

Giovanni Mascali

List of Publications by Year in descending order

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citing authors

#	ARTICLE	IF	CITATIONS
1	Exploitation of the Maximum Entropy Principle in the Study of Thermal Conductivity of Silicon, Germanium and Graphene. <i>Energies</i> , 2022, 15, 4718.	3.1	4
2	About the Definition of the Local Equilibrium Lattice Temperature in Suspended Monolayer Graphene. <i>Entropy</i> , 2021, 23, 873.	2.2	3
3	Quantum energy-transport and drift-diffusion models for electron transport in graphene: an approach by the wigner function. <i>Journal of Computational Electronics</i> , 2021, 20, 2135-2140.	2.5	2
4	A hierarchy of macroscopic models for phonon transport in graphene. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2020, 548, 124489.	2.6	14
5	Comparing Kinetic and MEP Model of Charge Transport in Graphene. <i>Journal of Computational and Theoretical Transport</i> , 2020, 49, 368-388.	0.8	4
6	Charge Transport in Low Dimensional Semiconductor Structures. <i>Mathematics in Industry</i> , 2020, , .	0.3	16
7	Application of MEP to Charge Transport in Graphene. <i>Mathematics in Industry</i> , 2020, , 229-283.	0.3	0
8	Numerical Method and Simulations. <i>Mathematics in Industry</i> , 2020, , 211-227.	0.3	0
9	Mathematical Models for the Double-Gate MOSFET. <i>Mathematics in Industry</i> , 2020, , 191-210.	0.3	0
10	Charge and Phonon Transport in Suspended Monolayer Graphene. <i>Mathematics in Industry</i> , 2020, , 115-123.	0.3	0
11	Application of MEP to Silicon. <i>Mathematics in Industry</i> , 2020, , 69-129.	0.3	0
12	An improved 2D→3D model for charge transport based on the maximum entropy principle. <i>Continuum Mechanics and Thermodynamics</i> , 2019, 31, 751-773.	2.2	1
13	Charge Transport in Graphene including Thermal Effects. <i>SIAM Journal on Applied Mathematics</i> , 2017, 77, 593-613.	1.8	34
14	Thermal conductivity reduction by embedding nanoparticles. <i>Journal of Computational Electronics</i> , 2017, 16, 180-189.	2.5	8
15	Exploitation of the Maximum Entropy Principle in Mathematical Modeling of Charge Transport in Semiconductors. <i>Entropy</i> , 2017, 19, 36.	2.2	29
16	Monte Carlo Analysis of Thermal Effects in Monolayer Graphene. <i>Journal of Computational and Theoretical Transport</i> , 2016, 45, 540-553.	0.8	26
17	A New Formula for Thermal Conductivity Based on a Hierarchy of Hydrodynamical Models. <i>Journal of Statistical Physics</i> , 2016, 163, 1268-1284.	1.2	16
18	Charge transport and mobility in monolayer graphene. <i>Journal of Mathematics in Industry</i> , 2016, 7, .	1.2	19

#	ARTICLE	IF	CITATIONS
19	An Electro-Thermal Hydrodynamical Model for Charge Transport in Graphene. Mathematics in Industry, 2016, , 721-729.	0.3	0
20	A hydrodynamic model for silicon semiconductors including crystal heating. European Journal of Applied Mathematics, 2015, 26, 477-496.	2.9	34
21	A hydrodynamical model for covalent semiconductors with a generalized energy dispersion relation. European Journal of Applied Mathematics, 2014, 25, 255-276.	2.9	10
22	A comprehensive hydrodynamical model for charge transport in graphene. , 2014, , .		4
23	Some Mathematical Considerations on Solid State Physics in the Framework of the Phase Space Formulation of Quantum Mechanics. International Journal of Theoretical Physics, 2014, 53, 3546-3574.	1.2	2
24	Simulation of a double-gate MOSFET by a non-parabolic energy-transport subband model for semiconductors based on the maximum entropy principle. Mathematical and Computer Modelling, 2013, 58, 321-343.	2.0	24
25	A macroscopic model for electron transport in silicon using analytic descriptions for both the electron bands and the phonon dispersion relations. , 2013, , .		0
26	A hydrodynamical model for holes in silicon semiconductors. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2012, 31, 552-582.	0.9	1
27	A Hydrodynamic Model for Covalent Semiconductors with Applications to GaN and SiC. Acta Applicandae Mathematicae, 2012, 122, 335.	1.0	19
28	Numerical simulation of a double-gate MOSFET with a subband model for semiconductors based on the maximum entropy principle. Continuum Mechanics and Thermodynamics, 2012, 24, 417-436.	2.2	33
29	A non parabolic hydrodynamical subband model for semiconductors based on the maximum entropy principle. Mathematical and Computer Modelling, 2012, 55, 1003-1020.	2.0	30
30	A hydrodynamical model for holes in silicon semiconductors: The case of non-parabolic warped bands. Mathematical and Computer Modelling, 2011, 53, 213-229.	2.0	19
31	Numerical simulation of a subband model based on the Maximum Entropy Principle. , 2010, , .		2
32	Hyperbolic PDAEs for Semiconductor Devices Coupled with Circuits. Mathematics in Industry, 2010, , 305-312.	0.3	2
33	Nonlinear Models for Silicon Semiconductors. Mathematics in Industry, 2010, , 429-436.	0.3	1
34	Exact Maximum Entropy Closure of the Hydrodynamical Model for Si Semiconductors: The 8-Moment Case. SIAM Journal on Applied Mathematics, 2009, 70, 710-734.	1.8	33
35	THE SEMICONDUCTOR STEADY BOLTZMANN EQUATION: A VARIATIONAL FORMULATION WITH AN APPLICATION TO MOBILITY. , 2007, , .		0
36	NONLINEAR EXACT CLOSURE FOR THE HYDRODYNAMICAL MODEL OF SEMICONDUCTORS BASED ON THE MAXIMUM ENTROPY PRINCIPLE. , 2007, , .		0

#	ARTICLE	IF	CITATIONS
37	Gunn Oscillations Described by the MEP Hydrodynamical Model of Semiconductors. Understanding Complex Systems, 2006, , 223-228.	0.6	0
38	NEW PERSPECTIVES ON MATHEMATICAL MODELING OF SEMICONDUCTORS. , 2005, , .		0
39	Si and GaAs mobility derived from a hydrodynamical model for semiconductors based on the maximum entropy principle. Physica A: Statistical Mechanics and Its Applications, 2005, 352, 459-476.	2.6	21
40	Simulation of Gunn oscillations with a non-parabolic hydrodynamical model based on the maximum entropy principle. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2005, 24, 35-54.	0.9	16
41	Non-parabolic Tail Electron Hydrodynamical Model for Silicon Semiconductors. Mathematics in Industry, 2004, , 94-103.	0.3	0
42	A TWO POPULATION MODEL FOR ELECTRON TRANSPORT IN SI. , 2004, , .		0
43	MOBILITY IN GAAS SEMICONDUCTORS. , 2004, , .		0
44	Maximum entropy principle in relativistic radiation hydrodynamics II: Compton and double Compton scattering. Continuum Mechanics and Thermodynamics, 2002, 14, 549-561.	2.2	9
45	Hydrodynamical model of charge transport in GaAs based on the maximum entropy principle. Continuum Mechanics and Thermodynamics, 2002, 14, 405-423.	2.2	31
46	A non-linear determination of the distribution function of degenerate gases with an application to semiconductors. Physica A: Statistical Mechanics and Its Applications, 2002, 310, 121-138.	2.6	14
47	COMPTON COOLING OF A RADIATING FLUID. , 2002, , .		0
48	Two Dimensional MESFET Simulation of Transients and Steady State with Kinetic Based Hydrodynamical Models. VLSI Design, 2001, 13, 355-361.	0.5	0
49	High field fluid dynamical models for the transport of charge carriers in semiconductors. Physica A: Statistical Mechanics and Its Applications, 2001, 297, 291-302.	2.6	1
50	Theoretical foundations for tail electron hydrodynamical models in semiconductors. Applied Mathematics Letters, 2001, 14, 245-252.	2.7	12