

# Juan F R Archilla

## List of Publications by Year in descending order

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67  
papers

1,040  
citations

361413

20  
h-index

454955

30  
g-index

69  
all docs

69  
docs citations

69  
times ranked

378  
citing authors

#	ARTICLE	IF	CITATIONS
1	Charge Transport in Poly(dG) $\leftrightarrow$ Poly(dC) and Poly(dA) $\leftrightarrow$ Poly(dT) DNA Polymers. Journal of Biological Physics, 2004, 30, 227-238.	1.5	56
2	Demonstration of the stability or instability of multibreathers at low coupling. Physica D: Nonlinear Phenomena, 2003, 180, 235-255.	2.8	50
3	Moving breathers in a DNA model with competing short-and long-range dispersive interactions. Physica D: Nonlinear Phenomena, 2002, 163, 106-126.	2.8	48
4	Moving discrete breathers in a Klein-Gordon chain with an impurity. Journal of Physics A, 2002, 35, 10519-10530.	1.6	46
5	Nonlinear charge transport mechanism in periodic and disordered DNA. Physica D: Nonlinear Phenomena, 2003, 180, 256-272.	2.8	42
6	Reaction-rate theory with account of the crystal anharmonicity. Physical Review E, 2011, 83, 041124.	2.1	42
7	Ultradiscrete kinks with supersonic speed in a layered crystal with realistic potentials. Physical Review E, 2015, 91, 022912.	2.1	42
8	Discrete breathers and Anderson modes: two faces of the same phenomenon?. Physica D: Nonlinear Phenomena, 1999, 134, 406-418.	2.8	36
9	Influence of moving breathers on vacancies migration. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 315, 364-371.	2.1	36
10	Bright and dark breathers in Fermi-Pasta-Ulam lattices. Physical Review B, 2004, 70, .	3.2	33
11	Long range annealing of defects in germanium by low energy plasma ions. Physica D: Nonlinear Phenomena, 2015, 297, 56-61.	2.8	33
12	Discrete Breathers for Understanding Reconstructive Mineral Processes at Low Temperatures. Journal of Physical Chemistry B, 2006, 110, 24112-24120.	2.6	32
13	Moving breathers in a bent DNA model. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 299, 221-225.	2.1	30
14	Effect of base-pair inhomogeneities on charge transport along the DNA molecule, mediated by twist and radial polarons. New Journal of Physics, 2004, 6, 13-13.	2.9	27
15	Localization properties of electronic states in a polaron model of poly(dG)-poly(dC) and poly(dA)-poly(dT) DNA polymers. European Physical Journal E, 2005, 17, 149-154.	1.6	26
16	Interaction of moving discrete breathers with vacancies. Physica D: Nonlinear Phenomena, 2006, 216, 115-120.	2.8	24
17	Breather trapping and breather transmission in a DNA model with an interface. European Physical Journal B, 2006, 51, 119-130.	1.5	24
18	Interplay of nonlinearity and geometry in a DNA-related, Klein-Gordon model with long-range dipole-dipole interaction. Physical Review E, 2001, 65, 016609.	2.1	23

#	ARTICLE	IF	CITATIONS
19	Dark breathers in Klein-Gordon lattices. Band analysis of their stability properties. <i>New Journal of Physics</i> , 2002, 4, 72-72.	2.9	21
20	Energy funneling in a bent chain of Morse oscillators with long-range coupling. <i>Physical Review E</i> , 2004, 69, 026603.	2.1	20
21	On the charge of quodons. <i>Letters on Materials</i> , 2016, 6, 3-8.	0.7	19
22	Numerical study of breathers in a bent chain of oscillators with long-range interaction. <i>Journal of Physics A</i> , 2001, 34, 6363-6373.	1.6	18
23	Stationary and moving breathers in a simplified model of curved alpha-helix proteins. <i>Journal of Physics A</i> , 2002, 35, 8885-8902.	1.6	18
24	MULTIBREATHING AND VORTEX BREATHING STABILITY IN KLEIN-GORDON LATTICES: EQUIVALENCE BETWEEN TWO DIFFERENT APPROACHES. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2011, 21, 2161-2177.	1.7	18
25	Infinite charge mobility in muscovite at 300 K. <i>Europhysics Letters</i> , 2017, 120, 46001.	2.0	17
26	Nonlinear waves in a model for silicate layers. <i>Chaos</i> , 2018, 28, 083119.	2.5	16
27	Bubble generation in a twisted and bent DNA-like model. <i>Physical Review E</i> , 2004, 70, 036609.	2.1	15
28	MOVING BREATHERS IN BENT DNA WITH REALISTIC PARAMETERS. <i>Modern Physics Letters B</i> , 2004, 18, 1319-1326.	1.9	15
29	Quodons in Mica. <i>Springer Series in Materials Science</i> , 2015, , .	0.6	13
30	Moving Excitations in Cation Lattices. <i>Ukrainian Journal of Physics</i> , 2013, 58, 646-656.	0.2	13
31	A neutron scattering study of strong-symmetric hydrogen bonds in potassium and cesium hydrogen bistrifluoroacetates: Determination of the crystal structures and of the single-well potentials for protons. <i>Journal of Chemical Physics</i> , 2008, 128, 204502.	3.0	12
32	Stability of non-time-reversible phonobreathers. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2011, 44, 035102.	2.1	12
33	A Supersonic Crowdion in Mica. <i>Springer Series in Materials Science</i> , 2015, , 69-96.	0.6	12
34	Pterobreathers in a model for a layered crystal with realistic potentials: Exact moving breathers in a moving frame. <i>Physical Review E</i> , 2019, 100, 022206.	2.1	12
35	Effect of the introduction of impurities on the stability properties of multibreathers at low coupling. <i>Nonlinearity</i> , 2005, 18, 769-790.	1.4	11
36	Hyperconductivity in fluorphlogopite at 300 K and 1.1 T. <i>Europhysics Letters</i> , 2019, 127, 16001.	2.0	11

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37	Lie symmetries and multiple solutions in reaction-diffusion systems. Journal of Physics A, 1997, 30, 185-194.	1.6	10
38	Discrete moving breather collisions in a Klein-Gordon chain of oscillators. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 1256-1264.	2.1	10
39	Breathers in a system with helicity and dipole interaction. Physical Review E, 2002, 66, 017601.	2.1	8
40	Stretching and relaxation dynamics in double stranded DNA. Physica A: Statistical Mechanics and Its Applications, 2004, 331, 579-601.	2.6	8
41	The Origin of Defects Induced in Ultra-Pure Germanium by Electron Beam Deposition. Springer Series in Materials Science, 2015, , 363-380.	0.6	6
42	Diffusion equations for nonhomogeneous media. existence of similarity solutions. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 111, 179-181.	2.1	5
43	Numerical study of two-dimensional disordered Klein-Gordon lattices with cubic soft anharmonicity. Journal of Physics A, 2001, 34, L221-L230.	1.6	5
44	Title is missing!. Theoretical and Mathematical Physics(Russian Federation), 2003, 137, 1406-1411.	0.9	5
45	Modelling the thermal evolution of enzyme-created bubbles in DNA. Journal of the Royal Society Interface, 2005, 2, 89-95.	3.4	5
46	Effect of Breather Existence on Reconstructive Transformations in Mica Muscovite. AIP Conference Proceedings, 2008, , .	0.4	5
47	Experimental Observation of Intrinsic Localized Modes in Germanium. Springer Series in Materials Science, 2015, , 343-362.	0.6	5
48	Kinks in a Lattice of Repelling Particles. Understanding Complex Systems, 2018, , 261-282.	0.6	4
49	Ballistic Charge Transport by Mobile Nonlinear Excitations. Physica Status Solidi - Rapid Research Letters, 2022, 16, 2100420.	2.4	4
50	Rate Theory of Acceleration of Defect Annealing Driven by Discrete Breathers. Springer Series in Materials Science, 2015, , 381-398.	0.6	4
51	Nonlinear Systems, Vol. 2. Understanding Complex Systems, 2018, , .	0.6	4
52	Multi-Site H-Bridge Breathers in a DNA-shaped Double Strand. Physica Scripta, 2004, 69, 150-160.	2.5	3
53	Quantum dynamics of wave packets in a non-stationary parabolic potential and the Kramers escape rate theory. Journal of Micromechanics and Molecular Physics, 2016, 01, 1650010.	1.2	3
54	Localized Waves in Silicates. What Do We Know from Experiments?. Springer Proceedings in Complexity, 2021, , 721-734.	0.3	3

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55	Diffusion in a class of exactly solvable non-harmonic potentials. Intrinsic effects induced by non-linearities. <i>Physica D: Nonlinear Phenomena</i> , 1990, 41, 79-88.	2.8	2
56	Intersection of crisis loci in a driven nonlinearly damped oscillator. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 201, 186-190.	2.1	2
57	Spiral waves solutions in reaction-diffusion equations with symmetries. Analysis through specific models. <i>Journal of Physics A</i> , 1997, 30, 4259-4271.	1.6	2
58	Moving breather collisions in Klein-Gordon chains of oscillators. <i>European Physical Journal B</i> , 2009, 70, 543-555.	1.5	2
59	D " Goldschmidt Abstracts 2013. <i>Mineralogical Magazine</i> , 2013, 77, 934-1025.	1.4	2
60	Energy localization and shape transformations in semiflexible polymer rings. <i>Physical Review E</i> , 2016, 93, 062227.	2.1	2
61	CHARGE TRANSPORT IN A NONLINEAR, THREE-DIMENSIONAL DNA MODEL WITH DISORDER. , 2003, , .		2
62	BREATHERS IN FPU SYSTEMS, NEAR AND FAR FROM THE PHONON BAND. , 2003, , .		1
63	Nonlinear waves in a chain of magnetically coupled pendula. <i>Proceedings of Meetings on Acoustics</i> , 2018, , .	0.3	0
64	INTERACTION OF MOVING BREATHERS WITH AN IMPURITY. , 2003, , .		0
65	Polaronic charge transport mechanism in DNA. , 2006, , 429-450.		0
66	Collisions of Discrete Breathers in Nonlinear Schrödinger and Klein-Gordon Lattices. , 2011, , 159-164.		0
67	Nonsymmetric moving breather collisions in the Peyrard-Bishop DNA model. <i>Discrete and Continuous Dynamical Systems - Series S</i> , 2011, 4, 995-1006.	1.1	0