Armando Majorana

List of Publications by Year
in descending order

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58	907	430874	477307
papers	citations	18 h-index	29 g-index

59	59	59	267
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A WENO-solver for the transients of Boltzmannâ€“Poisson system for semiconductor devices: performance and comparisons with Monte Carlo methods. Journal of Computational Physics, 2003, 184, 498-525.	3.8	120
2	A discontinuous Galerkin solver for Boltzmannâ€“Poisson systems in nano devices. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 3130-3150.	6.6	62
3	A Finite Difference Scheme Solving the Boltzmannâ€“Poisson System for Semiconductor Devices. Journal of Computational Physics, 2001, 174, 649-668.	3.8	56
4	Space homogeneous solutions of the Boltzmann equation describing electron-phonon interactions in semiconductors. Transport Theory and Statistical Physics, 1991, 20, 261-279.	0.4	55
5	DSMC method consistent with the Pauli exclusion principle and comparison with deterministic solutions for charge transport in graphene. Journal of Computational Physics, 2015, 302, 267-284.	3.8	50
6	2D semiconductor device simulations by WENO-Boltzmann schemes: Efficiency, boundary conditions and comparison to Monte Carlo methods. Journal of Computational Physics, 2006, 214, 55-80.	3.8	48
7	Shock structure for heat conducting and viscid fluids. Meccanica, 1981, 16, 149-156.	2.0	40
8	A Direct Solver for 2D Non-Stationary Boltzmann-Poisson Systems for Semiconductor Devices: A MESFET Simulation by WENO-Boltzmann Schemes. Journal of Computational Electronics, 2003, 2, 375-380.	2.5	36
9	Cross validation of discontinuous Galerkin method and Monte Carlo simulations of charge transport in graphene on substrate. Ricerche Di Matematica, 2017, 66, 201-220.	1.0	31
10	Equilibrium solutions of the non-linear Boltzmann equation for an electron gas in a semiconductor. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1993, 108, 871-877.	0.2	26
11	Existence and uniqueness of positive solutions to a linear transport equation in a metric space. Applied Mathematics Letters, 1997, 10, 49-53.	2.7	24
12	Magnetoacoustic shock waves in a relativistic gas. Physics of Fluids, 1987, 30, 3045.	1.4	23
13	Charge transport in 1D silicon devices via Monte Carlo simulation and Boltzmannâ€Poisson solver. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2004, 23, 410-425.	0.9	21
14	Shock Structure in Relativistic Fluid-Dynamics. Journal of Non-Equilibrium Thermodynamics, 1985, 10, .	4.2	20
15	Simulation of Bipolar Charge Transport in Graphene by Using a Discontinuous Galerkin Method. Communications in Computational Physics, 2019, 26, 114-134.	1.7	20
16	Space Homogeneous Solutions of the Linear Semiconductor Boltzmann Equation. Journal of Mathematical Analysis and Applications, 2001, 259, 609-629.	1.0	19
17	A WENO-Solver for the 1D Non-Stationary Boltzmannâ€“Poisson System for Semiconductor Devices. Journal of Computational Electronics, 2002, 1, 365-370.	2.5	19
18	A brief survey of the discontinuous Galerkin method for the Boltzmann-Poisson equations. BoletÃn De La Sociedad EspaÃ‘ola De MatemÃ‘tica Aplicada, 2011, 54, 47-64.	0.9	19

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19	Charge transport and mobility in monolayer graphene. Journal of Mathematics in Industry, 2016, 7, .	1.2	19
20	Discontinuous Galerkin solver for Boltzmann-Poisson transients. Journal of Computational Electronics, 2008, 7, 119-123.	2.5	18
21	Analysis of thermal, sound, and shear waves according to a relativistic kinetic model. Physics of Fluids, 1985, 28, 1673.	1.4	15
22	Conservation laws from the Boltzmann equation describing electron-phonon interactions in semiconductors. Transport Theory and Statistical Physics, 1993, 22, 849-859.	0.4	15
23	On a four-body problem. Celestial Mechanics, 1981, 25, 267-270.	0.1	13
24	A numerical model of the Boltzmann equation related to the discontinuous Galerkin method. Kinetic and Related Models, 2011, 4, 139-151.	0.9	12
25	Space Homogeneous Solutions to the Cauchy Problem for Semiconductor Boltzmann Equations. SIAM Journal on Mathematical Analysis, 1997, 28, 1294-1308.	1.9	11
26	Deterministic Simulation of the Boltzmann--Poisson System in GaAs-Based Semiconductors. SIAM Journal of Scientific Computing, 2006, 27, 1981-2009.	2.8	11
27	Trend to equilibrium of electron gas in a semiconductor according to the Boltzmann equation. Transport Theory and Statistical Physics, 1998, 27, 547-571.	0.4	9
28	Propagation of infinitesimal disturbances in a gas according to a relativistic kinetic model. Meccanica, 1984, 19, 175-181.	2.0	8
29	Structure of shock waves in relativistic simple gases. Physics of Fluids, 1988, 31, 1064.	1.4	8
30	A Discontinuous Galerkin Solver for Full-Band Boltzmann-Poisson Models. , 2009, , .		8
31	Continuous Solutions of a Nonlinear Integral Equation on an Unbounded Domain. Journal of Integral Equations and Applications, 1994, 6, .	0.6	8
32	DSMC versus WENO-BTE: A double gate MOSFET example. Journal of Computational Electronics, 2007, 5, 471-474.	2.5	7
33	Analysis of thermal and shear waves according to BKG kinetic model. Zeitschrift Fur Angewandte Mathematik Und Physik, 1985, 36, 699-711.	1.4	6
34	Analytical solutions of the Rankine-Hugoniot relations for a relativistic simple gas. Il Nuovo Cimento B, 1987, 98, 111-118.	0.1	5
35	STATIONARY SOLUTIONS OF HYDRODYNAMIC MODELS FOR SEMICONDUCTOR DEVICE SIMULATION. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 1993, 12, 81-93.	0.9	5
36	Discontinuous Galerkin Solver for the Semiconductor Boltzmann Equation. , 2007, , 257-260.		5

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37	Finite amplitude water waves above a sloping beach. Wave Motion, 1985, 7, 229-233.	2.0	4
38	Relativistic relaxation models for a simple gas. Journal of Mathematical Physics, 1990, 31, 2042-2046.	1.1	4
39	Numerical Solutions of the Spatially Homogeneous Boltzmann Equation for Electrons in n-Doped Graphene on a Substrate. Journal of Computational and Theoretical Transport, 2017, 46, 176-185.	0.8	4
40	Shock structure in an ultrarelativistic gas. Meccanica, 1990, 25, 77-82.	2.0	3
41	The Velocity Overshoot in Semiconductors According to a Transport Model Derived from the Boltzmann Equation. Transport Theory and Statistical Physics, 2000, 29, 805-823.	0.4	3
42	A Uniqueness Theorem for y ï¿½ = f(x, y), y(x 0) = y 0. Proceedings of the American Mathematical Society, 1991, 111, 215.	0.8	2
43	On the Cauchy problem for spatially homogeneous semiconductor Boltzmann equations: existence and uniqueness. Annali Di Matematica Pura Ed Applicata, 2005, 184, 275-296.	1.0	2
44	Discontinuous Galerkin methods for the Boltzmann-Poisson systems in semiconductor device simulations. , 2011, , .		2
45	Discontinuous Galerkin deterministic solvers for a Boltzmannâ€“Poisson model of hot electron transport by averaged empirical pseudopotential band structures. Computer Methods in Applied Mechanics and Engineering, 2017, 321, 209-234.	6.6	2
46	Finite moment equations for a relativistic simple gas. Journal of Mathematical Physics, 1988, 29, 987-989.	1.1	1
47	A uniqueness theorem for ?â€™=?(?,?),?(?â,€)=?â,€. Proceedings of the American Mathematical Society, 1991, 111, 215-220.	0.8	1
48	A boundary value problem for a kinetic model describing electron flow in a semiconductor. Mathematical Methods in the Applied Sciences, 2000, 23, 735-750.	2.3	1
49	High field mobility and diffusivity of an electron gas in silicon devices. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2002, 21, 31-44.	0.9	1
50	Performance of a discontinuous Galerkin solver for semiconductor boltzmann equations. , 2010, , .		1
51	Numerical solutions to a microcontinuum model using WENO schemes. Continuum Mechanics and Thermodynamics, 2020, 32, 945-957.	2.2	1
52	Approximate explicit stationary solutions to a Vlasov equation for planetary rings. Kinetic and Related Models, 2017, 10, 467-479.	0.9	1
53	A fast approach to discontinuous Galerkin solvers for Boltzmann-Poisson transport systems for full electronic bands and phonon scattering. , 2012, , .		0
54	Deterministic solutions of the Boltzmann equation for charge transport in graphene on substrates. , 2016, , .		0

#	Article	IF	Citations
55	Deterministic numerical solutions to a semi-discrete Boltzmann equation. AIP Conference Proceedings, 2019, , .	0.4	0
56	HOW TO TACKLE THE BOLTZMANN EQUATION FOR INDUSTRIAL SEMICONDUCTOR DEVICE SIMULATION. , 2005, , .		0
57	Deterministic Solutions of the Transport Equation for Charge Carrier in Graphene. Mathematics in Industry, 2016, , 741-748.	0.3	0
58	A BGK model for charge transport in graphene. Communications in Applied and Industrial Mathematics, 2019, 10, 153-161.	0.3	0