Compact families of piecewise constant functions in. Nonlinear Analysis: Theory, Methods & Applications, 2012, 75, 3072-3077.	1.1	74
96	A GPU-Accelerated Parallel Preconditioner for the Solution of the Boltzmann Transport Equation for Semiconductors. Lecture Notes in Computer Science, 2012, , 147-157.	1.3	1
97	Adaptive variable-order spherical harmonics expansion of the Boltzmann Transport Equation. , 2011, , .		9
98	Parallel preconditioning for spherical harmonics expansions of the Boltzmann transport equation. , 2011, , .		4
99	Cross Diffusion Preventing Blow-Up in the Two-Dimensional Kellerâ€“Segel Model. SIAM Journal on Mathematical Analysis, 2011, 43, 997-1022.	1.9	54
100	Self-heating in a coupled thermo-electric circuit-device model. Journal of Computational Electronics, 2011, 10, 163-178.	2.5	6
101	A New Derivation of the Quantum Navierâ€“Stokes Equations in the Wignerâ€“Fokkerâ€“Planck Approach. Journal of Statistical Physics, 2011, 145, 1661-1673.	1.2	10
102	Diffusive semiconductor moment equations using Fermiâ€“Dirac statistics. Zeitschrift Fur Angewandte Mathematik Und Physik, 2011, 62, 623-639.	1.4	7
103	Convex Sobolev Inequalities Derived from Entropy Dissipation. Archive for Rational Mechanics and Analysis, 2011, 199, 563-596.	2.4	16
104	Analysis of a bipolar energy-transport model for a metal-oxide-semiconductor diode. Journal of Mathematical Analysis and Applications, 2011, 378, 764-774.	1.0	3
105	A simplified quantum energy-transport model for semiconductors. Nonlinear Analysis: Real World Applications, 2011, 12, 1033-1046.	1.7	4
106	A finite-volume scheme for the multidimensional quantum drift-diffusion model for semiconductors. Numerical Methods for Partial Differential Equations, 2011, 27, 1483-1510.	3.6	9
107	Effective velocity in compressible Navierâ€“Stokes equations with third-order derivatives. Nonlinear Analysis: Theory, Methods & Applications, 2011, 74, 2813-2818.	1.1	13
108	On the feasibility of spherical harmonics expansions of the Boltzmann transport equation for three-dimensional device geometries. , 2011, , .		27

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109	Semiclassical limit in a simplified quantum energy-transport model for semiconductors. Kinetic and Related Models, 2011, 4, 1049-1062.	0.9	1
110	Full compressible Navier-Stokes equations for quantum fluids: Derivation and numerical solution. Kinetic and Related Models, 2011, 4, 785-807.	0.9	26
111	Entropies for radially symmetric higher-order nonlinear diffusion equations. Communications in Mathematical Sciences, 2011, 9, 353-382.	1.0	4
112	Matrix compression for spherical harmonics expansions of the Boltzmann transport equation for semiconductors. Journal of Computational Physics, 2010, 229, 8750-8765.	3.8	13
113	Time-dependent simulations of quantum waveguides using a time-splitting spectral method. Mathematics and Computers in Simulation, 2010, 81, 883-898.	4.4	5
114	The zero-electron-mass limit in the hydrodynamic model for plasmas. Nonlinear Analysis: Theory, Methods & Applications, 2010, 72, 4415-4427.	1.1	24
115	Global Weak Solutions to Compressible Navierâ€“Stokes Equations for Quantum Fluids. SIAM Journal on Mathematical Analysis, 2010, 42, 1025-1045.	1.9	109
116	System matrix compression for spherical harmonics expansions of the Boltzmann transport equation. , 2010, , .		1
117	Energy transport in semiconductor devices. Mathematical and Computer Modelling of Dynamical Systems, 2010, 16, 1-22.	2.2	16
118	Diffusive and nondiffusive population models. Modeling and Simulation in Science, Engineering and Technology, 2010, , 397-425.	0.6	22
119	Small velocity and finite temperature variations in kinetic relaxation models. Kinetic and Related Models, 2010, 3, 1-15.	0.9	1
120	Global existence of solutions to one-dimensional viscous quantum hydrodynamic equations. Journal of Differential Equations, 2009, 247, 3117-3135.	2.2	29
121	A Three-Dimensional Mixed Finite-Element Approximation of the Semiconductor Energy-Transport Equations. SIAM Journal of Scientific Computing, 2009, 31, 1120-1140.	2.8	10
122	A Sixth-Order Nonlinear Parabolic Equation for Quantum Systems. SIAM Journal on Mathematical Analysis, 2009, 41, 1472-1490.	1.9	18
123	Transport Equations for Semiconductors. Lecture Notes in Physics, 2009, , .	0.7	166
124	Drift-Diffusion Equations. Lecture Notes in Physics, 2009, , 1-29.	0.7	3
125	Energy-Transport Equations. Lecture Notes in Physics, 2009, , 1-27.	0.7	2
126	The Wigner Equation. Lecture Notes in Physics, 2009, , 1-17.	0.7	0

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127	Spherical Harmonics Expansion Equations. Lecture Notes in Physics, 2009, , 1-14.	0.7	0
128	Mixed entropy estimates for the porous-medium equation with convection. Discrete and Continuous Dynamical Systems - Series B, 2009, 12, 783-796.	0.9	2
129	Derivation of Macroscopic Equations. Lecture Notes in Physics, 2009, , 1-10.	0.7	0
130	Collisionless Models. Lecture Notes in Physics, 2009, , 1-14.	0.7	0
131	Scattering Models. Lecture Notes in Physics, 2009, , 1-25.	0.7	0
132	Hydrodynamic Equations. Lecture Notes in Physics, 2009, , 1-19.	0.7	0
133	Quantum Diffusive Higher-Order Moment Equations. Lecture Notes in Physics, 2009, , 1-8.	0.7	0
134	Quantum Hydrodynamic Equations. Lecture Notes in Physics, 2009, , 1-26.	0.7	0
135	Quantum Drift-Diffusion Equations. Lecture Notes in Physics, 2009, , 1-24.	0.7	0
136	Sequential Quadratic Programming Method forÂVolatility Estimation inÂOptionÂPricing. Journal of Optimization Theory and Applications, 2008, 139, 515-540.	1.5	2
137	Non-homogeneous boundary conditions for a fourth-order diffusion equation. Comptes Rendus Mathematique, 2008, 346, 143-148.	0.3	1
138	The Derridaâ€“Lebowitzâ€“Speerâ€“Spohn Equation: Existence, NonUniqueness, and Decay Rates of the Solutions. SIAM Journal on Mathematical Analysis, 2008, 39, 1996-2015.	1.9	70
139	Numerical Coupling of Electric Circuit Equations and Energy-Transport Models for Semiconductors. SIAM Journal of Scientific Computing, 2008, 30, 873-894.	2.8	13
140	SIMULATION OF THERMAL EFFECTS IN OPTOELECTRONIC DEVICES USING COUPLED ENERGY-TRANSPORT AND CIRCUIT MODELS. Mathematical Models and Methods in Applied Sciences, 2008, 18, 2125-2150.	3.3	4
141	Numerical Simulation of Thermal Effects in Coupled Optoelectronic Device-circuit Systems. , 2008, , 29-38.		1
142	Convergence of an entropic semi-discretization for nonlinear Fokker-Planck equations in $mathbb{R}^d$. Publicacions Matematiques, 2008, 52, 413-433.	0.5	6
143	Analysis of a Parabolic Cross-Diffusion Semiconductor Model with Electron-Hole Scattering. Communications in Partial Differential Equations, 2007, 32, 127-148.	2.2	28
144	A Hierarchy of Diffusive Higher-Order Moment Equations for Semiconductors. SIAM Journal on Applied Mathematics, 2007, 68, 171-198.	1.8	13

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145	A Two-Surface Problem of the Electron Flow in a Semiconductor on the Basis of Kinetic Theory. Journal of Statistical Physics, 2007, 130, 313-342.	1.2	3
146	First-order entropies for the Derrida-Lebowitz-Speer-Spohn equation. Discrete and Continuous Dynamical Systems - Series B, 2007, 8, 861-877.	0.9	14
147	Physical and numerical viscosity for quantum hydrodynamics. Communications in Mathematical Sciences, 2007, 5, 447-471.	1.0	27
148	A Nonlinear Fourthâ€order Parabolic Equation with Nonhomogeneous Boundary Conditions. SIAM Journal on Mathematical Analysis, 2006, 37, 1761-1779.	1.9	27
149	Derivation of New Quantum Hydrodynamic Equations Using Entropy Minimization. SIAM Journal on Applied Mathematics, 2006, 67, 46-68.	1.8	50
150	Numerical approximation of the viscous quantum hydrodynamic model for semiconductors. Applied Numerical Mathematics, 2006, 56, 899-915.	2.1	27
151	Analysis of a parabolic cross-diffusion population model without self-diffusion. Journal of Differential Equations, 2006, 224, 39-59.	2.2	119
152	The relaxation-time limit in the quantum hydrodynamic equations for semiconductors. Journal of Differential Equations, 2006, 225, 440-464.	2.2	30
153	An algorithmic construction of entropies in higher-order nonlinear PDEs. Nonlinearity, 2006, 19, 633-659.	1.4	47
154	Multi-Scale Modeling of Quantum Semiconductor Devices. , 2006, , 331-363.		5
155	Entropy-energy inequalities and improved convergence rates for nonlinear parabolic equations. Discrete and Continuous Dynamical Systems - Series B, 2006, 6, 1027-1050.	0.9	18
156	A logarithmic fourth-order parabolic equation and related logarithmic Sobolev inequalities. Communications in Mathematical Sciences, 2006, 4, 275-290.	1.0	22
157	Existence and uniqueness of solutions to a quasilinear parabolic equation with quadratic gradients in financial markets. Nonlinear Analysis: Theory, Methods & Applications, 2005, 62, 519-544.	1.1	11
158	Discrete minimum and maximum principles for finite element approximations of non-monotone elliptic equations. Numerische Mathematik, 2005, 99, 485-508.	1.9	15
159	Semiconductor Simulations Using a Coupled Quantum Driftâ€Diffusion SchrÃ¶dingerâ€“Poisson Model. SIAM Journal on Applied Mathematics, 2005, 66, 554-572.	1.8	20
160	Quantum Euler-Poisson systems: global existence and exponential decay. Quarterly of Applied Mathematics, 2004, 62, 569-600.	0.7	57
161	Analysis of a Multidimensional Parabolic Population Model with Strong Cross-Diffusion. SIAM Journal on Mathematical Analysis, 2004, 36, 301-322.	1.9	130
162	Convergence of a high-order compact finite difference scheme for a nonlinear Blackâ€“Scholes equation. ESAIM: Mathematical Modelling and Numerical Analysis, 2004, 38, 359-369.	1.9	44

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163	ANALYSIS OF A SPHERICAL HARMONICS EXPANSION MODEL OF PLASMA PHYSICS. Mathematical Models and Methods in Applied Sciences, 2004, 14, 759-774.	3.3	5
164	Analysis of the viscous quantum hydrodynamic equations for semiconductors. European Journal of Applied Mathematics, 2004, 15, 577-595.	2.9	47
165	An Adaptive Mixed Scheme for Energy-Transport Simulations of Field-Effect Transistors. SIAM Journal of Scientific Computing, 2004, 25, 1698-1716.	2.8	13
166	Asymptotic Limits in Macroscopic Plasma Models. The IMA Volumes in Mathematics and Its Applications, 2004, , 151-166.	0.5	0
167	Semi-discretization in time and numerical convergence of solutions of a nonlinear cross-diffusion population model. Numerische Mathematik, 2003, 93, 655-673.	1.9	82
168	Global smooth solutions to the multi-dimensional hydrodynamic model for two-carrier plasmas. Journal of Differential Equations, 2003, 190, 663-685.	2.2	72
169	Exponential decay in time of solutions of the viscous quantum hydrodynamic equations. Applied Mathematics Letters, 2003, 16, 1273-1278.	2.7	26
170	High Order Compact Finite Difference Schemes for a Nonlinear Black-Scholes Equation. International Journal of Theoretical and Applied Finance, 2003, 06, 767-789.	0.5	58
171	A Mixed Finite-Element Discretization of the Energy-Transport Model for Semiconductors. SIAM Journal of Scientific Computing, 2003, 24, 2058-2075.	2.8	26
172	A Parabolic Cross-Diffusion System for Granular Materials. SIAM Journal on Mathematical Analysis, 2003, 35, 561-578.	1.9	23
173	Convergence of Nonlinear SchrÃ¶dingerâ€“Poisson Systems to the Compressible Euler Equations. Communications in Partial Differential Equations, 2003, 28, 1005-1022.	2.2	20
174	Convergent semidiscretization of a nonlinear fourth order parabolic system. ESAIM: Mathematical Modelling and Numerical Analysis, 2003, 37, 277-289.	1.9	24
175	Recent Progress on Quantum Hydrodynamic Models for Semiconductors. , 2003, , 217-226.		3
176	Positive entropic schemes for a nonlinear fourth-order parabolic equation. Discrete and Continuous Dynamical Systems - Series B, 2003, 3, 1-20.	0.9	9
177	LOCAL EXISTENCE OF SOLUTIONS TO THE TRANSIENT QUANTUM HYDRODYNAMIC EQUATIONS. Mathematical Models and Methods in Applied Sciences, 2002, 12, 485-495.	3.3	38
178	ASYMPTOTIC LIMITS FOR QUANTUM TRAJECTORY MODELS. Communications in Partial Differential Equations, 2002, 27, 669-691.	2.2	14
179	A relaxation scheme for the hydrodynamic equations forÂsemiconductors. Applied Numerical Mathematics, 2002, 43, 229-252.	2.1	14
180	A Positivity-Preserving Numerical Scheme for a Nonlinear Fourth Order Parabolic System. SIAM Journal on Numerical Analysis, 2001, 39, 385-406.	2.3	68

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181	Positive Solutions to Singular Second and Third Order Differential Equations for Quantum Fluids. Archive for Rational Mechanics and Analysis, 2001, 156, 183-203.	2.4	41
182	Entropy Dissipation Methods for Degenerate ParabolicProblems and Generalized Sobolev Inequalities. Monatshefte Fur Mathematik, 2001, 133, 1-82.	0.9	280
183	On a quasilinear degenerate system arising in semiconductors theory. Part I: Existence and uniqueness of solutions. Nonlinear Analysis: Real World Applications, 2001, 2, 305-336.	1.7	26
184	Nonlinear problems in quantum semiconductor modeling. Nonlinear Analysis: Theory, Methods & Applications, 2001, 47, 5873-5884.	1.1	27
185	Subsonic Solutions to a One-Dimensional Non-isentropic Hydrodynamic Model for Semiconductors. Journal of Mathematical Analysis and Applications, 2001, 258, 52-62.	1.0	21
186	Quasi-hydrodynamic Semiconductor Equations. , 2001, , .		197
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