

Laurent Gosse

List of Publications by Year in descending order

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99
papers

1,561
citations

331538

21
h-index

330025

37
g-index

104
all docs

104
docs citations

104
times ranked

608
citing authors

#	ARTICLE	IF	CITATIONS
1	A well-balanced flux-vector splitting scheme designed for hyperbolic systems of conservation laws with source terms. <i>Computers and Mathematics With Applications</i> , 2000, 39, 135-159.	1.4	150
2	A WELL-BALANCED SCHEME USING NON-CONSERVATIVE PRODUCTS DESIGNED FOR HYPERBOLIC SYSTEMS OF CONSERVATION LAWS WITH SOURCE TERMS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2001, 11, 339-365.	1.7	113
3	An asymptotic-preserving well-balanced scheme for the hyperbolic heat equations. <i>Comptes Rendus Mathematique</i> , 2002, 334, 337-342.	0.1	93
4	Global BV Entropy Solutions and Uniqueness for Hyperbolic Systems of Balance Laws. <i>Archive for Rational Mechanics and Analysis</i> , 2002, 162, 327-366.	1.1	69
5	Numerical approximations of one-dimensional linear conservation equations with discontinuous coefficients. <i>Mathematics of Computation</i> , 2000, 69, 987-1016.	1.1	60
6	Computing Qualitatively Correct Approximations of Balance Laws. <i>SIAM Springer Series</i> , 2013, , .	0.4	60
7	Using K-Branch Entropy Solutions for Multivalued Geometric Optics Computations. <i>Journal of Computational Physics</i> , 2002, 180, 155-182.	1.9	53
8	Space Localization and Well-Balanced Schemes for Discrete Kinetic Models in Diffusive Regimes. <i>SIAM Journal on Numerical Analysis</i> , 2003, 41, 641-658.	1.1	51
9	TWO MOMENT SYSTEMS FOR COMPUTING MULTIPHASE SEMICLASSICAL LIMITS OF THE SCHRÖDINGER EQUATION. <i>Mathematical Models and Methods in Applied Sciences</i> , 2003, 13, 1689-1723.	1.7	49
10	Identification of Asymptotic Decay to Self-Similarity for One-Dimensional Filtration Equations. <i>SIAM Journal on Numerical Analysis</i> , 2006, 43, 2590-2606.	1.1	45
11	Localization effects and measure source terms in numerical schemes for balance laws. <i>Mathematics of Computation</i> , 2001, 71, 553-583.	1.1	41
12	Lagrangian Numerical Approximations to One-Dimensional Convolution-Diffusion Equations. <i>SIAM Journal of Scientific Computing</i> , 2006, 28, 1203-1227.	1.3	40
13	Vaccine Inoculation Route Modulates Early Immunity and Consequently Antigen-Specific Immune Response. <i>Frontiers in Immunology</i> , 2021, 12, 645210.	2.2	38
14	Asymptotic-preserving & well-balanced schemes for radiative transfer and the Rosseland approximation. <i>Numerische Mathematik</i> , 2004, 98, 223-250.	0.9	35
15	Multiphase semiclassical approximation of an electron in a one-dimensional crystalline lattice. <i>Journal of Computational Physics</i> , 2004, 197, 387-417.	1.9	33
16	Godunov-type approximation for a general resonant balance law with large data. <i>Journal of Differential Equations</i> , 2004, 198, 233-274.	1.1	29
17	Two A Posteriori Error Estimates for One-Dimensional Scalar Conservation Laws. <i>SIAM Journal on Numerical Analysis</i> , 2000, 38, 964-988.	1.1	28
18	Convergence results for an inhomogeneous system arising in various high frequency approximations. <i>Numerische Mathematik</i> , 2002, 90, 721-753.	0.9	26

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19	Asymptotic-Preserving and Well-Balanced schemes for the 1D Cattaneo model of chemotaxis movement in both hyperbolic and diffusive regimes. <i>Journal of Mathematical Analysis and Applications</i> , 2012, 388, 964-983.	0.5	26
20	Multiphase semiclassical approximation of an electron in a one-dimensional crystalline lattice III. From ab initio models to WKB for Schrödinger-Poisson. <i>Journal of Computational Physics</i> , 2006, 211, 326-346.	1.9	24
21	Overcoming immunogenicity issues of HIV p24 antigen by the use of innovative nanostructured lipid carriers as delivery systems: evidences in mice and non-human primates. <i>Npj Vaccines</i> , 2018, 3, 46.	2.9	24
22	Convergence of relaxation schemes to the equations of elastodynamics. <i>Mathematics of Computation</i> , 2000, 70, 555-578.	1.1	21
23	A priori error estimate for a well-balanced scheme designed for inhomogeneous scalar conservation laws. <i>Comptes Rendus Mathematique</i> , 1998, 327, 467-472.	0.5	18
24	Error Estimates for Well-Balanced Schemes on Simple Balance Laws. <i>SpringerBriefs in Mathematics</i> , 2015, , .	0.2	18
25	Multiphase semiclassical approximation of an electron in a one-dimensional crystalline lattice II. Impurities, confinement and Bloch oscillations. <i>Journal of Computational Physics</i> , 2004, 201, 344-375.	1.9	17
26	Time-Splitting Schemes and Measure Source Terms for a Quasilinear Relaxing System. <i>Mathematical Models and Methods in Applied Sciences</i> , 2003, 13, 1081-1101.	1.7	16
27	Resolution of the finite Markov moment problem. <i>Comptes Rendus Mathematique</i> , 2005, 341, 775-780.	0.1	16
28	Transient radiative transfer in the grey case: Well-balanced and asymptotic-preserving schemes built on Case's elementary solutions. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011, 112, 1995-2012.	1.1	16
29	A Two-Dimensional Version of the Godunov Scheme for Scalar Balance Laws. <i>SIAM Journal on Numerical Analysis</i> , 2014, 52, 626-652.	1.1	16
30	A well-balanced and asymptotic-preserving scheme for the one-dimensional linear Dirac equation. <i>BIT Numerical Mathematics</i> , 2015, 55, 433-458.	1.0	16
31	Existence, Uniqueness, and a Constructive Solution Algorithm for a Class of Finite Markov Moment Problems. <i>SIAM Journal on Applied Mathematics</i> , 2008, 68, 1618-1640.	0.8	14
32	Maxwellian Decay for Well-balanced Approximations of a Super-characteristic Chemotaxis Model. <i>SIAM Journal of Scientific Computing</i> , 2012, 34, A520-A545.	1.3	14
33	Well-balanced schemes using elementary solutions for linear models of the Boltzmann equation in one space dimension. <i>Kinetic and Related Models</i> , 2012, 5, 283-323.	0.5	14
34	Effective band-limited extrapolation relying on Slepian series and regularization. <i>Computers and Mathematics With Applications</i> , 2010, 60, 1259-1279.	1.4	18
35	Transient L1 error estimates for well-balanced schemes on non-resonant scalar balance laws. <i>Journal of Differential Equations</i> , 2013, 255, 469-502.	1.1	12
36	Superior Efficacy of a Human Immunodeficiency Virus Vaccine Combined with Antiretroviral Prevention in Simian-Human Immunodeficiency Virus-Challenged Nonhuman Primates. <i>Journal of Virology</i> , 2016, 90, 5315-5328.	1.5	12

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37	Numerical High-Field Limits in Two-Stream Kinetic Models and 1D Aggregation Equations. <i>SIAM Journal of Scientific Computing</i> , 2016, 38, A412-A434.	1.3	12
38	A well-balanced scheme for kinetic models of chemotaxis derived from one-dimensional local forward–backward problems. <i>Mathematical Biosciences</i> , 2013, 242, 117-128.	0.9	11
39	Redheffer Products and Numerical Approximation of Currents in One-Dimensional Semiconductor Kinetic Models. <i>Multiscale Modeling and Simulation</i> , 2014, 12, 1533-1560.	0.6	11
40	A Truly Two-Dimensional Discretization of Drift-Diffusion Equations on Cartesian Grids. <i>SIAM Journal on Numerical Analysis</i> , 2018, 56, 2845-2870.	1.1	11
41	Finite Moment Problems and Applications to Multiphase Computations in Geometric Optics. <i>Communications in Mathematical Sciences</i> , 2005, 3, 373-392.	0.5	10
42	Decay of positive waves for n imes n hyperbolic systems of balance laws. <i>Proceedings of the American Mathematical Society</i> , 2004, 132, 1627-1637.	0.4	9
43	A well-balanced scheme able to cope with hydrodynamic limits for linear kinetic models. <i>Applied Mathematics Letters</i> , 2015, 42, 15-21.	1.5	9
44	\hat{a}, \hat{b} -Splines and Viscosity Limits for Well-Balanced Schemes Acting on Linear Parabolic Equations. <i>Acta Applicandae Mathematicae</i> , 2018, 153, 101-124.	0.5	9
45	The numerical spectrum of a one-dimensional Schrödinger operator with two competing periodic potentials. <i>Communications in Mathematical Sciences</i> , 2007, 5, 485-493.	0.5	9
46	Impurity bands and quasi-Bloch waves for a one-dimensional model of modulated crystal. <i>Nonlinear Analysis: Real World Applications</i> , 2008, 9, 927-948.	0.9	8
47	HIV specific responses induced in nonhuman primates with ANRS HIV-Lipo-5 vaccine combined with rMVA-HIV prime or boost immunizations. <i>Vaccine</i> , 2015, 33, 2354-2359.	1.7	8
48	Analysis and short-time extrapolation of stock market indexes through projection onto discrete wavelet subspaces. <i>Nonlinear Analysis: Real World Applications</i> , 2010, 11, 3139-3154.	0.9	7
49	A Donoho–Stark criterion for stable signal recovery in discrete wavelet subspaces. <i>Journal of Computational and Applied Mathematics</i> , 2011, 235, 5024-5039.	1.1	7
50	Compressed sensing with preconditioning for sparse recovery with subsampled matrices of Slepian prolate functions. <i>Annali Dell'Universita Di Ferrara</i> , 2013, 59, 81-116.	0.7	7
51	Some examples of kinetic schemes whose diffusion limit is $\hat{a} \hat{b}$'s exponential-fitting. <i>Numerische Mathematik</i> , 2019, 141, 627-680.	0.9	7
52	Viscous Equations Treated with \mathcal{L} -Splines and Steklov-Poincaré Operator in Two Dimensions. <i>Springer INdAM Series</i> , 2017, , 167-195.	0.4	7
53	Filtered Gradient Algorithms for Inverse Design Problems of One-Dimensional Burgers Equation. <i>Springer INdAM Series</i> , 2017, , 197-227.	0.4	7
54	Stringent error estimates for one-dimensional, space-dependent 2 – 2 relaxation systems. <i>Annales De L'Institut Henri Poincare (C) Analyse Non Lineaire</i> , 2016, 33, 621-654.	0.7	6

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55	Travelling Chemotactic Aggregates at Mesoscopic Scale and BiStability. SIAM Journal on Applied Mathematics, 2017, 77, 2224-2249.	0.8	6
56	A Truly Two-Dimensional, Asymptotic-Preserving Scheme for a Discrete Model of Radiative Transfer. SIAM Journal on Numerical Analysis, 2020, 58, 1092-1116.	1.1	6
57	Multiphase semiclassical approximation of the one-dimensional harmonic crystal: I. The periodic case. Journal of Physics A, 2006, 39, 10509-10521.	1.6	5
58	NUMERICAL ASPECTS OF NONLINEAR SCHRÖDINGER EQUATIONS IN THE PRESENCE OF CAUSTICS. Mathematical Models and Methods in Applied Sciences, 2007, 17, 1531-1553.	1.7	5
59	Error Estimates for well-balanced and time-split schemes on a locally damped wave equation. Mathematics of Computation, 2015, 85, 601-633.	1.1	5
60	Locally Inertial Approximations of Balance Laws Arising in (1+1)-Dimensional General Relativity. SIAM Journal on Applied Mathematics, 2015, 75, 1301-1328.	0.8	5
61	Dirichlet-to-Neumann mappings and finite-differences for anisotropic diffusion. Computers and Fluids, 2017, 156, 58-65.	1.3	5
62	A Semiclassical Coupled Model for the Transient Simulation of Semiconductor Devices. SIAM Journal of Scientific Computing, 2007, 29, 376-396.	1.3	4
63	A Two-Dimensional "Flea on the Elephant" Phenomenon and its Numerical Visualization. Multiscale Modeling and Simulation, 2019, 17, 137-166.	0.6	4
64	A single lentivector DNA based immunization contains a late heterologous SIVmac251 mucosal challenge infection. Vaccine, 2020, 38, 3729-3739.	1.7	4
65	Diffusive Limit of a Two-Dimensional Well-Balanced Scheme for the Free Klein-Kramers Equation. Multiscale Modeling and Simulation, 2021, 19, 568-587.	0.6	4
66	Aliasing and two-dimensional well-balanced for drift-diffusion equations on square grids. Mathematics of Computation, 2019, 89, 139-168.	1.1	3
67	Chirplet Approximation of Band-Limited, Real Signals Made Easy. SIAM Journal of Scientific Computing, 2009, 31, 3922-3945.	1.3	2
68	Introduction and Chronological Perspective. SIMAI Springer Series, 2013, , 1-17.	0.4	2
69	Hydrodynamic singular regimes in 1 + 1 kinetic models and spectral numerical methods. Journal of Mathematical Analysis and Applications, 2017, 445, 564-603.	0.5	2
70	Stability of a Kirchhoff-Roe scheme for two-dimensional linearized Euler systems. Annali Dell'Universita Di Ferrara, 2018, 64, 335-360.	0.7	2
71	An efficient numerical model for the simulation of coupled heat, air, and moisture transfer in porous media. Engineering Reports, 2020, 2, e12099.	0.9	2
72	\mathscr{L} -Splines as Diffusive Limits of Dissipative Kinetic Models. Vietnam Journal of Mathematics, 2021, 49, 651-671.	0.4	2

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73	THE VISCOSITY-DUALITY SOLUTIONS APPROACH TO GEOMETRIC OPTICS FOR THE HELMHOLTZ EQUATION. Series on Advances in Mathematics for Applied Sciences, 2001, , 133-151.	0.0	2
74	A recombinant measles virus vaccine strongly reduces SHIV viremia and virus reservoir establishment in macaques. Npj Vaccines, 2021, 6, 123.	2.9	2
75	MUSCL reconstruction and Haar wavelets. Communications in Mathematical Sciences, 2015, 13, 1501-1514.	0.5	2
76	Diffusive limits of 2D well-balanced schemes for kinetic models of neutron transport. ESAIM: Mathematical Modelling and Numerical Analysis, 0, , .	0.8	2
77	Well-Balanced Schemes Based on Elementary Solutions for Kinetic Models of Ionized or Ultra-Relativistic Gas. Journal of Computational and Theoretical Transport, 2017, 46, 1-19.	0.3	1
78	Concentration Waves of Chemotactic Bacteria: The Discrete Velocity Case. Springer INdAM Series, 2017, , 79-109.	0.4	1
79	Diffusive limit of a two-dimensional well-balanced approximation to a kinetic model of chemotaxis. SN Partial Differential Equations and Applications, 2021, 2, .	0.3	1
80	A Nonconservative Numerical Approach for Hyperbolic Systems with Source Terms: The Well-Balanced Schemes. , 2001, , 453-461.		1
81	A Numerical Glimpse at Some Non-standard Solutions to Compressible Euler Equations. Springer INdAM Series, 2017, , 111-140.	0.4	1
82	A Model for Scattering of Forward-Peaked Beams. SIMAI Springer Series, 2013, , 263-268.	0.4	0
83	Aggregation Phenomena with Kinetic Models of Chemotaxis Dynamics. SIMAI Springer Series, 2013, , 191-214.	0.4	0
84	Time-Stabilization on Flat Currents with Non-Degenerate Boltzmann-Poisson Models. SIMAI Springer Series, 2013, , 215-239.	0.4	0
85	Balances in Two Dimensions: Kinetic Semiconductor Equations Again. SIMAI Springer Series, 2013, , 295-313.	0.4	0
86	Conclusion: Outlook and Shortcomings. SIMAI Springer Series, 2013, , 315-321.	0.4	0
87	Early Well-Balanced Derivations for Various Systems. SIMAI Springer Series, 2013, , 63-76.	0.4	0
88	Material Variables, Strings and Infinite Domains. SIMAI Springer Series, 2013, , 117-134.	0.4	0
89	Klein-Kramers Equation and Burgers/Fokker-Planck Model of Spray. SIMAI Springer Series, 2013, , 241-261.	0.4	0
90	The Special Case of 2-Velocity Kinetic Models. SIMAI Springer Series, 2013, , 137-165.	0.4	0

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91	Lifting a Non-Resonant Scalar Balance Law. SIMAI Springer Series, 2013, , 21-40.	0.4	0
92	Linearized BGK Model of Heat Transfer. SIMAI Springer Series, 2013, , 269-293.	0.4	0
93	Lyapunov Functional for Linear Error Estimates. SIMAI Springer Series, 2013, , 41-61.	0.4	0
94	Reprint of: Dirichlet-to-Neumann mappings and finite-differences for anisotropic diffusion. Computers and Fluids, 2018, 169, 365-372.	1.3	0
95	Kinetic Scheme with Reflections and Linear Geometric Optics. SIMAI Springer Series, 2013, , 95-116.	0.4	0
96	Elementary Solutions and Analytical Discrete-Ordinates for Radiative Transfer. SIMAI Springer Series, 2013, , 167-189.	0.4	0
97	Lyapunov FunctionalFunctional for Inertial Approximations. SpringerBriefs in Mathematics, 2015, , 45-79.	0.2	0
98	Local and Global Error Estimates. SpringerBriefs in Mathematics, 2015, , 9-22.	0.2	0
99	Position-Dependent Scalar Balance Laws. SpringerBriefs in Mathematics, 2015, , 23-44.	0.2	0