

# Santos B Yuste

## List of Publications by Year in descending order

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126  
papers

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citations

147801

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docs citations

131  
times ranked

1744  
citing authors

#	ARTICLE	IF	CITATIONS
1	An Explicit Finite Difference Method and a New von Neumann-Type Stability Analysis for Fractional Diffusion Equations. <i>SIAM Journal on Numerical Analysis</i> , 2005, 42, 1862-1874.	2.3	493
2	Weighted average finite difference methods for fractional diffusion equations. <i>Journal of Computational Physics</i> , 2006, 216, 264-274.	3.8	303
3	Reaction front in an A+B $\rightarrow$ C reaction-subdiffusion process. <i>Physical Review E</i> , 2004, 69, 036126.	2.1	264
4	Subdiffusion-Limited A+A Reactions. <i>Physical Review Letters</i> , 2001, 87, 118301.	7.8	125
5	Radial distribution function for hard spheres. <i>Physical Review A</i> , 1991, 43, 5418-5423.	2.5	101
6	An accurate and simple equation of state for hard disks. <i>Journal of Chemical Physics</i> , 1995, 103, 4622-4625.	3.0	99
7	Subdiffusion-limited reactions. <i>Chemical Physics</i> , 2002, 284, 169-180.	1.9	97
8	A finite difference method with non-uniform timesteps for fractional diffusion equations. <i>Computer Physics Communications</i> , 2012, 183, 2594-2600.	7.5	94
9	Improvement of a Krylov-Bogoliubov method that uses Jacobi elliptic functions. <i>Journal of Sound and Vibration</i> , 1990, 139, 151-163.	3.9	80
10	Reaction-subdiffusion and reaction-superdiffusion equations for evanescent particles performing continuous-time random walks. <i>Physical Review E</i> , 2010, 81, 031115.	2.1	72
11	Reaction-subdiffusion model of morphogen gradient formation. <i>Physical Review E</i> , 2010, 82, 061123.	2.1	66
12	Structure of hard-sphere metastable fluids. <i>Physical Review E</i> , 1996, 53, 4820-4826.	2.1	60
13	Exploration and Trapping of Mortal Random Walkers. <i>Physical Review Letters</i> , 2013, 110, 220603.	7.8	60
14	An Explicit Difference Method for Solving Fractional Diffusion and Diffusion-Wave Equations in the Caputo Form. <i>Journal of Computational and Nonlinear Dynamics</i> , 2011, 6, .	1.2	58
15	PRELIMINARY COMMUNICATION Equation of state of a multicomponent d-dimensional hard-sphere fluid. <i>Molecular Physics</i> , 1999, 96, 1-5.	1.7	56
16	Pair correlation function of short-ranged square-well fluids. <i>Journal of Chemical Physics</i> , 2005, 122, 084510.	3.0	54
17	Structure of multi-component hard-sphere mixtures. <i>Journal of Chemical Physics</i> , 1998, 108, 3683-3693.	3.0	52
18	A model for the structure of square-well fluids. <i>Journal of Chemical Physics</i> , 1994, 101, 2355-2364.	3.0	50

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19	Survival probability of a particle in a sea of mobile traps: A tale of tails. <i>Physical Review E</i> , 2008, 78, 021105.	2.1	50
20	Contact values of the radial distribution functions of additive hard-sphere mixtures in d dimensions: A new proposal. <i>Journal of Chemical Physics</i> , 2002, 117, 5785-5793.	3.0	49
21	Subdiffusive target problem: Survival probability. <i>Physical Review E</i> , 2007, 76, 051114.	2.1	46
22	Extension and improvement to the Krylov-Bogoliubov methods using elliptic functions. <i>International Journal of Control</i> , 1989, 49, 1127-1141.	1.9	46
23	Order statistics for first passage times in one-dimensional diffusion processes. <i>Journal of Statistical Physics</i> , 1996, 85, 501-512.	1.2	43
24	Continuous-time random-walk model for anomalous diffusion in expanding media. <i>Physical Review E</i> , 2017, 96, 032117.	2.1	42
25	“Cubication” of non-linear oscillators using the principle of harmonic balance. <i>International Journal of Non-Linear Mechanics</i> , 1992, 27, 347-356.	2.6	37
26	Equation of state of nonadditive d-dimensional hard-sphere mixtures. <i>Journal of Chemical Physics</i> , 2005, 122, 024514.	3.0	37
27	A finite difference method with non-uniform timesteps for fractional diffusion and diffusion-wave equations. <i>European Physical Journal: Special Topics</i> , 2013, 222, 1987-1998.	2.6	37
28	Generalized fourier series for the study of limit cycles. <i>Journal of Sound and Vibration</i> , 1988, 125, 13-21.	3.9	36
29	Radial distribution function for sticky hard-core fluids. <i>Journal of Statistical Physics</i> , 1993, 72, 703-720.	1.2	34
30	Trapping reactions with subdiffusive traps and particles characterized by different anomalous diffusion exponents. <i>Physical Review E</i> , 2005, 72, 061103.	2.1	34
31	Simple effective rule to estimate the jamming packing fraction of polydisperse hard spheres. <i>Physical Review E</i> , 2014, 89, 040302.	2.1	34
32	Fast, accurate and robust adaptive finite difference methods for fractional diffusion equations. <i>Numerical Algorithms</i> , 2016, 71, 207-228.	1.9	33
33	On Duffing oscillators with slowly varying parameters. <i>International Journal of Non-Linear Mechanics</i> , 1991, 26, 671-677.	2.6	31
34	Some exact results for the trapping of subdiffusive particles in one dimension. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 336, 334-346.	2.6	31
35	Survival probability of an immobile target in a sea of evanescent diffusive or subdiffusive traps: A fractional equation approach. <i>Physical Review E</i> , 2012, 86, 061120.	2.1	30
36	Optimal search strategies of space-time coupled random walkers with finite lifetimes. <i>Physical Review E</i> , 2015, 91, 052115.	2.1	29

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37	Comment on "Mean first passage time for anomalous diffusion" Physical Review E, 2004, 69, 033101; discussion 033102.	2.1	28
38	Sticky hard spheres beyond the Percus-Yevick approximation. Physical Review E, 1993, 48, 4599-4604.	2.1	27
39	Radial distribution functions for a multicomponent system of sticky hard spheres. Journal of Chemical Physics, 1998, 109, 6814-6819.	3.0	26
40	Order statistics for d-dimensional diffusion processes. Physical Review E, 2001, 64, 052102.	2.1	26
41	Alternative Approaches to the Equilibrium Properties of Hard-Sphere Liquids. Lecture Notes in Physics, 2008, , 183-245.	0.7	26
42	Virial coefficients and equations of state for mixtures of hard discs, hard spheres and hard hyperspheres. Molecular Physics, 2001, 99, 1959-1972.	1.7	25
43	Structural and thermodynamic properties of hard-sphere fluids. Journal of Chemical Physics, 2020, 153, 120901.	3.0	25
44	Is there a glass transition for dense hard-sphere systems?. Journal of Chemical Physics, 1998, 108, 1290-1291.	3.0	24
45	On three explicit difference schemes for fractional diffusion and diffusion-wave equations. Physica Scripta, 2009, T136, 014025.	2.5	24
46	Evanescent continuous-time random walks. Physical Review E, 2013, 88, 062110.	2.1	24
47	Diffusion in an expanding medium: Fokker-Planck equation, Green's function, and first-passage properties. Physical Review E, 2016, 94, 032118.	2.1	24
48	A heuristic radial distribution function for hard disks. Journal of Chemical Physics, 1993, 99, 2020-2023.	3.0	23
49	Escape Times of Random Walkers from a Fractal Labyrinth. Physical Review Letters, 1997, 79, 3565-3568.	7.8	23
50	Territory covered by Random walkers. Physical Review E, 1999, 60, R3459-R3462.	2.1	23
51	Low-temperature and high-temperature approximations for penetrable-sphere fluids: Comparison with Monte Carlo simulations and integral equation theories. Physical Review E, 2007, 76, 021504.	2.1	23
52	Number of distinct sites visited by Random walkers on a Euclidean lattice. Physical Review E, 2000, 61, 2340-2347.	2.1	22
53	Target problem with evanescent subdiffusive traps. Physical Review E, 2006, 74, 046119.	2.1	22
54	How "sticky" are short-range square-well fluids?. Journal of Chemical Physics, 2006, 125, 074507.	3.0	22

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55	Demixing in binary mixtures of hard hyperspheres. <i>Europhysics Letters</i> , 2000, 52, 158-164.	2.0	21
56	Contact values of the particle-particle and wall-particle correlation functions in a hard-sphere polydisperse fluid. <i>Journal of Chemical Physics</i> , 2005, 123, 234512.	3.0	21
57	Virial coefficients, thermodynamic properties, and fluid-fluid transition of nonadditive hard-sphere mixtures. <i>Journal of Chemical Physics</i> , 2010, 132, 204506.	3.0	21
58	A weighted mean-square method of "cubication" for non-linear oscillators. <i>Journal of Sound and Vibration</i> , 1989, 134, 423-433.	3.9	20
59	Energy levels of the quartic double well using a phase-integral method. <i>Physical Review A</i> , 1993, 48, 3478-3485.	2.5	20
60	Territory covered by N random walkers on fractal media: The Sierpinski gasket and the percolation aggregate. <i>Physical Review E</i> , 2000, 63, 011105.	2.1	20
61	Structure of the square-shoulder fluid. <i>Molecular Physics</i> , 2011, 109, 987-995.	1.7	20
62	Asymptotic solutions of decoupled continuous-time random walks with superheavy-tailed waiting time and heavy-tailed jump length distributions. <i>Physical Review E</i> , 2011, 84, 061143.	2.1	20
63	Quasi-pure-cubic oscillators studied using a krylov-Bogoliubov method. <i>Journal of Sound and Vibration</i> , 1992, 158, 267-275.	3.9	19
64	First-passage time, survival probability and propagator on deterministic fractals. <i>Journal of Physics A</i> , 1995, 28, 7027-7038.	1.6	18
65	Short-time regime propagator in fractals. <i>Physical Review E</i> , 1998, 57, 5160-5167.	2.1	16
66	Depletion potential in the infinite dilution limit. <i>Journal of Chemical Physics</i> , 2008, 128, 134507.	3.0	16
67	Equation of state of polydisperse hard-disk mixtures in the high-density regime. <i>Physical Review E</i> , 2017, 96, 062603.	2.1	16
68	First-encounter time of two diffusing particles in confinement. <i>Physical Review E</i> , 2020, 102, 032118.	2.1	15
69	Order statistics of diffusion on fractals. <i>Physical Review E</i> , 1998, 57, 6327-6334.	2.1	14
70	Diffusion of a set of random walkers in Euclidean media. First passage times. <i>Journal of Physics A</i> , 2000, 33, 507-512.	1.6	14
71	On the radial distribution function of a hard-sphere fluid. <i>Journal of Chemical Physics</i> , 2006, 124, 236102.	3.0	14
72	Multicomponent fluid of hard spheres near a wall. <i>Physical Review E</i> , 2007, 75, 061201.	2.1	14

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73	Number of distinct sites visited by a subdiffusive random walker. <i>Physical Review E</i> , 2008, 77, 032101.	2.1	14
74	An Explicit Numerical Method for the Fractional Cable Equation. <i>International Journal of Differential Equations</i> , 2011, 2011, 1-12.	0.8	14
75	Continuous-time random walks and Fokker-Planck equation in expanding media. <i>Physical Review E</i> , 2018, 98, .	2.1	14
76	Survival probability of a subdiffusive particle in ad-dimensional sea of mobile traps. <i>Physical Review E</i> , 2009, 80, 061121.	2.1	13
77	Structural properties of fluids interacting via piece-wise constant potentials with a hard core. <i>Journal of Chemical Physics</i> , 2013, 139, 074505.	3.0	13
78	Anomalous diffusion and dynamics of fluorescence recovery after photobleaching in the random-comb model. <i>Physical Review E</i> , 2016, 94, 012118.	2.1	13
79	Continuous time random walk in a velocity field: role of domain growth, Galilei-invariant advection-diffusion, and kinetics of particle mixing. <i>New Journal of Physics</i> , 2020, 22, 073048.	2.9	13
80	Multiparticle trapping problem in the half-line. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2001, 297, 321-336.	2.6	12
81	Order statistics of the trapping problem. <i>Physical Review E</i> , 2001, 64, 061107.	2.1	12
82	Numerical matrix method for quantum periodic potentials. <i>American Journal of Physics</i> , 2016, 84, 426-433.	0.7	12
83	Structural properties of the Jagla fluid. <i>Physical Review E</i> , 2018, 98, 012138.	2.1	12
84	Reaction-diffusion and reaction-subdiffusion equations on arbitrarily evolving domains. <i>Physical Review E</i> , 2020, 102, 032111.	2.1	12
85	Structure of ternary additive hard-sphere fluid mixtures. <i>Physical Review E</i> , 2002, 66, 061203.	2.1	11
86	Communication: Inferring the equation of state of a metastable hard-sphere fluid from the equation of state of a hard-sphere mixture at high densities. <i>Journal of Chemical Physics</i> , 2011, 135, 181102.	3.0	11
87	A reactionâ€“subdiffusion model of fluorescence recovery after photobleaching (FRAP). <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P11014.	2.3	11
88	Direct correlation functions and bridge functions in additive hard-sphere mixtures. <i>Molecular Physics</i> , 2000, 98, 439-446.	1.7	10
89	Encounter-controlled coalescence and annihilation on a one-dimensional growing domain. <i>Physical Review E</i> , 2018, 98, .	2.1	10
90	Mean field model of coagulation and annihilation reactions in a medium of quenched traps: Subdiffusion. <i>Physical Review E</i> , 2009, 79, 051113.	2.1	9

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91	Elucidating the Role of Subdiffusion and Evanescence in the Target Problem: Some Recent Results. <i>Mathematical Modelling of Natural Phenomena</i> , 2013, 8, 100-113.	2.4	9
92	A generalized Galerkin method for cubic oscillators. <i>Journal of Sound and Vibration</i> , 1989, 130, 332-336.	3.9	8
93	Test of a universality ansatz for the contact values of the radial distribution functions of hard-sphere mixtures near a hard wall. <i>Molecular Physics</i> , 2006, 104, 3461-3467.	1.7	8
94	Standard and fractional Ornstein-Uhlenbeck process on a growing domain. <i>Physical Review E</i> , 2019, 100, 012142.	2.1	8
95	Equation of state of additive hard-disk fluid mixtures: A critical analysis of two recent proposals. <i>Physical Review E</i> , 2002, 66, 031202.	2.1	7
96	Simulations for trapping reactions with subdiffusive traps and subdiffusive particles. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 065120.	1.8	7
97	Contact values for disparate-size hard-sphere mixtures. <i>Molecular Physics</i> , 2009, 107, 685-691.	1.7	7
98	Virial coefficients and demixing in the Asakura-Oosawa model. <i>Journal of Chemical Physics</i> , 2015, 142, 014902.	3.0	7
99	Theoretical approaches to the structural properties of the square-shoulder fluid. <i>Molecular Physics</i> , 2016, 114, 2382-2390.	1.7	7
100	Structural properties of additive binary hard-sphere mixtures. <i>Physical Review E</i> , 2020, 101, 012117.	2.1	7
101	Pseudo-two-dimensional dynamics in a system of macroscopic rolling spheres. <i>Physical Review E</i> , 2021, 103, 042903.	2.1	7
102	Simple equation of state for hard disks on the hyperbolic plane. <i>Journal of Chemical Physics</i> , 2008, 129, 116101.	3.0	6
103	Divergent series and memory of the initial condition in the long-time solution of some anomalous diffusion problems. <i>Physical Review E</i> , 2010, 81, 021105.	2.1	6
104	Survival probability and order statistics of diffusion on disordered media. <i>Physical Review E</i> , 2002, 66, 011110.	2.1	5
105	Order statistics of Rosenstock's trapping problem in disordered media. <i>Physical Review E</i> , 2003, 68, 036134.	2.1	5
106	Fourth virial coefficients of asymmetric nonadditive hard-disk mixtures. <i>Journal of Chemical Physics</i> , 2012, 136, 184505.	3.0	5
107	Reaction-Diffusion Kinetics in Growing Domains. <i>Handbook of Statistics</i> , 2018, 39, 131-151.	0.6	5
108	Reactions in Subdiffusive Media and Associated Fractional Equations. , 2011, , 77-106.		5

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109	Properties of the reaction front in a reaction-subdiffusion process. , 2004, , .		4
110	<title>Trapping reactions with subdiffusive traps and particles (Invited Paper)</title>. , 2005, 5845, 27.		4
111	Coagulation reactions in low dimensions: Revisiting subdiffusive A+A reactions in one dimension. Physical Review E, 2009, 80, 051114.	2.1	4
112	Virial coefficients, equation of state, and demixing of binary asymmetric nonadditive hard-disk mixtures. Journal of Chemical Physics, 2017, 147, 164502.	3.0	4
113	Equation of State of Four- and Five-Dimensional Hard-Hypersphere Mixtures. Entropy, 2020, 22, 469.	2.2	4
114	Generalized Bohr-Sommerfeld rule for quartic oscillators. Physical Review A, 1992, 46, 5367-5374.	2.5	3
115	Demonstration of a conjecture for random walks in d-dimensional Sierpinski fractals. Journal of Physics A, 1998, 31, 6589-6593.	1.6	3
116	Arrival Statistics and Exploration Properties of Mortal Walkers. , 2014, , 1-20.		3
117	Structural properties of additive binary hard-sphere mixtures. II. Asymptotic behavior and structural crossovers. Physical Review E, 2021, 104, 024128.	2.1	3
118	The Rayleigh method with Jacobi elliptic functions. Journal of Sound and Vibration, 1989, 133, 180-184.	3.9	2
119	Average shape of fluctuations for subdiffusive walks. Physical Review E, 2004, 69, 031104.	2.1	2
120	First-encounter time of two diffusing particles in two- and three-dimensional confinement. Physical Review E, 2022, 105, 044119.	2.1	2
121	First-Passage Processes and Encounter-Controlled Reactions in Growing Domains. , 2019, , 409-433.		1
122	Structural properties of additive binary hard-sphere mixtures. III. Direct correlation functions. Physical Review E, 2021, 104, 054142.	2.1	1
123	On an Explicit Difference Method for Fractional Diffusion and Diffusion-Wave Equations. , 2009, , .		0
124	On a novel iterative method to compute polynomial approximations to Bessel functions of the first kind and its connection to the solution of fractional diffusion/diffusion-wave problems. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 075203.	2.1	0
125	Fractional calculus and morphogen gradient formation. , 2012, , .		0
126	Analysis of Fractional Dynamic Systems. Scientific World Journal, The, 2014, 2014, 1-2.	2.1	0