

# Felice Iavernaro

## List of Publications by Year in descending order

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81  
papers

1,323  
citations

331670

21  
h-index

395702

33  
g-index

82  
all docs

82  
docs citations

82  
times ranked

307  
citing authors

#	ARTICLE	IF	CITATIONS
1	A minimum-time obstacle-avoidance path planning algorithm for unmanned aerial vehicles. Numerical Algorithms, 2022, 89, 1639-1661.	1.9	6
2	Spectral solution of delay differential equations with application to a model for the COVID-19 spread in Italy. AIP Conference Proceedings, 2022, , .	0.4	0
3	Arbitrarily high-order energy-conserving methods for Poisson problems. Numerical Algorithms, 2022, 91, 861-894.	1.9	4
4	Continuous-Stage Runge–Kutta Approximation to Differential Problems. Axioms, 2022, 11, 192.	1.9	6
5	Arbitrary high-order methods for one-sided direct event location in discontinuous differential problems with nonlinear event function. Applied Numerical Mathematics, 2022, 179, 39-49.	2.1	2
6	A general framework for solving differential equations. Annali Dell'Universita Di Ferrara, 2022, 68, 243-258.	1.3	2
7	Computation of higher order Lie derivatives on the Infinity Computer. Journal of Computational and Applied Mathematics, 2021, 383, 113135.	2.0	22
8	A multiregional extension of the SIR model, with application to the COVID-19 spread in Italy. Mathematical Methods in the Applied Sciences, 2021, 44, 4414-4427.	2.3	8
9	Maximal-entropy driven determination of weights in least-square approximation. Mathematical Methods in the Applied Sciences, 2021, 44, 6448-6461.	2.3	2
10	A Fourth Order Symplectic and Conjugate-Symplectic Extension of the Midpoint and Trapezoidal Methods. Mathematics, 2021, 9, 1103.	2.2	3
11	Conjugate-symplecticity properties of Euler–Maclaurin methods and their implementation on the Infinity Computer. Applied Numerical Mathematics, 2020, 155, 58-72.	2.1	28
12	Analysis of spectral Hamiltonian boundary value methods (SHBVMs) for the numerical solution of ODE problems. Numerical Algorithms, 2020, 83, 1489-1508.	1.9	17
13	On the use of the Infinity Computer architecture to set up a dynamic precision floating-point arithmetic. Soft Computing, 2020, 24, 17589-17600.	3.6	8
14	Arbitrarily high-order energy-preserving methods for simulating the gyrocenter dynamics of charged particles. Journal of Computational and Applied Mathematics, 2020, 380, 112994.	2.0	16
15	A Dynamic Precision Floating-Point Arithmetic Based on the Infinity Computer Framework. Lecture Notes in Computer Science, 2020, , 289-297.	1.3	3
16	Spectral solution of ODE-IVPs by using SHBVMs. AIP Conference Proceedings, 2020, , .	0.4	0
17	A note on the continuous-stage Runge–Kutta (Nyström) formulation of Hamiltonian Boundary Value Methods (HBVMs). Applied Mathematics and Computation, 2019, 363, 124634.	2.2	7
18	Spectrally accurate solutions of nonlinear fractional initial value problems. AIP Conference Proceedings, 2019, , .	0.4	5

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19	Space-time spectrally accurate HBVMs for Hamiltonian PDEs. AIP Conference Proceedings, 2019, , .	0.4	1
20	Advanced Numerical Methods in Applied Sciences. Axioms, 2019, 8, 16.	1.9	1
21	Fluid statics of a self-gravitating perfect-gas isothermal sphere. European Journal of Mechanics, B/Fluids, 2019, 78, 62-87.	2.5	3
22	Line Integral Solution of Hamiltonian PDEs. Mathematics, 2019, 7, 275.	2.2	12
23	Spectrally accurate space-time solution of Hamiltonian PDEs. Numerical Algorithms, 2019, 81, 1183-1202.	1.9	28
24	Analysis of Energy and QUadratic Invariant Preserving (EQUIP) methods. Journal of Computational and Applied Mathematics, 2018, 335, 51-73.	2.0	19
25	Line integral solution of Hamiltonian systems with holonomic constraints. Applied Numerical Mathematics, 2018, 127, 56-77.	2.1	6
26	Energy-conserving methods for the nonlinear Schrödinger equation. Applied Mathematics and Computation, 2018, 318, 3-18.	2.2	42
27	Predictor-corrector implementation of EQUIP methods. AIP Conference Proceedings, 2018, , .	0.4	1
28	Symplecticity properties of Euler-Maclaurin methods. AIP Conference Proceedings, 2018, , .	0.4	1
29	Line Integral Solution of Differential Problems. Axioms, 2018, 7, 36.	1.9	32
30	A generalized Taylor method of order three for the solution of initial value problems in standard and infinity floating-point arithmetic. Mathematics and Computers in Simulation, 2017, 141, 24-39.	4.4	55
31	Solving the nonlinear Schrödinger equation using energy conserving Hamiltonian boundary value methods. AIP Conference Proceedings, 2017, , .	0.4	1
32	On the use of the line integral in the numerical treatment of conservative problems. AIP Conference Proceedings, 2016, , .	0.4	0
33	Line integral formulation of energy and QUadratic invariants preserving (EQUIP) methods for Hamiltonian systems. AIP Conference Proceedings, 2016, , .	0.4	5
34	Recent advances in the numerical solution of Hamiltonian partial differential equations. AIP Conference Proceedings, 2016, , .	0.4	2
35	Numerical methods for solving ODEs on the infinity computer. AIP Conference Proceedings, 2016, , .	0.4	11
36	Energy conservation issues in the numerical solution of the semilinear wave equation. Applied Mathematics and Computation, 2015, 270, 842-870.	2.2	63

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37	Energy conservation issues in the numerical solution of Hamiltonian PDEs. AIP Conference Proceedings, 2015, , .	0.4	3
38	Recent advances in the numerical solution of Hamiltonian PDEs. AIP Conference Proceedings, 2015, , .	0.4	2
39	Modified line integral methods for conservative problems with multiple invariants. AIP Conference Proceedings, 2015, , .	0.4	0
40	Energy-conserving methods for Hamiltonian boundary value problems and applications in astrodynamics. Advances in Computational Mathematics, 2015, 41, 881-905.	1.6	23
41	Reprint of Analysis of Hamiltonian Boundary Value Methods (HBVMs): A class of energy-preserving Runge-Kutta methods for the numerical solution of polynomial Hamiltonian systems. Communications in Nonlinear Science and Numerical Simulation, 2015, 21, 34-51.	3.3	2
42	Efficient implementation of Radau collocation methods. Applied Numerical Mathematics, 2015, 87, 100-113.	2.1	10
43	Analysis of Hamiltonian Boundary Value Methods (HBVMs): A class of energy-preserving Runge-Kutta methods for the numerical solution of polynomial Hamiltonian systems. Communications in Nonlinear Science and Numerical Simulation, 2015, 20, 650-667.	3.3	51
44	Efficient implementation of Gauss collocation and Hamiltonian boundary value methods. Numerical Algorithms, 2014, 65, 633-650.	1.9	45
45	Efficient implementation of geometric integrators for separable Hamiltonian problems. AIP Conference Proceedings, 2013, , .	0.4	7
46	Energy conservation in the numerical solution of Hamiltonian boundary value problems. , 2013, , .		1
47	Geometric integration by playing with matrices. , 2012, , .		4
48	Recent advances on the parallelization of Gauss methods. , 2012, , .		0
49	Recent advances in the numerical solution of conservative problems. , 2012, , .		4
50	Energy- and Quadratic Invariants-Preserving Integrators Based upon Gauss Collocation Formulae. SIAM Journal on Numerical Analysis, 2012, 50, 2897-2916.	2.3	69
51	A two-step, fourth-order method with energy preserving properties. Computer Physics Communications, 2012, 183, 1860-1868.	7.5	25
52	Line integral methods which preserve all invariants of conservative problems. Journal of Computational and Applied Mathematics, 2012, 236, 3905-3919.	2.0	37
53	Continued fractions as dynamical systems. Applied Mathematics and Computation, 2012, 218, 8203-8216.	2.2	0
54	The lack of continuity and the role of infinite and infinitesimal in numerical methods for ODEs: The case of symplecticity. Applied Mathematics and Computation, 2012, 218, 8056-8063.	2.2	27

#	ARTICLE	IF	CITATIONS
55	A simple framework for the derivation and analysis of effective one-step methods for ODEs. Applied Mathematics and Computation, 2012, 218, 8475-8485.	2.2	87
56	Recent Advances on Preserving Methods for General Conservative Systems. , 2011, , .		0
57	A note on the efficient implementation of Hamiltonian BVMs. Journal of Computational and Applied Mathematics, 2011, 236, 375-383.	2.0	72
58	Numerical Comparisons among Some Methods for Hamiltonian Problems. , 2010, , .		3
59	Energy and Quadratic Invariants Preserving Integrators of Gaussian Type. , 2010, , .		13
60	Hamiltonian BVMs (HBVMs): A Family of "Drift Free" Methods for Integrating polynomial Hamiltonian problems. , 2009, , .		42
61	Hamiltonian BVMs (HBVMs): Implementation Details and Applications. , 2009, , .		9
62	Continued fractions without fractions: Lagrange theorem and Pell equations. Nonlinear Analysis: Theory, Methods & Applications, 2009, 71, e2136-e2151.	1.1	1
63	Conservative Block Boundary Value Methods for the Solution of Polynomial Hamiltonian Systems. AIP Conference Proceedings, 2008, , .	0.4	40
64	s-stage Trapezoidal Methods for the Conservation of Hamiltonian Functions of Polynomial Type. AIP Conference Proceedings, 2007, , .	0.4	56
65	State-dependent symplecticity and area preserving numerical methods. Journal of Computational and Applied Mathematics, 2007, 205, 814-825.	2.0	2
66	Symmetric Boundary Value Methods for Second Order Initial and Boundary Value Problems. Mediterranean Journal of Mathematics, 2006, 3, 383-398.	0.8	21
67	State Dependent Symplecticity of Symmetric Methods. Lecture Notes in Computer Science, 2006, , 724-731.	1.3	2
68	Symmetric schemes and Hamiltonian perturbations of linear Hamiltonian problems. Numerical Linear Algebra With Applications, 2005, 12, 171-179.	1.6	2
69	Conservative perturbations of positive definite Hamiltonian matrices. Numerical Linear Algebra With Applications, 2005, 12, 117-125.	1.6	4
70	Multistep Methods for Conservative Problems. Mediterranean Journal of Mathematics, 2005, 2, 53-69.	0.8	5
71	On the Discrete Nature of Physical Laws. , 2004, , 35-48.		3
72	Parallel implicit predictor corrector methods. Applied Numerical Mathematics, 2002, 42, 235-250.	2.1	1

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73	Generalization of Backward Differentiation Formulas for Parallel Computers. Numerical Algorithms, 2002, 31, 139-155.	1.9	4
74	Eigenvalues and Quasi-Eigenvalues of Banded Toeplitz Matrices: Some Properties and Applications. Numerical Algorithms, 2002, 31, 157-170.	1.9	5
75	Conservation Properties of Symmetric BVMs Applied to Linear Hamiltonian Problems. Lecture Notes in Computer Science, 2002, , 429-438.	1.3	2
76	Solvability of Runge-Kutta and Block-BVMs Systems Applied to Scalar ODEs. Lecture Notes in Computer Science, 2001, , 513-520.	1.3	0
77	Block-Boundary Value Methods for the Solution of Ordinary Differential Equations. SIAM Journal of Scientific Computing, 1999, 21, 323-339.	2.8	55
78	On the Extension of the Code GAM for Parallel Computing. Lecture Notes in Computer Science, 1999, , 1136-1143.	1.3	2
79	Solving ordinary differential equations by generalized Adams methods: properties and implementation techniques. Applied Numerical Mathematics, 1998, 28, 107-126.	2.1	55
80	Boundary values methods for time-domain simulation of power system dynamic behavior. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1998, 45, 50-63.	0.1	17
81	Convergence and Stability of Multistep Methods Solving Nonlinear Initial Value Problems. SIAM Journal of Scientific Computing, 1997, 18, 270-285.	2.8	23