Juan A Acebron

List of Publications by Year
in descending order

41 papers	3,198 citations	687363 13 h-index	377865 34 g-index
42 all docs	42 docs citations	42 times ranked	2334 citing authors

#	Article	IF	Citations
1	The Kuramoto model: A simple paradigm for synchronization phenomena. Reviews of Modern Physics, 2005, 77, 137-185.	45.6	2,547
2	Adaptive Frequency Model for Phase-Frequency Synchronization in Large Populations of Globally Coupled Nonlinear Oscillators. Physical Review Letters, 1998, 81, 2229-2232.	7.8	90
3	Synchronization in populations of globally coupled oscillators with inertial effects. Physical Review E, 2000, 62, 3437-3454.	2.1	78
4	Amplified Signal Response in Scale-Free Networks by Collaborative Signaling. Physical Review Letters, 2007, 99, 128701.	7.8	67
5	Emergent oscillations in unidirectionally coupled overdamped bistable systems. Physical Review E, 2004, 70, 036103.	2.1	58
6	Noisy FitzHugh-Nagumo model: From single elements to globally coupled networks. Physical Review E, 2004, 69, 026202.	2.1	57
7	Breaking the symmetry in bimodal frequency distributions of globally coupled oscillators. Physical Review E, 1998, 57, 5287-5290.	2.1	36
8	Domain Decomposition Solution of Elliptic Boundary-Value Problems via Monte Carlo and Quasi-Monte Carlo Methods. SIAM Journal of Scientific Computing, 2005, 27, 440-457.	2.8	36
9	Asymptotic description of transients and synchronized states of globally coupled oscillators. Physica D: Nonlinear Phenomena, 1998, 114, 296-314.	2.8	27
10	Domain decomposition solution of nonlinear two-dimensional parabolic problems by random trees. Journal of Computational Physics, 2009, 228, 5574-5591.	3.8	22
11	Probabilistically induced domain decomposition methods for elliptic boundary-value problems. Journal of Computational Physics, 2005, 210, 421-438.	3.8	16
12	Efficient Parallel Solution of Nonlinear Parabolic Partial Differential Equations by a Probabilistic Domain Decomposition. Journal of Scientific Computing, 2010, 43, 135-157.	2.3	16
13	A Monte Carlo method for solving the one-dimensional telegraph equations with boundary conditions. Journal of Computational Physics, 2016, 305, 29-43.	3.8	15
14	Noise-mediated dynamics in a two-dimensional oscillator: Exact solutions and numerical results. Europhysics Letters, 2001, 56, 354-360.	2.0	11
15	Uncertainty in phase-frequency synchronization of large populations of globally coupled nonlinear oscillators. Physica D: Nonlinear Phenomena, 2000, 141, 65-79.	2.8	10
16	A new parallel solver suited for arbitrary semilinear parabolic partial differential equations based on generalized random trees. Journal of Computational Physics, 2011, 230, 7891-7909.	3.8	10
17	A Comparison of Higher-Order Weak Numerical Schemes for Stopped Stochastic Differential Equations. Communications in Computational Physics, 2016, 20, 703-732.	1.7	10
18	Fast simulations of stochastic dynamical systems. Journal of Computational Physics, 2005, 208, 106-115.	3.8	9

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19	The Fractional Fourier Transform in the Analysis and Synthesis of Fiber Bragg Gratings. Optical and Quantum Electronics, 2005, 37, 755-787.	3.3	9
20	Highly efficient numerical algorithm based on random trees for accelerating parallel Vlasovâ€“Poisson simulations. Journal of Computational Physics, 2013, 250, 224-245.	3.8	9
21	A Stochastic Algorithm Based on Fast Marching for Automatic Capacitance Extraction in Non-Manhattan Geometries. SIAM Journal on Imaging Sciences, 2014, 7, 2657-2674.	2.2	9
22	Injection locking near a stochastic bifurcation: the dc SQUID as a case study. Physica A: Statistical Mechanics and its Applications, 2003, 325, 220-229.	2.6	8
23	Spectral analysis and computation for the Kuramoto-Sakaguchi integroparabolic equation. IMA Journal of Numerical Analysis, 2001, 21, 239-263.	2.9	7
24	An Efficient Algorithm for Accelerating Monte Carlo Approximations of the Solution to Boundary Value Problems. Journal of Scientific Computing, 2016, 66, 577-597.	2.3	7
25	Supercomputing applications to the numerical modeling of industrial and applied mathematics problems. Journal of Supercomputing, 2007, 40, 67-80.	3.6	6
26	A highly parallel algorithm for computing the action of a matrix exponential on a vector based on a multilevel Monte Carlo method. Computers and Mathematics With Applications, 2020, 79, 3495-3515.	2.7	6
27	A Monte Carlo method for computing the action of a matrix exponential on a vector. Applied Mathematics and Computation, 2019, 362, 124545.	2.2	5
28	A multigrid-like algorithm for probabilistic domain decomposition. Computers and Mathematics With Applications, 2016, 72, 1790-1810.	2.7	4
29	A distributed Monte Carlo based linear algebra solver applied to the analysis of large complex networks. Future Generation Computer Systems, 2022, 127, 320-330.	7.5	4
30	A New Probabilistic Approach to the Domain Decomposition Method. , 2007, , 473-480.		3
31	Second Harmonics Effects in Random Duffing Oscillators. SIAM Journal on Applied Mathematics, 2005, 66, 266-285.	1.8	2
32	A fully scalable algorithm suited for petascale computing andÂbeyond. Computer Science - Research and Development, 2010, 25, 115-121.	2.7	1
33	Parallelizing a hybrid finite element-boundary integral method for the analysis of scattering and radiation of electromagnetic waves. Finite Elements in Analysis and Design, 2010, 46, 645-657.	3.2	1
34	A Probabilistic Linear Solver Based on a Multilevel Monte Carlo Method. Journal of Scientific Computing, 2020, 82, 1.	2.3	1
35	A Fully Scalable Parallel Algorithm for Solving Elliptic Partial Differential Equations. Lecture Notes in Computer Science, 2007, , 727-736.	1.3	1
36	Self-Induced Oscillations in Electronically-Coupled Fluxgate Magnetometers. AIP Conference Proceedings, 2004, , .	0.4	0

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37	Uniform spectral partition method for the propagation of Gaussian pulses on lossy transmission lines using the Monte Carlo method. , 2015, , .		0
38	The PDD Method for Solving Linear, Nonlinear, and Fractional PDEs Problems. SEMA SIMAI Springer Series, 2021, , 239-273.	0.7	0
39	On the Performance of a New Parallel Algorithm for Large-Scale Simulations of Nonlinear Partial Differential Equations. Lecture Notes in Computer Science, 2010, , 41-50.	1.3	0
40	Scalability and Performance Analysis of a Probabilistic Domain Decomposition Method. , 2007, , 1257-1264.		0
41	A New Domain Decomposition Approach Suited for Grid Computing. , 2007, , 744-753.		0