Surajit Sen

List of Publications by Year
in descending order

85 papers	2,240 citations	331538 21 h-index	223716 46 g-index
85 all docs	85 docs citations	85 times ranked	525 citing authors

#	Article	IF	Citations
1	An agent-based model of spread of a pandemic with validation using COVID-19 data from New York State. Physica A: Statistical Mechanics and Its Applications, 2022, 585, 126401.	1.2	4
2	Granular chains with fixed side decoration as impact protector and signals filter. Physical Review E, 2021, 103, 042904.	0.8	2
3	Quasi-stable localized excitations in the Î²-Fermi Pasta Ulam Tsingou system. Chaos, Solitons and Fractals, 2021, 150, 111194.	2.5	0
4	Decorated granular crystal as filter of low-frequency ultrasonic signals. Granular Matter, 2020, 22, 1.	1.1	3
5	Head-on Collision of Solitary Waves Described by the Toda Lattice Model in Granular Chain. Chinese Physics Letters, 2020, 37, 074501.	1.3	2
6	On the generation and propagation of solitary waves in integrable and nonintegrable nonlinear lattices. European Physical Journal Plus, 2020, 135, 1.	1.2	6
7	Dynamics in a confined massâ€“spring chain with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1624" altimg="si5.svg"><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^•</mml:mo><mml:mi>r</mml:mi></mml:mrow></mml:math> repulsive potential: Strongly nonlinear regime. Physica A: Statistical Mechanics and Its Applications, 2020, 553, 124651.	1.2	1
8	Nonlinear normal modes in the Î²-Fermi-Pastaâ€“Ulam-Tsingou chain. Physica A: Statistical Mechanics and Its Applications, 2020, 553, 124283.	1.2	1
9	Interactions of solitary waves in integrable and nonintegrable lattices. Chaos, 2020, 30, 043101.	1.0	6
10	PULSEDYNâ€”A dynamical simulation tool for studying strongly nonlinear chains. Computer Physics Communications, 2019, 239, 134-149.	3.0	4
11	Small nanoparticles, surface geometry and contact forces. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170723.	1.0	8
12	Controlled energy dispersion in two-dimensional decorated granular crystals. Physical Review E, 2018, 98, .	0.8	2
13	Solitary waves and localized nonlinear excitations in the strongly nonlinear Î² -Fermi-Pasta-Ulam-Tsingou chain. Europhysics Letters, 2018, 123, 30005.	0.7	3
14	Possibility of useful mechanical energy from noise: the solitary wave train problem in the granular chain revisited. Granular Matter, 2018, 20, 1.	1.1	4
15	Study of simple land battles using agent-based modeling: Strategy and emergent phenomena. International Journal of Modern Physics B, 2017, 31, 1742002.	1.0	0
16	Impact decimation using alignment of granular spheres. International Journal of Modern Physics B, 2017, 31, 1742012.	1.0	5
17	Long-term behavior of Hertzian chains between fixed walls is really equilibrium. International Journal of Modern Physics B, 2017, 31, 1742011.	1.0	2
18	Fluctuations in Hertz chains at equilibrium. Physical Review E, 2017, 95, 032903.	0.8	10

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19	Early time evolution of a localized nonlinear excitation in the Î²-FPUT chain. International Journal of Modern Physics B, 2017, 31, 1742014.	1.0	6
20	Simulation, modeling and dynamical analysis of multibody flows. International Journal of Modern Physics B, 2017, 31, 1742004.	1.0	1
21	The equilibrium phase in heterogeneous Hertzian chains. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 123204.	0.9	8
22	Impact Dispersion Using 2D and 3D Composite Granular Packing. KONA Powder and Particle Journal, 2017, 34, 248-257.	0.9	9
23	Decorated granular layers for impact decimation. Granular Matter, 2016, 18, 1.	1.1	5
24	Rich collision dynamics of soft and sticky crystalline nanoparticles: Numerical experiments. Physical Review E, 2015, 92, 032403.	0.8	9
25	Localizing energy in granular materials. Applied Physics Letters, 2015, 107, .	1.5	13
26	Granular chains with soft boundaries: Slowing the transition to quasiequilibrium. Physical Review E, 2015, 91, 042207.	0.8	14
27	Drag-force regimes in granular impact. Physical Review E, 2014, 90, 062202.	0.8	15
28	Mechanical energy fluctuations in granular chains: The possibility of rogue fluctuations or waves. Physical Review E, 2014, 90, 032904.	0.8	8
29	Solitary wave propagation through two-dimensional treelike structures. Physical Review E, 2014, 89, 023209.	0.8	5
30	Granular chain between asymmetric boundaries and the quasiequilibrium state. Physical Review E, 2014, 89, 053202.	0.8	11
31	Newtonian chimpanzees? A molecular dynamics approach to understanding decision-making by wild chimpanzees. , 2014, , 81-102.		0
32	Strong plastic deformation and softening of fast colliding nanoparticles. Physical Review E, 2014, 89, 033308.	0.8	19
33	Spin Brazil-nut effect and its reverse in a rotating double-walled drum. European Physical Journal E, 2013, 36, 9855.	0.7	9
34	Nonlinear grainâ€“grain forces and the width of the solitary wave in granular chains: a numerical study. Granular Matter, 2013, 15, 157-161.	1.1	14
35	SIMULINK MODELING FOR CIRCUIT REPRESENTATION OF GRANULAR CHAINS. Modern Physics Letters B, 2013, 27, 1350093.	1.0	4
36	Long-lived solitary wave in a precompressed granular chain. Europhysics Letters, 2012, 100, 24003.	0.7	23

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37	Sustained strong fluctuations in a nonlinear chain at acoustic vacuum: Beyond equilibrium. Physical Review E, 2011, 84, 046610.	0.8	23
38	Linearity stabilizes discrete breathers. Pramana - Journal of Physics, 2011, 77, 975-986.	0.9	5
39	Dynamics of stochastic and nearly stochastic two-party competitions. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 1800-1810.	1.2	3
40	Nonlinear repulsive force between two solids with axial symmetry. Physical Review E, 2011, 83, 066605.	0.8	29
41	Impulse absorption using small, hard panels of embedded cylinders with granular alignments. Applied Physics Letters, 2011, 99, .	1.5	16
42	AGENT BASED STUDY OF SURPRISE ATTACKS: ROLES OF SURVEILLANCE, PROMPT REACTION AND INTELLIGENCE. Modern Physics Letters B, 2011, 25, 2279-2287.	1.0	3
43	Dynamics of metastable breathers in nonlinear chains in acoustic vacuum. Physical Review E, 2009, 79, 036603.	0.8	31
44	How solitary waves collide in discrete granular alignments. Physical Review E, 2009, 79, 046607.	0.8	26
45	Nonlinear, Statistical and Applied Physics of Solitary Wave-like Objects in Granular Systems. , 2009, , .		0
46	Energy partitioning and impulse dispersion in the decorated, tapered, strongly nonlinear granular alignment: A system with many potential applications. Journal of Applied Physics, 2009, 106, .	1.1	36
47	Solitary waves in the granular chain. Physics Reports, 2008, 462, 21-66.	10.3	365
48	Multi-agent Model Analysis of the Containment Strategy for Avian Influenza (AI) in South Korea. , 2008, , .		10
49	A COMPUTATIONAL MODEL FOR LESION DYNAMICS IN MULTIPLE SCLEROSIS OF THE BRAIN. International Journal of Modern Physics E, 2008, 17, 930-939.	0.4	10
50	WINNING A BATTLE: THE IMPORTANCE OF KNOWING THE â€œNEIGHBORHOODâ€• International Journal of Modern Physics E, 2008, 17, 924-929.	0.4	1
51	Solitary wave train formation in Hertzian chains. Europhysics Letters, 2007, 77, 24002.	0.7	69
52	Preferred frequencies for three unconsolidated earth materials. Applied Physics Letters, 2007, 91, 254103.	1.5	8
53	Acoustic interrogation of soil and possible remote detection of shallow buried inclusions. , 2007, , .		1
54	Solitary wave trains in granular chains: experiments, theory and simulations. Granular Matter, 2007, 10, 13-20.	1.1	169

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55	Solving the Liouville equation for conservative systems: Continued fraction formalism and a simple application. Physica A: Statistical Mechanics and Its Applications, 2006, 360, 304-324.	1.2	22
56	The quasi-equilibrium phase of nonlinear chains. Pramana - Journal of Physics, 2005, 64, 423-431.	0.9	19
57	USING MECHANICAL ENERGY AS A PROBE FOR THE DETECTION AND IMAGING OF SHALLOW BURIED INCLUSIONS IN DRY GRANULAR BEDS. International Journal of Modern Physics B, 2005, 19, 2951-2973.	1.0	18
58	Nanoprinting with Nanoparticles: Concept of a Novel Inkjet Printer with Possible Applications in Invisible Tagging of Objects. Journal of Dispersion Science and Technology, 2005, 25, 523-528.	1.3	7
59	How Hertzian Solitary Waves Interact with Boundaries in a 1D Granular Medium. Physical Review Letters, 2005, 94, 178002.	2.9	215
60	The quasi-equilibrium phase in nonlinear 1D systems. Physica A: Statistical Mechanics and Its Applications, 2004, 342, 336-343.	1.2	32
61	Impulse Propagation in Granular Systems. AIP Conference Proceedings, 2003, , .	0.3	7
62	Secondary solitary wave formation in systems with generalized Hertz interactions. Physical Review E, 2002, 66, 016616.	0.8	53
63	Impulse Backscattering based Detection and Imaging of Shallow Buried Objects. Materials Research Society Symposia Proceedings, 2002, 759, 1.	0.1	1
64	Energy Absorption and Recovery in Tapered Granular Chains: Small Chains and Low Tapering. Materials Research Society Symposia Proceedings, 2002, 759, 1.	0.1	3
65	Solitary wave dynamics in generalized Hertz chains: An improved solution of the equation of motion. Physical Review E, 2001, 64, 056605.	0.8	97
66	Nonlinear acoustics in granular assemblies. Granular Matter, 2001, 3, 33-39.	1.1	21
67	Impulse propagation in dissipative and disordered chains with power-law repulsive potentials. Physica D: Nonlinear Phenomena, 2001, 157, 226-240.	1.3	95
68	Thermalizing an impulse. Physica A: Statistical Mechanics and Its Applications, 2001, 299, 551-558.	1.2	52
69	Impulse acoustics based ejection of ferrofluid grains from a ferrofluid: the blueprint of a concept for a nozzle-free inkjet printer. Materials Research Society Symposia Proceedings, 2000, 627, 1.	0.1	3
70	Crossing of identical solitary waves in a chain of elastic beads. Physical Review E, 2000, 63, 016614.	0.8	65
71	Backscattering of Nonlinear Acoustic Impulses from Buried Inclusions in Granular Beds. Materials Research Society Symposia Proceedings, 2000, 627, 1.	0.1	1
72	Impulse and Low Frequency Acoustic Wave Propagation in Granular Beds. Materials Research Society Symposia Proceedings, 2000, 627, 1.	0.1	1

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73	Ejection of ferrofluid grains using nonlinear acoustic impulsesâ€" A particle dynamical study. Applied Physics Letters, 1999, 75, 1479-1481.	1.5	20
74	The propagation and backscattering of soliton-like pulses in a chain of quartz beads and related problems. (I). Propagation. Physica A: Statistical Mechanics and Its Applications, 1999, 274, 588-606.	1.2	39
75	Discrete Hertzian chains and solitons. Physica A: Statistical Mechanics and Its Applications, 1999, 268, 644-649.	1.2	52
76	Dynamics of an anharmonic oscillator that is harmonically coupled to a many-body system and the notion of an appropriate heat bath. Physical Review E, 1998, 57, 224-229.	0.8	9
77	Solitonlike pulses in perturbed and driven Hertzian chains and their possible applications in detecting buried impurities. Physical Review E, 1998, 57, 2386-2397.	0.8	132
78	Avalanche dynamics in model two-dimensional grain piles. Physical Review E, 1997, 56, 5759-5763.	0.8	2
79	Algebraic Relaxation Laws for Classical Particles in 1D Anharmonic Potentials. Physical Review Letters, 1996, 77, 4855-4859.	2.9	17
80	Sound propagation in impure granular columns. Physical Review E, 1996, 54, 6857-6865.	0.8	79
81	2D Lattices on Substrates with Randomly Distributed Pinning Centers: A Possible Scaling Law for Domain Sizes. Materials Research Society Symposia Proceedings, 1996, 455, 441.	0.1	0
82	Nonlinear Dynamics in Granular Columns. Physical Review Letters, 1995, 74, 2686-2689.	2.9	118
83	Aspects of non-ergpdicity in Hermitian systems. Physica A: Statistical Mechanics and Its Applications, 1992, 186, 285-297.	1.2	20
84	Solving the Liouville equation to probe relaxation in strongly nonlinear systems. International Journal of Modern Physics B, 0, , .	1.0	0
85	Foreword to this special issue. International Journal of Modern Physics B, 0, , .	1.0	0