

Pierangelo A Marcati

List of Publications by Year in descending order

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87
papers

1,938
citations

257450

24
h-index

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43
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94
all docs

94
docs citations

94
times ranked

447
citing authors

#	ARTICLE	IF	CITATIONS
1	Weak solutions to a hydrodynamic model for semiconductors and relaxation to the drift-diffusion equation. <i>Archive for Rational Mechanics and Analysis</i> , 1995, 129, 129-145.	2.4	184
2	The one-dimensional Darcy's law as the limit of a compressible Euler flow. <i>Journal of Differential Equations</i> , 1990, 84, 129-147.	2.2	126
3	The L^p - L^q estimates of solutions to one-dimensional damped wave equations and their application to the compressible flow through porous media. <i>Journal of Differential Equations</i> , 2003, 191, 445-469.	2.2	113
4	Convergence to the Barenblatt Solution for the Compressible Euler Equations with Damping and Vacuum. <i>Archive for Rational Mechanics and Analysis</i> , 2005, 176, 1-24.	2.4	113
5	On the Finite Energy Weak Solutions to a System in Quantum Fluid Dynamics. <i>Communications in Mathematical Physics</i> , 2009, 287, 657-686.	2.2	91
6	Existence and Asymptotic Behavior of Multi-Dimensional Quantum Hydrodynamic Model for Semiconductors. <i>Communications in Mathematical Physics</i> , 2004, 245, 215-247.	2.2	75
7	Hyperbolic to Parabolic Relaxation Theory for Quasilinear First Order Systems. <i>Journal of Differential Equations</i> , 2000, 162, 359-399.	2.2	73
8	A quasineutral type limit for the Navier-Stokes-Poisson system with large data. <i>Nonlinearity</i> , 2008, 21, 135-148.	1.4	72
9	Weak solutions to a hydrodynamic model for semiconductors: the Cauchy problem. <i>Proceedings of the Royal Society of Edinburgh Section A: Mathematics</i> , 1995, 125, 115-131.	1.2	71
10	Global well-posedness and relaxation limits of a model for radiating gas. <i>Journal of Differential Equations</i> , 2003, 190, 439-465.	2.2	69
11	The Quantum Hydrodynamics System in Two Space Dimensions. <i>Archive for Rational Mechanics and Analysis</i> , 2012, 203, 499-527.	2.4	61
12	Optimal Convergence Rates to Diffusion Waves for Solutions of the Hyperbolic Conservation Laws with Damping. <i>Journal of Mathematical Fluid Mechanics</i> , 2005, 7, S224-S240.	1.0	53
13	The relaxation to the drift-diffusion system for the 3-D isentropic Euler-Poisson model for semiconductors. <i>Discrete and Continuous Dynamical Systems</i> , 1999, 5, 449-455.	0.9	50
14	Convergence to nonlinear diffusion waves for solutions of the initial boundary problem to the hyperbolic conservation laws with damping. <i>Quarterly of Applied Mathematics</i> , 2000, 58, 763-784.	0.7	49
15	Well/ill Posedness for the Euler-Korteweg-Poisson System and Related Problems. <i>Communications in Partial Differential Equations</i> , 2015, 40, 1314-1335.	2.2	45
16	The combined relaxation and vanishing Debye length limit in the hydrodynamic model for semiconductors. <i>Mathematical Methods in the Applied Sciences</i> , 2001, 24, 81-92.	2.3	38
17	On the Diffusive Profiles for the System of Compressible Adiabatic Flow through Porous Media. <i>SIAM Journal on Mathematical Analysis</i> , 2001, 33, 790-826.	1.9	36
18	Singular convergence of weak solutions for a quasilinear nonhomogeneous hyperbolic system. <i>Manuscripta Mathematica</i> , 1988, 60, 49-69.	0.6	35

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19	Global asymptotic stability for a vector disease model with spatial spread. <i>Journal of Mathematical Biology</i> , 1980, 9, 179-187.	1.9	32
20	Low Mach number limit for the quantum hydrodynamics system. <i>Research in Mathematical Sciences</i> , 2016, 3, 1.	1.0	30
21	Asymptotic Behavior in Age-Dependent Population Dynamics with Hereditary Renewal Law. <i>SIAM Journal on Mathematical Analysis</i> , 1981, 12, 904-916.	1.9	29
22	Convergence of singular limits for multi-D semilinear hyperbolic systems to parabolic systems. <i>Transactions of the American Mathematical Society</i> , 2004, 356, 2093-2121.	0.9	29
23	On the global stability of the logistic age-dependent population growth. <i>Journal of Mathematical Biology</i> , 1982, 15, 215-226.	1.9	28
24	The Zero Relaxation Limit for the Hydrodynamic Whitham Traffic Flow Model. <i>Journal of Differential Equations</i> , 1997, 141, 150-178.	2.2	28
25	A DISPERSIVE APPROACH TO THE ARTIFICIAL COMPRESSIBILITY APPROXIMATIONS OF THE NAVIER-STOKES EQUATIONS IN 3D. <i>Journal of Hyperbolic Differential Equations</i> , 2006, 03, 575-588.	0.5	22
26	Quasi-Neutral Limit, Dispersion, and Oscillations for Korteweg-Type Fluids. <i>SIAM Journal on Mathematical Analysis</i> , 2015, 47, 2265-2282.	1.9	22
27	Decay and stability for nonlinear hyperbolic equations. <i>Journal of Differential Equations</i> , 1984, 55, 30-58.	2.2	21
28	Analysis of Oscillations and Defect Measures for the Quasineutral Limit in Plasma Physics. <i>Archive for Rational Mechanics and Analysis</i> , 2012, 206, 159-188.	2.4	21
29	Approximate solutions to conservation laws via convective parabolic equations. <i>Communications in Partial Differential Equations</i> , 1988, 13, 321-344.	2.2	20
30	Stability for second order abstract evolution equations. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1984, 8, 237-252.	1.1	18
31	The zero relaxation limit for 2D hyperbolic systems. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1999, 38, 375-389.	1.1	18
32	A General 3D Model for Growth Dynamics of Sensory-Growth Systems: From Plants to Robotics. <i>Frontiers in Robotics and AI</i> , 2020, 7, 89.	3.2	17
33	Leray weak solutions of the incompressible Navier Stokes system on exterior domains via the artificial compressibility method. <i>Indiana University Mathematics Journal</i> , 2010, 59, 1831-1852.	0.9	14
34	A model of synchronization over quantum networks. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 315101.	2.1	14
35	Linear stability analysis of the homogeneous Couette flow in a 2D isentropic compressible fluid. <i>Annals of PDE</i> , 2021, 7, 1.	1.8	14
36	Convergence of the pseudo-viscosity approximation for conservation laws. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1994, 23, 621-628.	1.1	12

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37	A Quasi-Neutral Limit in a Hydrodynamic Model for Charged Fluids. Monatshefte Fur Mathematik, 2003, 138, 189-208.	0.9	12
38	Steady states and interface transmission conditions for heterogeneous quantum-classical 1-D hydrodynamic model of semiconductor devices. Physica D: Nonlinear Phenomena, 2013, 243, 1-13.	2.8	11
39	Incompressible Type Limit Analysis of a Hydrodynamic Model for Charge-Carrier Transport. SIAM Journal on Mathematical Analysis, 2013, 45, 915-933.	1.9	11
40	Global weak entropy solutions to quasilinear wave equations of Klein-Gordon and Sine-Gordon type. Journal of the Mathematical Society of Japan, 1998, 50, 433.	0.4	10
41	Optimal control of plant root tip dynamics in soil. Bioinspiration and Biomimetics, 2020, 15, 056006.	2.9	10
42	Stationary solution for transient quantum hydrodynamics with bohmian-type boundary conditions. Computational and Applied Mathematics, 2017, 36, 459-479.	1.3	9
43	Non-relativistic limit analysis of the Chandrasekhar-Thorne relativistic Euler equations with physical vacuum. Mathematical Models and Methods in Applied Sciences, 2019, 29, 531-579.	3.3	8
44	On the Low Mach Number Limit for Quantum Navier-Stokes Equations. SIAM Journal on Mathematical Analysis, 2020, 52, 6105-6139.	1.9	8
45	ASYMPTOTIC BEHAVIOR OF NONLINEAR SCHRÖDINGER SYSTEMS WITH LINEAR COUPLING. Journal of Hyperbolic Differential Equations, 2014, 11, 159-183.	0.5	7
46	Dispersive shocks in quantum hydrodynamics with viscosity. Physica D: Nonlinear Phenomena, 2020, 402, 132222.	2.8	7
47	The Wigner-Lohe model for quantum synchronization and its emergent dynamics. Networks and Heterogeneous Media, 2017, 12, 403-416.	1.1	7
48	Nonlinear Maxwell-Schrödinger system and quantum magneto-hydrodynamics in \mathbb{R}^3 . Communications in Mathematical Sciences, 2017, 15, 451-479.	1.0	7
49	Some considerations on the mathematical approach to nonlinear age dependent population dynamics. Computers and Mathematics With Applications, 1983, 9, 361-370.	2.7	6
50	Analysis of solutions for a cerebrospinal fluid model. Nonlinear Analysis: Real World Applications, 2018, 44, 417-448.	1.7	6
51	SINGULAR CONVERGENCE TO NONLINEAR DIFFUSION WAVES FOR SOLUTIONS TO THE CAUCHY PROBLEM FOR THE COMPRESSIBLE EULER EQUATIONS WITH DAMPING. Mathematical Models and Methods in Applied Sciences, 2002, 12, 1317-1336.	3.3	5
52	Numerical investigations of dispersive shocks and spectral analysis for linearized quantum hydrodynamics. Applied Mathematics and Computation, 2020, 385, 125450.	2.2	5
53	Genuine Hydrodynamic Analysis to the 1-D QHD System: Existence, Dispersion and Stability. Communications in Mathematical Physics, 2021, 383, 2113-2161.	2.2	5
54	Splash singularities for a 2D Oldroyd-B model with nonlinear Piola-Kirchhoff stress. Nonlinear Differential Equations and Applications, 2017, 24, 1.	0.8	4

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55	Abstract stability theory and applications to hyperbolic equations with time dependent dissipative force fields. <i>Computers and Mathematics With Applications</i> , 1986, 12, 541-550.	2.7	3
56	Splash Singularities for a General Oldroyd Model with Finite Weissenberg Number. <i>Archive for Rational Mechanics and Analysis</i> , 2020, 235, 1589-1660.	2.4	3
57	Splash Singularity for a Free-Boundary Incompressible Viscoelastic Fluid Model. <i>Springer Proceedings in Mathematics and Statistics</i> , 2018, , 501-513.	0.2	3
58	The Quasineutral Limit for the Navier-Stokes-Fourier-Poisson System. <i>Springer Proceedings in Mathematics and Statistics</i> , 2014, , 193-206.	0.2	3
59	Quantum hydrodynamics with nonlinear interactions. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2016, 9, 1-13.	1.1	3
60	Fault shape effect on SH waves using finite element method. <i>Journal of Seismology</i> , 2022, 26, 417-437.	1.3	3
61	Approximate solutions to first and second order quasilinear evolution equations via nonlinear viscosity. <i>Transactions of the American Mathematical Society</i> , 1994, 342, 501-521.	0.9	2
62	CONVERGENCE OF A BGK APPROXIMATION OF THE ISENTROPIC EULER EQUATIONS. <i>Journal of Hyperbolic Differential Equations</i> , 2011, 08, 233-255.	0.5	2
63	Low Mach Number Limit on Exterior Domains. <i>Acta Mathematica Scientia</i> , 2012, 32, 164-176.	1.0	2
64	Stability for the quadratic derivative nonlinear Schrödinger equation and applications to the Korteweg-Kirchhoff type Euler equations for quantum hydrodynamics. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 2019, 186, 209-218.	1.1	2
65	Splash singularity for a free-boundary incompressible viscoelastic fluid model. <i>Advances in Mathematics</i> , 2020, 368, 107124.	1.1	2
66	Singular Limits for Nonlinear Hyperbolic Systems. , 2002, , 79-96.		2
67	A Vanishing Debye Length Limit in a Hydrodynamic Model for Semiconductors. , 2001, , 409-414.		2
68	ASYMPTOTIC BEHAVIOR OF THE RENEWAL EQUATION ARISING IN THE GURTIN POPULATION MODEL. , 1982, , 655-662.		2
69	On a nonconservative hyperbolic system describing the nonlinear age dependent populations growth. <i>Computers and Mathematics With Applications</i> , 1985, 11, 207-222.	2.7	1
70	Almost periodic solutions for a semilinear quasi-autonomous hyperbolic problem. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1986, 10, 1053-1067.	1.1	1
71	APPLICATION OF THE DIV-CURL LEMMA FOR MAXWELL'S EQUATIONS WITH NON-LINEAR CONDUCTIVITY. <i>Journal of Hyperbolic Differential Equations</i> , 2011, 08, 257-267.	0.5	1
72	Dissipative martingale solutions of the stochastically forced Navier-Stokes-Poisson system on domains without boundary. <i>Nonlinear Analysis: Real World Applications</i> , 2021, 57, 103201.	1.7	1

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73	SOME CONSIDERATIONS ON THE MATHEMATICAL APPROACH TO NONLINEAR AGE DEPENDENT POPULATION DYNAMICS. , 1983, , 361-369.		1
74	Approximate Solutions to First and Second Order Quasilinear Evolution Equations via Nonlinear Viscosity. Transactions of the American Mathematical Society, 1994, 342, 501.	0.9	1
75	A comparison of two mathematical models of the cerebrospinal fluid dynamics. Mathematical Biosciences and Engineering, 2019, 16, 2811-2851.	1.9	1
76	Cauchy problem for compressible Euler equations with damping. , 2000, , 315-317.		1
77	Preface II. Kinetic and Related Models, 2009, 2, v-vii.	0.9	1
78	Nonhomogeneous quasilinear hyperbolic systems: Initial and boundary value problem. Lecture Notes in Mathematics, 1988, , 193-200.	0.2	0
79	Evolution of hypersurfaces in \mathbb{R}^N by Gaussian curvature. Nonlinear Differential Equations and Applications, 1999, 6, 119-132.	0.8	0
80	Dispersive behaviour in the analysis of acoustic waves and plasma oscillations. Bulletin of the Brazilian Mathematical Society, 2016, 47, 291-305.	0.8	0
81	Parabolic Relaxation of Semilinear Multidimensional Hyperbolic Systems. , 2001, , 307-316.		0
82	Artificial Compressibility Approximation for the Incompressible Navier-Stokes Equations on Unbounded Domain. , 2008, , 475-483.		0
83	Finite Energy Weak Solutions to the Quantum Hydrodynamics System. The IMA Volumes in Mathematics and Its Applications, 2011, , 205-216.	0.5	0
84	Analysis of Quasineutral Limits. Series in Contemporary Applied Mathematics, 2012, , 390-397.	0.8	0
85	Approximate Solutions to Conservation Laws Via Convective Parabolic Equations : Analytical and Numerical Results. , 1987, , 169-177.		0
86	Fluid flow in macromolecular systems and related perturbation problems. Annales De La Faculté Des Sciences De Toulouse, 1990, 11, 73-92.	0.3	0
87	The Cauchy Problem for the Maxwell-Schrödinger System with a Power-Type Nonlinearity. Springer Proceedings in Mathematics and Statistics, 2018, , 71-83.	0.2	0