

Pierre Degond

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282
papers

6,664
citations

41
h-index

67
g-index

291
ext. papers

7,404
ext. citations

2.1
avg, IF

6.09
L-index

#	Paper	IF	Citations
282	CONTINUUM LIMIT OF SELF-DRIVEN PARTICLES WITH ORIENTATION INTERACTION. <i>Mathematical Models and Methods in Applied Sciences</i> , 2008 , 18, 1193-1215	3.5	217
281	The weighted particle method for convection-diffusion equations. I. The case of an isotropic viscosity. <i>Mathematics of Computation</i> , 1989 , 53, 485-485	1.6	165
280	On a hierarchy of macroscopic models for semiconductors. <i>Journal of Mathematical Physics</i> , 1996 , 37, 3306-3333	1.2	163
279	On a Finite-Element Method for Solving the Three-Dimensional Maxwell Equations. <i>Journal of Computational Physics</i> , 1993 , 109, 222-237	4.1	163
278	Global existence for the Vlasov-Poisson equation in 3 space variables with small initial data. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 1985 , 2, 101-118	1.6	160
277	On a one-dimensional steady-state hydrodynamic model for semiconductors. <i>Applied Mathematics Letters</i> , 1990 , 3, 25-29	3.5	138
276	Traffic instabilities in self-organized pedestrian crowds. <i>PLoS Computational Biology</i> , 2012 , 8, e1002442	5	137
275	Kinetic formulation and global existence for the Hall-Magneto-hydrodynamics system. <i>Kinetic and Related Models</i> , 2011 , 4, 901-918	2.4	129
274	Well-posedness for Hall-magnetohydrodynamics. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2014 , 31, 555-565	1.6	126
273	Quantum Moment Hydrodynamics and the Entropy Principle. <i>Journal of Statistical Physics</i> , 2003 , 112, 587-628	1.5	123
272	Quantum Energy-Transport and Drift-Diffusion Models. <i>Journal of Statistical Physics</i> , 2005 , 118, 625-667	1.5	116
271	Large Scale Dynamics of the Persistent Turning Walker Model of Fish Behavior. <i>Journal of Statistical Physics</i> , 2008 , 131, 989-1021	1.5	103
270	A Model for the Dynamics of large Queuing Networks and Supply Chains. <i>SIAM Journal on Applied Mathematics</i> , 2006 , 66, 896-920	1.8	103
269	A Model for the Formation and Evolution of Traffic Jams. <i>Archive for Rational Mechanics and Analysis</i> , 2008 , 187, 185-220	2.3	96
268	An energy-transport model for semiconductors derived from the Boltzmann equation. <i>Journal of Statistical Physics</i> , 1996 , 84, 205-231	1.5	95
267	An Asymptotic-Preserving all-speed scheme for the Euler and Navier-Stokes equations. <i>Journal of Computational Physics</i> , 2012 , 231, 5685-5704	4.1	91
266	All Speed Scheme for the Low Mach Number Limit of the Isentropic Euler Equations. <i>Communications in Computational Physics</i> , 2011 , 10, 1-31	2.4	89

265	THE FOKKER-PLANCK ASYMPTOTICS OF THE BOLTZMANN COLLISION OPERATOR IN THE COULOMB CASE. <i>Mathematical Models and Methods in Applied Sciences</i> , 1992 , 02, 167-182	3.5	89
264	Realistic following behaviors for crowd simulation. <i>Computer Graphics Forum</i> , 2012 , 31, 489-498	2.4	78
263	A Hierarchy of Heuristic-Based Models of Crowd Dynamics. <i>Journal of Statistical Physics</i> , 2013 , 152, 1033-1068	1.0	77
262	A steady state potential flow model for semiconductors. <i>Annali Di Matematica Pura Ed Applicata</i> , 1993 , 165, 87-98	0.8	72
261	Global existence of smooth solutions for the Vlasov-Fokker-Planck equation in 1^s and 2^s space dimensions. <i>Annales Scientifiques De L'Ecole Normale Supérieure</i> , 1986 , 19, 519-542	1.6	69
260	A system of parabolic equations in nonequilibrium thermodynamics including thermal and electrical effects. <i>Journal Des Mathematiques Pures Et Appliquees</i> , 1997 , 76, 991-1015	1.7	68
259	An asymptotic preserving scheme for the two-fluid Euler-Poisson model in the quasineutral limit. <i>Journal of Computational Physics</i> , 2007 , 223, 208-234	4.1	65
258	Fast Algorithms for Numerical, Conservative, and Entropy Approximations of the Fokker-Planck-Landau Equation. <i>Journal of Computational Physics</i> , 1997 , 133, 310-322	4.1	62
257	Dispersion Relations for the Linearized Fokker-Planck Equation. <i>Archive for Rational Mechanics and Analysis</i> , 1997 , 138, 137-167	2.3	60
256	A Deterministic Approximation of Diffusion Equations Using Particles. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1990 , 11, 293-310		60
255	On a one-dimensional Schrödinger-Poisson scattering model. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1997 , 48, 135-155	1.6	59
254	Macroscopic Limits and Phase Transition in a System of Self-propelled Particles. <i>Journal of Nonlinear Science</i> , 2013 , 23, 427-456	2.8	57
253	A multiscale kinetic-fluid solver with dynamic localization of kinetic effects. <i>Journal of Computational Physics</i> , 2010 , 229, 4907-4933	4.1	55
252	A smooth transition model between kinetic and hydrodynamic equations. <i>Journal of Computational Physics</i> , 2005 , 209, 665-694	4.1	52
251	Deterministic particle simulations of the boltzmann transport equation of semiconductors. <i>Journal of Computational Physics</i> , 1988 , 78, 313-349	4.1	49
250	A steady-state system in non-equilibrium thermodynamics including thermal and electrical effects. <i>Mathematical Methods in the Applied Sciences</i> , 1998 , 21, 1399-1413	2.3	48
249	A MODEL HIERARCHY FOR IONOSPHERIC PLASMA MODELING. <i>Mathematical Models and Methods in Applied Sciences</i> , 2004 , 14, 393-415	3.5	48
248	An entropy scheme for the Fokker-Planck collision operator of plasma kinetic theory. <i>Numerische Mathematik</i> , 1994 , 68, 239-262	2.2	48

247	Numerical Discretization of Energy-Transport Models for Semiconductors with Nonparabolic Band Structure. <i>SIAM Journal of Scientific Computing</i> , 2000 , 22, 986-1007	2.6	46
246	A hybrid kinetic/fluid model for solving the gas dynamics Boltzmann-BGK equation. <i>Journal of Computational Physics</i> , 2004 , 199, 776-808	4.1	45
245	Local existence of solutions of the vlasov-maxwell equations and convergence to the vlasov-poisson equations for infinite light velocity. <i>Mathematical Methods in the Applied Sciences</i> , 1986 , 8, 533-558	2.3	45
244	Mass sperm motility is associated with fertility in sheep. <i>Animal Reproduction Science</i> , 2015 , 161, 75-81	2.1	44
243	Phase Transitions, Hysteresis, and Hyperbolicity for Self-Organized Alignment Dynamics. <i>Archive for Rational Mechanics and Analysis</i> , 2015 , 216, 63-115	2.3	43
242	The Weighted Particle Method for Convection-Diffusion Equations. Part 2: The Anisotropic Case. <i>Mathematics of Computation</i> , 1989 , 53, 509	1.6	43
241	Asymptotic-Preserving Particle-In-Cell method for the Vlasov-Poisson system near quasineutrality. <i>Journal of Computational Physics</i> , 2010 , 229, 5630-5652	4.1	41
240	The moment-guided Monte Carlo method. <i>International Journal for Numerical Methods in Fluids</i> , 2011 , 67, 189-213	1.9	40
239	A TRAFFIC-FLOW MODEL WITH CONSTRAINTS FOR THE MODELING OF TRAFFIC JAMS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2008 , 18, 1269-1298	3.5	40
238	Macroscopic limit of self-driven particles with orientation interaction. <i>Comptes Rendus Mathematique</i> , 2007 , 345, 555-560	0.4	40
237	Polynomial upwind schemes for hyperbolic systems. <i>Comptes Rendus Mathematique</i> , 1999 , 328, 479-483		40
236	Vision-based macroscopic pedestrian models. <i>Kinetic and Related Models</i> , 2013 , 6, 809-839	2.4	39
235	The Weighted Particle Method for Convection-Diffusion Equations. Part 1: The Case of an Isotropic Viscosity. <i>Mathematics of Computation</i> , 1989 , 53, 485	1.6	38
234	Two-way multi-lane traffic model for pedestrians in corridors. <i>Networks and Heterogeneous Media</i> , 2011 , 6, 351-381	1.6	38
233	Macroscopic Fluid Models with Localized Kinetic Upscaling Effects. <i>Multiscale Modeling and Simulation</i> , 2006 , 5, 940-979	1.8	37
232	Transport coefficients of plasmas and disparate mass binary gases. <i>Transport Theory and Statistical Physics</i> , 1996 , 25, 595-633		37
231	A particle-tracking method for 3D electromagnetic PIC codes on unstructured meshes. <i>Computer Physics Communications</i> , 1992 , 72, 105-114	4.2	37
230	Numerical Simulations of Rarefied Gases in Curved Channels: Thermal Creep, Circulating Flow, and Pumping Effect. <i>Communications in Computational Physics</i> , 2009 , 6, 919-954	2.4	37

229	THE ASYMPTOTICS OF COLLISION OPERATORS FOR TWO SPECIES OF PARTICLES OF DISPARATE MASSES. <i>Mathematical Models and Methods in Applied Sciences</i> , 1996 , 06, 405-436	3.5	36
228	A Smooth Transition Model between Kinetic and Diffusion Equations. <i>SIAM Journal on Numerical Analysis</i> , 2005 , 42, 2671-2687	2.4	36
227	An analysis of the Darwin model of approximation to Maxwell's equations. <i>Forum Mathematicum</i> , 1992 , 4,	0.6	36
226	Existence of solutions and diffusion approximation for a model Fokker-Planck equation. <i>Transport Theory and Statistical Physics</i> , 1987 , 16, 589-636		35
225	Spectral theory of the linearized Vlasov-Poisson equation. <i>Transactions of the American Mathematical Society</i> , 1986 , 294, 435-435	1	35
224	Hydrodynamic models of self-organized dynamics: Derivation and existence theory. <i>Methods and Applications of Analysis</i> , 2013 , 20, 89-114	0.3	35
223	Phase Transitions in a Kinetic Flocking Model of Cucker-Smale Type. <i>Multiscale Modeling and Simulation</i> , 2016 , 14, 1063-1088	1.8	33
222	DIFFUSION IN A CONTINUUM MODEL OF SELF-PROPELLED PARTICLES WITH ALIGNMENT INTERACTION. <i>Mathematical Models and Methods in Applied Sciences</i> , 2010 , 20, 1459-1490	3.5	33
221	An Asymptotic Preserving scheme for the Euler equations in a strong magnetic field. <i>Journal of Computational Physics</i> , 2009 , 228, 3540-3558	4.1	33
220	Large-Scale Dynamics of Mean-Field Games Driven by Local Nash Equilibria. <i>Journal of Nonlinear Science</i> , 2014 , 24, 93-115	2.8	32
219	Self-organized hydrodynamics with congestion and path formation in crowds. <i>Journal of Computational Physics</i> , 2013 , 237, 299-319	4.1	32
218	A new flocking model through body attitude coordination. <i>Mathematical Models and Methods in Applied Sciences</i> , 2017 , 27, 1005-1049	3.5	32
217	An asymptotic analysis of the one-dimensional Vlasov-Poisson system: the Child-Langmuir law. <i>Asymptotic Analysis</i> , 1991 , 4, 187-214	0.7	32
216	Evolution of the Distribution of Wealth in an Economic Environment Driven by Local Nash Equilibria. <i>Journal of Statistical Physics</i> , 2014 , 154, 751-780	1.5	31
215	Numerical approximation of the Euler-Maxwell model in the quasineutral limit. <i>Journal of Computational Physics</i> , 2012 , 231, 1917-1946	4.1	31
214	An asymptotic-preserving method for highly anisotropic elliptic equations based on a Micro-Macro decomposition. <i>Journal of Computational Physics</i> , 2012 , 231, 2724-2740	4.1	31
213	An Asymptotic Preserving Scheme for Strongly Anisotropic Elliptic Problems. <i>Multiscale Modeling and Simulation</i> , 2010 , 8, 645-666	1.8	30
212	Modelling and simulation of vehicular traffic jam formation. <i>Kinetic and Related Models</i> , 2008 , 1, 279-293	2.4	29

211	Diffusion models for Knudsen compressors. <i>Physics of Fluids</i> , 2007 , 19, 117103	4.4	29
210	Analysis of an Asymptotic Preserving Scheme for the Euler-Poisson System in the Quasineutral Limit. <i>SIAM Journal on Numerical Analysis</i> , 2008 , 46, 1298-1322	2.4	28
209	KINETIC LIMITS FOR PAIR-INTERACTION DRIVEN MASTER EQUATIONS AND BIOLOGICAL SWARM MODELS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2013 , 23, 1339-1376	3.5	27
208	A moving interface method for dynamic kinetic-fluid coupling. <i>Journal of Computational Physics</i> , 2007 , 227, 1176-1208	4.1	27
207	Coupling one-dimensional time-dependent classical and quantum transport models. <i>Journal of Mathematical Physics</i> , 2002 , 43, 1-24	1.2	27
206	HYDRODYNAMICS OF THE KURAMOTO-VICSEK MODEL OF ROTATING SELF-PROPELLED PARTICLES. <i>Mathematical Models and Methods in Applied Sciences</i> , 2014 , 24, 277-325	3.5	26
205	A Coupled Schrödinger Drift-Diffusion Model for Quantum Semiconductor Device Simulations. <i>Journal of Computational Physics</i> , 2002 , 181, 222-259	4.1	26
204	Symmetry-breaking phase transitions in highly concentrated semen. <i>Journal of the Royal Society Interface</i> , 2016 , 13,	4.1	25
203	Asymptotic-Preserving methods and multiscale models for plasma physics. <i>Journal of Computational Physics</i> , 2017 , 336, 429-457	4.1	24
202	Numerical simulations of the Euler system with congestion constraint. <i>Journal of Computational Physics</i> , 2011 , 230, 8057-8088	4.1	24
201	Modelling wire-to-wire corona discharge action on aerodynamics and comparison with experiment. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 035205	3	24
200	An entropic quantum drift-diffusion model for electron transport in resonant tunneling diodes. <i>Journal of Computational Physics</i> , 2007 , 221, 226-249	4.1	24
199	Quasi-neutral fluid models for current-carrying plasmas. <i>Journal of Computational Physics</i> , 2005 , 205, 408-438	4.1	24
198	Quaternions in Collective Dynamics. <i>Multiscale Modeling and Simulation</i> , 2018 , 16, 28-77	1.8	23
197	Symmetrization and entropy inequality for general diffusion equations. <i>Comptes Rendus Mathématique</i> , 1997 , 325, 963-968		23
196	A Diffusion Model for Rarefied Flows in Curved Channels. <i>Multiscale Modeling and Simulation</i> , 2008 , 6, 1281-1316	1.8	23
195	On the Time Splitting Spectral Method for the Complex Ginzburg-Landau Equation in the Large Time and Space Scale Limit. <i>SIAM Journal of Scientific Computing</i> , 2008 , 30, 2466-2487	2.6	23
194	Macroscopic limits of the Boltzmann equation: a review. <i>Modeling and Simulation in Science, Engineering and Technology</i> , 2004 , 3-57	0.8	23

193	Viscoelastic Fluid Models Derived from Kinetic Equations for Polymers. <i>SIAM Journal on Applied Mathematics</i> , 2002 , 62, 1501-1519	1.8	23
192	Kinetic models for polymers with inertial effects. <i>Networks and Heterogeneous Media</i> , 2009 , 4, 625-647	1.6	23
191	Mass and energy balance laws derived from High-Field limits of thermostatted Boltzmann equations. <i>Communications in Mathematical Sciences</i> , 2007 , 5, 355-382	1	23
190	The architectural design of smart ventilation and drainage systems in termite nests. <i>Science Advances</i> , 2019 , 5, eaat8520	14.3	22
189	Trail formation based on directed pheromone deposition. <i>Journal of Mathematical Biology</i> , 2013 , 66, 1267-301	2	22
188	A Macroscopic Model for a System of Swarming Agents Using Curvature Control. <i>Journal of Statistical Physics</i> , 2011 , 143, 685-714	1.5	22
187	Evolution of wealth in a non-conservative economy driven by local Nash equilibria. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014 , 372,	3	21
186	Macroscopic models for semiconductor heterostructures. <i>Journal of Mathematical Physics</i> , 1998 , 39, 4634-4663	1.2	21
185	Particle simulations of the semiconductor boltzmann equation for one-dimensional inhomogeneous structures. <i>Journal of Computational Physics</i> , 1990 , 90, 65-97	4.1	21
184	Some families of solutions of the Vlasov-Poisson system. <i>Archive for Rational Mechanics and Analysis</i> , 1988 , 104, 79-103	2.3	20
183	Duality-based asymptotic-preserving method for highly anisotropic diffusion equations. <i>Communications in Mathematical Sciences</i> , 2012 , 10, 1-31	1	20
182	Fluid simulations with localized boltzmann upscaling by direct simulation Monte-Carlo. <i>Journal of Computational Physics</i> , 2012 , 231, 2414-2437	4.1	19
181	Coagulation-Fragmentation Model for Animal Group-Size Statistics. <i>Journal of Nonlinear Science</i> , 2017 , 27, 379-424	2.8	19
180	Phase Appearance or Disappearance in Two-Phase Flows. <i>Journal of Scientific Computing</i> , 2014 , 58, 115-148	1.8	19
179	HYDRODYNAMICS OF SELF-ALIGNMENT INTERACTIONS WITH PRECESSION AND DERIVATION OF THE LANDAU-LIFSHITZ-GILBERT EQUATION. <i>Mathematical Models and Methods in Applied Sciences</i> , 2012 , 22, 1140001	3.5	19
178	A Model of Near-Wall Conductivity and Its Application to Plasma Thrusters. <i>SIAM Journal on Applied Mathematics</i> , 1998 , 58, 1138-1162	1.8	19
177	High field approximations of the spherical harmonics expansion model for semiconductors. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2001 , 52, 201-230	1.6	19
176	Numerical Approximation of the Maxwell Equations in Inhomogeneous Media by a P1-Conforming Finite Element Method. <i>Journal of Computational Physics</i> , 1996 , 128, 363-380	4.1	19

175	. <i>IEEE Transactions on Magnetics</i> , 1991 , 27, 4177-4180	2	19
174	Quantum hydrodynamic models derived from the entropy principle. <i>Contemporary Mathematics</i> , 2005 , 107-131	1.6	19
173	Kinetic hierarchy and propagation of chaos in biological swarm models. <i>Physica D: Nonlinear Phenomena</i> , 2013 , 260, 90-111	3.3	18
172	Kinetic boundary layers and fluid-kinetic coupling in semiconductors. <i>Transport Theory and Statistical Physics</i> , 1999 , 28, 31-55		18
171	An Asymptotically Stable Semi-Lagrangian scheme in the Quasi-neutral Limit. <i>Journal of Scientific Computing</i> , 2009 , 41, 341-365	2.3	17
170	Stochastic Dynamics of Long Supply Chains with Random Breakdowns. <i>SIAM Journal on Applied Mathematics</i> , 2007 , 68, 59-79	1.8	17
169	Electron transport in stationary plasma thrusters. <i>Transport Theory and Statistical Physics</i> , 1998 , 27, 203-221		17
168	Travelling wave analysis and jump relations for Euler-Boisson model in the quasineutral limit. <i>Asymptotic Analysis</i> , 1995 , 11, 209-240	0.7	17
167	Phase transition and diffusion among socially interacting self-propelled agents. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2014 , 19, 1249-1278	1.3	17
166	Congestion in a Macroscopic Model of Self-driven Particles Modeling Gregariousness. <i>Journal of Statistical Physics</i> , 2010 , 138, 85-125	1.5	16
165	Isothermal Quantum Hydrodynamics: Derivation, Asymptotic Analysis, and Simulation. <i>Multiscale Modeling and Simulation</i> , 2007 , 6, 246-272	1.8	16
164	Homogenization of a Flow in a Periodic Channel of Small Section. <i>Multiscale Modeling and Simulation</i> , 2003 , 1, 304-334	1.8	16
163	AN INFINITE SYSTEM OF DIFFUSION EQUATIONS ARISING IN TRANSPORT THEORY: THE COUPLED SPHERICAL HARMONICS EXPANSION MODEL. <i>Mathematical Models and Methods in Applied Sciences</i> , 2001 , 11, 903-932	3.5	16
162	ON THE PARAXIAL APPROXIMATION OF THE STATIONARY VLASOV-MAXWELL SYSTEM. <i>Mathematical Models and Methods in Applied Sciences</i> , 1993 , 03, 513-562	3.5	16
161	An asymptotically stable Particle-in-Cell (PIC) scheme for collisionless plasma simulations near quasineutrality. <i>Comptes Rendus Mathematique</i> , 2006 , 343, 613-618	0.4	15
160	Plasma Expansion in Vacuum: Modeling the Breakdown of Quasi Neutrality. <i>Multiscale Modeling and Simulation</i> , 2003 , 2, 158-178	1.8	15
159	The Child-Langmuir Law for the Boltzmann Equation of Semiconductors. <i>SIAM Journal on Mathematical Analysis</i> , 1995 , 26, 364-398	1.7	15
158	Macroscopic models of collective motion with repulsion. <i>Communications in Mathematical Sciences</i> , 2015 , 13, 1615-1638	1	15

157	Travelling wave analysis of an isothermal Euler-Poisson model. <i>Annales De La Faculté Des Sciences De Toulouse</i> , 1996 , 5, 599-643	0.3	15
156	On the Asymptotic Limit of the Three Dimensional Vlasov-Poisson System for Large Magnetic Field: Formal Derivation. <i>Journal of Statistical Physics</i> , 2016 , 165, 765-784	1.5	14
155	Simple mechanical cues could explain adipose tissue morphology. <i>Journal of Theoretical Biology</i> , 2017 , 429, 61-81	2.3	14
154	A Network Model for Supply Chains with Multiple Policies. <i>Multiscale Modeling and Simulation</i> , 2007 , 6, 820-837	1.8	14
153	Turbulence Models for Incompressible Fluids Derived from Kinetic Theory. <i>Journal of Mathematical Fluid Mechanics</i> , 2002 , 4, 257-284	1.4	14
152	High-field approximations of the energy-transport model for semiconductors with non-parabolic band structure. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2001 , 52, 1053-1070	1.6	14
151	On the viscosity and thermal conduction of fluids with multivalued internal energy. <i>European Journal of Mechanics, B/Fluids</i> , 2001 , 20, 303-327	2.4	14
150	Numerical simulation of electron transport in the channel region of a stationary plasma thruster. <i>Plasma Sources Science and Technology</i> , 2002 , 11, 104-114	3.5	14
149	The Child-Langmuir law as a model for electron transport in semiconductors. <i>Solid-State Electronics</i> , 1996 , 39, 737-744	1.7	14
148	A deterministic particle method for the kinetic model of semiconductors: The homogeneous field model. <i>Solid-State Electronics</i> , 1991 , 34, 1335-1345	1.7	14
147	On quantum hydrodynamic and quantum energy transport models. <i>Communications in Mathematical Sciences</i> , 2007 , 5, 887-908	1	14
146	Local Stability of Perfect Alignment for a Spatially Homogeneous Kinetic Model. <i>Journal of Statistical Physics</i> , 2014 , 157, 84-112	1.5	13
145	Nonconforming Multiscale Finite Element Method for Stokes Flows in Heterogeneous Media. Part I: Methodologies and Numerical Experiments. <i>Multiscale Modeling and Simulation</i> , 2015 , 13, 1146-1172	1.8	13
144	A PLASMA EXPANSION MODEL BASED ON THE FULL EULER-BOISSON SYSTEM. <i>Mathematical Models and Methods in Applied Sciences</i> , 2007 , 17, 1129-1158	3.5	13
143	A 1D coupled Schrödinger drift-diffusion model including collisions. <i>Journal of Computational Physics</i> , 2005 , 203, 129-153	4.1	13
142	An age-structured continuum model for myxobacteria. <i>Mathematical Models and Methods in Applied Sciences</i> , 2018 , 28, 1737-1770	3.5	12
141	On the macroscopic dynamics induced by a model wave-particle collision operator. <i>Continuum Mechanics and Thermodynamics</i> , 1998 , 10, 153-178	3.5	12
140	A one-dimensional model of plasma expansion. <i>Mathematical and Computer Modelling</i> , 2003 , 38, 1093-1099		12

139	A hybrid kinetic-fluid model for solving the Vlasov-BGK equation. <i>Journal of Computational Physics</i> , 2005 , 203, 572-601	4.1	12
138	An asymptotically stable discretization for the Euler-Poisson system in the quasi-neutral limit. <i>Comptes Rendus Mathématique</i> , 2005 , 341, 323-328	0.4	12
137	Existence of Solutions of a Kinetic Equation Modeling Cometary Flows. <i>Journal of Statistical Physics</i> , 1999 , 96, 361-376	1.5	12
136	On a penalization of the Child-Langmuir emission condition for the one-dimensional Vlasov-Poisson equation. <i>Asymptotic Analysis</i> , 1992 , 6, 1-27	0.7	12
135	Mean-field games and model predictive control. <i>Communications in Mathematical Sciences</i> , 2017 , 15, 1403-1422	1	12
134	Topological Interactions in a Boltzmann-Type Framework. <i>Journal of Statistical Physics</i> , 2016 , 163, 41-60	1.5	11
133	Kinetic Theory of Particle Interactions Mediated by Dynamical Networks. <i>Multiscale Modeling and Simulation</i> , 2017 , 15, 1294-1323	1.8	11
132	Asymptotic-Preserving Particle-In-Cell methods for the Vlasov-Maxwell system in the quasi-neutral limit. <i>Journal of Computational Physics</i> , 2017 , 330, 467-492	4.1	11
131	A multi-layer model for self-propelled disks interacting through alignment and volume exclusion. <i>Mathematical Models and Methods in Applied Sciences</i> , 2015 , 25, 2439-2475	3.5	11
130	Numerical Approximation of the Euler-Poisson-Boltzmann Model in the Quasineutral Limit. <i>Journal of Scientific Computing</i> , 2012 , 51, 59-86	2.3	11
129	An asymptotic preserving scheme for the Schrödinger equation in the semiclassical limit. <i>Comptes Rendus Mathématique</i> , 2007 , 345, 531-536	0.4	11
128	The Child-Langmuir Asymptotics of the Vlasov-Poisson Equation for Cylindrically or Spherically Symmetric Diodes Part 1: Statement of the Problem and Basic Estimates. <i>Mathematical Methods in the Applied Sciences</i> , 1996 , 19, 287-312	2.3	11
127	A quantum-transport model for semiconductors : the Wigner-Poisson problem on a bounded Brillouin zone. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 1990 , 24, 697-709	1.8	11
126	From Bloch model to the rate equations. <i>Discrete and Continuous Dynamical Systems</i> , 2004 , 11, 1-26	2	11
125	A hierarchy of diffusion models for partially ionized plasmas. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2007 , 8, 735-772	1.3	11
124	Regularized Boltzmann operators. <i>Computers and Mathematics With Applications</i> , 1998 , 35, 55-74	2.7	10
123	On quantum extensions to classical spherical harmonics expansion/Fokker-Planck models. <i>Journal of Mathematical Physics</i> , 2006 , 47, 043302	1.2	10
122	Mathematical models of magnetic insulation. <i>Physics of Plasmas</i> , 1998 , 5, 1522-1534	2.1	10

121	The Wigner-Poisson problem in a crystal. <i>Applied Mathematics Letters</i> , 1989 , 2, 187-191	3.5	10
120	Continuum model for linked fibers with alignment interactions. <i>Mathematical Models and Methods in Applied Sciences</i> , 2016 , 26, 269-318	3.5	10
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