

# Antonio Giorgilli

## List of Publications by Year in descending order

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73  
papers

4,740  
citations

186265

28  
h-index

118850

62  
g-index

73  
all docs

73  
docs citations

73  
times ranked

1650  
citing authors

#	ARTICLE	IF	CITATIONS
1	Lyapunov Characteristic Exponents for smooth dynamical systems and for hamiltonian systems; a method for computing all of them. Part 1: Theory. <i>Meccanica</i> , 1980, 15, 9-20.	2.0	1,481
2	Lyapunov Characteristic Exponents for smooth dynamical systems and for hamiltonian systems; A method for computing all of them. Part 2: Numerical application. <i>Meccanica</i> , 1980, 15, 21-30.	2.0	774
3	On the Hamiltonian interpolation of near-to-the identity symplectic mappings with application to symplectic integration algorithms. <i>Journal of Statistical Physics</i> , 1994, 74, 1117-1143.	1.2	215
4	Effective stability for a Hamiltonian system near an elliptic equilibrium point, with an application to the restricted three body problem. <i>Journal of Differential Equations</i> , 1989, 77, 167-198.	2.2	163
5	A proof of Nekhoroshev's theorem for the stability times in nearly integrable Hamiltonian systems. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1985, 37, 1-25.	1.4	141
6	Superexponential stability of KAM tori. <i>Journal of Statistical Physics</i> , 1995, 78, 1607-1617.	1.2	137
7	On the number of isolating integrals in Hamiltonian systems. <i>Physical Review A</i> , 1978, 18, 1183-1189.	2.5	122
8	Formal integrals for an autonomous Hamiltonian system near an equilibrium point. <i>Celestial Mechanics</i> , 1978, 17, 267-280.	0.1	95
9	Realization of holonomic constraints and freezing of high frequency degrees of freedom in the light of classical perturbation theory. Part II. <i>Communications in Mathematical Physics</i> , 1989, 121, 557-601.	2.2	89
10	On the stability of the lagrangian points in the spatial restricted problem of three bodies. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1991, 50, 31-58.	1.4	88
11	Realization of holonomic constraints and freezing of high frequency degrees of freedom in the light of classical perturbation theory. Part I. <i>Communications in Mathematical Physics</i> , 1987, 113, 87-103.	2.2	80
12	Universal properties in conservative dynamical systems. <i>Lettere Al Nuovo Cimento Rivista Internazionale Della Societ� Italiana Di Fisica</i> , 1980, 28, 1-4.	0.4	78
13	On the problem of energy equipartition for large systems of the Fermi-Pasta-Ulam type: analytical and numerical estimates. <i>Physica D: Nonlinear Phenomena</i> , 1992, 59, 334-348.	2.8	74
14	Rigorous estimates for the series expansions of Hamiltonian perturbation theory. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1985, 37, 95-112.	1.4	72
15	Exponentially long times to equipartition in the thermodynamic limit. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2004, 321, 167-172.	2.1	68
16	Localization of energy in FPU chains. <i>Discrete and Continuous Dynamical Systems</i> , 2004, 11, 855-866.	0.9	64
17	Exponential stability of states close to resonance in infinite-dimensional Hamiltonian systems. <i>Journal of Statistical Physics</i> , 1993, 71, 569-606.	1.2	62
18	Exponential law for the equipartition times among translational and vibrational degrees of freedom. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987, 120, 23-27.	2.1	58

#	ARTICLE	IF	CITATIONS
19	A computer program for integrals of motion. <i>Computer Physics Communications</i> , 1979, 16, 331-343.	7.5	54
20	A Nekhoroshev-type theorem for Hamiltonian systems with infinitely many degrees of freedom. <i>Communications in Mathematical Physics</i> , 1988, 119, 95-108.	2.2	49
21	An efficient procedure to compute fractal dimensions by box counting. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1986, 115, 202-206.	2.1	45
22	Invariant Tori in the Secular Motions of the Three-body Planetary Systems. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2000, 78, 47-74.	1.4	45
23	Boltzmann's ultraviolet cutoff and Nekhoroshev's theorem on Arnold diffusion. <i>Nature</i> , 1984, 311, 444-446.	27.8	40
24	On a connection between KAM and Nekhoroshev's theorems. <i>Physica D: Nonlinear Phenomena</i> , 1995, 86, 514-516.	2.8	39
25	Kolmogorov and Nekhoroshev theory for the problem of three bodies. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2009, 104, 159-173.	1.4	38
26	Improved estimates on the existence of invariant tori for Hamiltonian systems. <i>Nonlinearity</i> , 2000, 13, 397-412.	1.4	37
27	Exponential stability for time dependent potentials. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1992, 43, 827-855.	1.4	32
28	On the dynamics in the asteroids belt. Part II: Detailed study of the main resonances. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1990, 47, 173-204.	1.4	29
29	Invariant tori in the Sun-Jupiter-Saturn system. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2007, 7, 377-398.	0.9	29
30	Title is missing!. <i>Regular and Chaotic Dynamics</i> , 2005, 10, 153.	0.8	27
31	Apparent fractal dimensions in conservative dynamical systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1986, 118, 325-330.	2.1	26
32	On the stability of the secular evolution of the planar Sun-Jupiter-Saturn-Uranus system. <i>Mathematics and Computers in Simulation</i> , 2013, 88, 1-14.	4.4	26
33	Secular dynamics of a planar model of the Sun-Jupiter-Saturn-Uranus system; effective stability in the light of Kolmogorov and Nekhoroshev theories. <i>Regular and Chaotic Dynamics</i> , 2017, 22, 54-77.	0.8	26
34	Resonances and asymptotic behavior of Birkhoff series. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1983, 95, 11-14.	2.1	21
35	On the dynamics in the asteroids belt. Part I : General theory. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1990, 47, 145-172.	1.4	21
36	A semi-analytic algorithm for constructing lower dimensional elliptic tori in planetary systems. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2011, 111, 337-361.	1.4	21

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37	Packets of resonant modes in the Fermi-Pasta-Ulam system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012, 376, 2038-2044.	2.1	19
38	Unstable equilibria of Hamiltonian systems. <i>Discrete and Continuous Dynamical Systems</i> , 2001, 7, 855-871.	0.9	18
39	Classical electrodynamics as a nonlinear dynamical system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1989, 139, 221-230.	2.1	16
40	Some remarks on the problem of ergodicity of the Standard Map. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2000, 272, 359-367.	2.1	16
41	An Extensive Adiabatic Invariant for the Klein-Gordon Model in the Thermodynamic Limit. <i>Annales Henri Poincare</i> , 2015, 16, 897-959.	1.7	16
42	Bifurcations and complex instability in a 4-dimensional symplectic mapping. <i>Meccanica</i> , 1988, 23, 19-28.	2.0	15
43	Quantitative perturbation theory by successive elimination of harmonics. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1993, 55, 131-159.	1.4	15
44	On the role of high order resonances in normal forms and in separatrix splitting. <i>Physica D: Nonlinear Phenomena</i> , 1997, 102, 195-207.	2.8	15
45	Local chaotic behaviour in the Fermi-Pasta-Ulam system. <i>Discrete and Continuous Dynamical Systems - Series B</i> , 2005, 5, 991-1004.	0.9	15
46	On the convergence of an algorithm constructing the normal form for elliptic lower dimensional tori in planetary systems. <i>Celestial Mechanics and Dynamical Astronomy</i> , 2014, 119, 397-424.	1.4	14
47	Quantitative Methods in Classical Perturbation Theory. <i>NATO ASI Series Series B: Physics</i> , 1995, , 21-37.	0.2	13
48	Convergence radius in the Poincaré-Siegel problem. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2010, 3, 601-621.	1.1	13
49	On the numerical optimization of KAM estimates by classical perturbation theory. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1988, 39, 743-747.	1.4	10
50	Extensive Adiabatic Invariants for Nonlinear Chains. <i>Journal of Statistical Physics</i> , 2012, 148, 1106-1134.	1.2	10
51	Invariant Tori in the Secular Motions of the Three-Body Planetary Systems. , 2001, , 47-74.		9
52	Estimates for normal forms of differential equations near an equilibrium point. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1988, 39, 713-732.	1.4	8
53	Long Time Stability for the Main Problem of Artificial Satellites. <i>Celestial Mechanics and Dynamical Astronomy</i> , 1997, 69, 317-330.	1.4	8
54	On a weakened form of the averaging principle in multifrequency systems. <i>Nonlinearity</i> , 1995, 8, 283-293.	1.4	6

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55	Classical constructive methods in KAM theory. Planetary and Space Science, 1998, 46, 1441-1451.	1.7	6
56	Improved convergence estimates for the Schröder-Siegel problem. Annali Di Matematica Pura Ed Applicata, 2015, 194, 995-1013.	1.0	6
57	Characterization of vibrational transition modes by use of normal forms. Theoretica Chimica Acta, 1993, 87, 215-232.	0.8	5
58	Canonical perturbation theory for nearly integrable systems. , 2006, , 1-41.		5
59	Small denominators and exponential stability: From Poincaré to the present time. Milan Journal of Mathematics, 1998, 68, 19-57.	0.1	4
60	A Series Expansion for the Time Autocorrelation of Dynamical Variables. Journal of Statistical Physics, 2012, 148, 1054-1071.	1.2	4
61	Representation of a 2-power as sum of k 2-powers: A recursive formula. Journal of Number Theory, 2013, 133, 1251-1261.	0.4	3
62	Effective stability in Hamiltonian systems in the light of Nekhoroshev's theorem. , 1989, , 142-153.		1
63	Cosmic Visions in Celestial Mechanics. Celestial Mechanics and Dynamical Astronomy, 2010, 107, 1-2.	1.4	1
64	Relevance of Exponentially Large Time Scales in Practical Applications: Effective Fractal Dimensions in Conservative Dynamical Systems. NATO ASI Series Series B: Physics, 1988, , 161-170.	0.2	1
65	Energy Equipartition and Nekhoroshev-Type Estimates for Large Systems. The IMA Volumes in Mathematics and Its Applications, 1995, , 147-161.	0.5	1
66	The Dynamical Foundations of Classical Statistical Mechanics and the Boltzmann-Jeans Conjecture. , 1994, , 3-14.		1
67	ON THE PERSISTENCE OF ORDERED MOTIONS IN HAMILTONIAN SYSTEMS AND THE PROBLEM OF ENERGY PARTITION. , 1986, , 94-103.		0
68	On a notion of weak stability and its relevance for celestial mechanics and molecular dynamics. , 1994, , 56-63.		0
69	A Tribute to Jürgen Moser. Celestial Mechanics and Dynamical Astronomy, 2000, 77, 153-155.	1.4	0
70	Recent Results on the Fermi-Pasta-Ulam Problem. Journal of Mathematical Sciences, 2005, 128, 2761-2766.	0.4	0
71	NORMAL FORM AND ENERGY CONSERVATION OF HIGH FREQUENCY SUBSYSTEMS WITHOUT NONRESONANCE CONDITIONS. Istituto Lombardo - Accademia Di Scienze E Lettere - Rendiconti Di Scienze, 2013, , .	0.0	0
72	From Kolmogorov's Normalization Algorithm to the Orbits in the Three-Body Planetary Problem. , 2002, , 411-415.		0

#	ARTICLE	IF	CITATIONS
73	Perturbation Methods in Celestial Mechanics. Springer INdAM Series, 2019, , 51-114.	0.5	0