Rui Vilela Mendes

List of Publications by Year
in descending order

159 papers	**1,895** citations	430754 **18** h-index	302012 **39** g-index
165 all docs	**165** docs citations	**165** times ranked	**1373** citing authors

#	Article	IF	Citations
1	On lattice confinement and hybrid fusion. Modern Physics Letters B, 2022, 36, .	1.0	1
2	Non-Abelian lattice theories: Consistent measures and strata. International Journal of Modern Physics A, 2022, 37, .	0.5	0
3	Alternative Quantum Formulations and Systems at the Classical-Quantum Border. Springer Proceedings in Mathematics and Statistics, 2021, , 381-400.	0.1	0
4	Modular quantum computing and quantum-like devices. International Journal of Quantum Information, 2021, 19, 2150020.	0.6	0
5	Exact conservative solutions of fluid models for the scrape-off layer as the ancestors of plasma blobs?. Nuclear Fusion, 2020, 60, 016012.	1.6	1
6	Space–times over normed division algebras, revisited. International Journal of Modern Physics A, 2020, 35, 2050055.	0.5	1
7	Commutative or noncommutative spacetime? Two length scales of noncommutativity. Physical Review D, 2019, 99, .	1.6	4
8	Stochastic stability of invariant measures: The 2D Euler equation. International Journal of Modern Physics B, 2019, 33, 1950185.	1.0	0
9	Non-commutative probability and non-commutative processes: Beyond the Heisenberg algebra. Journal of Mathematical Physics, 2019, 60, 093501.	0.5	0
10	Quantum control of quasi-collision states: A protocol for hybrid fusion. International Journal of Modern Physics B, 2018, 32, 1850134.	1.0	1
11	Detecting and quantifying ambiguity: a neural network approach. Soft Computing, 2018, 22, 2695-2703.	2.1	1
12	Analytical study of growth estimates, control of fluctuations, and conservative structures in a two-field model of the scrape-off layer. Physics of Plasmas, 2017, 24, 012303.	0.7	4
13	A consistent measure for lattice Yang–Mills. International Journal of Modern Physics A, 2017, 32, 1750016.	0.5	1
14	Signal-adapted tomography as a tool for dust devil detection. Aeolian Research, 2017, 29, 12-22.	1.1	8
15	Ultradistribution Spaces: Superprocesses and Nonlinear Differential Problems. Springer Proceedings in Mathematics and Statistics, 2017, , 247-261.	0.1	0
16	Current algebra, statistical mechanics and quantum models. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 113104.	0.9	2
17	The Geometry of Noncommutative Space-Time. International Journal of Theoretical Physics, 2017, 56, 259-269.	0.5	4
18	Superprocesses on ultradistributions. Stochastics, 2017, 89, 896-909.	0.6	3

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19	An extended Dirac equation in noncommutative spacetime. Modern Physics Letters A, 2016, 31, 1650089.	0.5	2
20	The Stability of Physical Theories Principle. , 2016, , 153-200.		0
21	From Market Data to Agent-Based Models and Stochastic Differential Equations. Springer Proceedings in Mathematics and Statistics, 2016, , 225-242.	0.1	0
22	Signals on graphs: Transforms and tomograms. Physica A: Statistical Mechanics and Its Applications, 2016, 450, 1-17.	1.2	6
23	Stochastic Solutions of Nonlinear PDEâ€™s and an Extension of Superprocesses. Trends in Mathematics, 2016, , 243-262.	0.1	2
24	LONG RANGE DEPENDENCE AND THE DYNAMICS OF EXPLOITED FISH POPULATIONS. International Journal of Modeling, Simulation, and Scientific Computing, 2015, 18, 1550017.	0.9	1
25	Non-commutative tomography and signal processing. Physica Scripta, 2015, 90, 074022.	1.2	5
26	No-arbitrage, leverage and completeness in a fractional volatility model. Physica A: Statistical Mechanics and Its Applications, 2015, 419, 470-478.	1.2	8
27	Fractional Boson Gas and Fractional Poisson Measure in Infinite Dimensions. Springer Proceedings in Mathematics and Statistics, 2015, , 293-312.	0.1	1
28	Portfolios and the market geometry. Physica A: Statistical Mechanics and Its Applications, 2014, 410, 226-235.	1.2	2
29	Signal recognition and adapted filtering by nonâ€‘commutative tomography. IET Signal Processing, 2014, 8, 67-75.	0.9	6
30	A stochastic approach to the solution of magnetohydrodynamic equations. Journal of Computational Physics, 2013, 242, 777-789.	1.9	4
31	A laboratory scale fundamental time?. European Physical Journal C, 2012, 72, 1.	1.4	10
32	Noncommutative tomography: A tool for data analysis and signal processing. Journal of Russian Laser Research, 2012, 33, 103-121.	0.3	9
33	The deformation-stability fundamental length and deviations from c. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 1823-1826.	0.9	8
34	Ergodic parameters and dynamical complexity. Chaos, 2011, 21, 037115.	1.0	2
35	On the problem of quantum control in infinite dimensions. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 135302.	0.7	3
36	An infinite-dimensional calculus for generalized connections on hypercubic lattices. Journal of Mathematical Physics, 2011, 52, .	0.5	2

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37	Cooperation, Punishment, Emergence of Government, and the Tragedy of Authorities. Complex Systems, 2011, 20, 363-374.	0.9	1
38	Poisson–Vlasov in a strong magnetic field: A stochastic solution approach. Journal of Mathematical Physics, 2010, 51, .	0.5	9
39	INNOVATION AND SELF-ORGANIZATION IN A MULTI-AGENT MODEL. International Journal of Modeling, Simulation, and Scientific Computing, 2009, 12, 233-253.	0.9	10
40	Tomographic analysis of reflectometry data: II. The phase derivative. Measurement Science and Technology, 2009, 20, 105502.	1.4	5
41	A tomographic analysis of reflectometry data: I. Component factorization. Measurement Science and Technology, 2009, 20, 105501.	1.4	11
42	A fractional calculus interpretation of the fractional volatility model. Nonlinear Dynamics, 2009, 55, 395-399.	2.7	49
43	Signal reconstruction by random sampling in chirp space. Nonlinear Dynamics, 2009, 56, 223-229.	2.7	3
44	Universal families and quantum control in infinite dimensions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 2529-2532.	0.9	5
45	From controlled dynamical systems to context-dependent grammars: A connectionist approach. Engineering Applications of Artificial Intelligence, 2009, 22, 192-200.	4.3	0
46	Stochastic solutions of some nonlinear partial differential equations. Stochastics, 2009, 81, 279-297.	0.6	9
47	The fractional volatility model: An agent-based interpretation. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 3987-3994.	1.2	7
48	A stochastic representation for the Poisson–Vlasov equation. Communications in Nonlinear Science and Numerical Simulation, 2008, 13, 221-226.	1.7	10
49	Poisson-Vlasov: stochastic representation and numerical codes. European Physical Journal D, 2008, 46, 295-302.	0.6	10
50	Reduction and approximation in guiding-center dynamics. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 465501.	0.7	3
51	Entropy-Based Choice of a Neural Network Drive Model. IEEE Transactions on Industrial Electronics, 2007, 54, 110-116.	5.2	6
52	Fluctuations and control in the Vlasov–Poisson equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 368, 87-91.	0.9	0
53	The dynamical nature of a backlash system with and without fluid friction. Nonlinear Dynamics, 2007, 47, 363-366.	2.7	11
54	A NONLINEAR STOCHASTIC EQUATION OF CONVOLUTION TYPE. , 2007, , .		2

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55	PATH-INTEGRAL ESTIMATES OF GROUND-STATE FUNCTIONALS. , 2007, , .		0
56	Deterministic Bakâ€"Sneppen model: Lyapunov spectrum and avalanches as return times. Physica D: Nonlinear Phenomena, 2006, 214, 182-186.	1.3	1
57	Network Dynamics: Tools and Examples. Nonlinear Dynamics, 2006, 44, 181-204.	2.7	2
58	A probabilistic operator symbol framework for quantum information. Journal of Russian Laser Research, 2006, 27, 507-532.	0.3	89
59	Short-term load forecast using trend information and process reconstruction. International Journal of Energy Research, 2006, 30, 811-822.	2.2	18
60	ALICE: Physics Performance Report, Volume II. Journal of Physics G: Nuclear and Particle Physics, 2006, 32, 1295-2040.	1.4	441
61	DYNAMICS AND CODING OF A BIOLOGICALLY-MOTIVATED NETWORK. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 383-394.	0.7	1
62	The Quantum Ultimatum Game. Quantum Information Processing, 2005, 4, 1-12.	1.0	16
63	TOOLS FOR NETWORK DYNAMICS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 1185-1213.	0.7	11
64	Stratification of the orbit space in gauge theories: the role of nongeneric strata. Journal of Physics A, 2004, 37, 11485-11498.	1.6	4
65	NETWORK DEPENDENCE OF STRONG RECIPROCITY. International Journal of Modeling, Simulation, and Scientific Computing, 2004, 07, 357-368.	0.9	4
66	The nonlinear directional coupler: an analytic solution. Optics Communications, 2004, 232, 425-427.	1.0	11
67	Quantum control in infinite dimensions. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 322, 282-285.	0.9	7
68	A dynamical characterization of the small world phase. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 319, 285-289.	0.9	6
69	Fractionally coupled solutions of the diffusion equation. Applied Mathematics and Computation, 2003, 141, 125-130.	1.4	21
70	Reconstructing an economic space from a market metric. Physica A: Statistical Mechanics and Its Applications, 2003, 323, 635-650.	1.2	18
71	Using immunology principles for fault detection. IEEE Transactions on Industrial Electronics, 2003, 50, 362-373.	5.2	55
72	Quantum control and the Strocchi map. Physical Review A, 2003, 67, .	1.0	48

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73	A PROCESS-RECONSTRUCTION ANALYSIS OF MARKET FLUCTUATIONS. International Journal of Theoretical and Applied Finance, 2002, 05, 797-821.	0.2	17
74	Quantum sensitive dependence. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 300, 353-360.	0.9	5
75	Stochastic Calculus and Processes in Non-Commutative Space-Time. , 2002, , 205-217.		1
76	Language identification of controlled systems: modeling, control, and anomaly detection. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2001, 31, 234-242.	3.3	15
77	Quantum computation by quantumlike systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 288, 132-138.	0.9	31
78	Non-commutative space–time and the uncertainty principle. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 290, 109-114.	0.9	19
79	Structure-generating mechanisms in agent-based models. Physica A: Statistical Mechanics and Its Applications, 2001, 295, 537-561.	1.2	9
80	From synchronization to multistability in two coupled quadraticÂmaps. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 285, 327-338.	0.9	19
81	NEURAL NETWORKS AND LOGICAL REASONING SYSTEMS: A TRANSLATION TABLE. International Journal of Neural Systems, 2001, 11, 179-186.	3.2	8
82	Tomograms and other transforms: a unified view. Journal of Physics A, 2001, 34, 8321-8332.	1.6	72
83	CLASSICAL AND QUANTUM LYAPUNOV EXPONENTS IN THE PHASE-SPACE TOMOGRAPHIC APPROACH. , 2001, , .		0
84	Lyapunov exponent in quantum mechanics. A phase-space approach. Physica D: Nonlinear Phenomena, 2000, 145, 330-348.	1.3	76
85	Characterizing self-organization and coevolution by ergodic invariants. Physica A: Statistical Mechanics and Its Applications, 2000, 276, 550-571.	1.2	9
86	Geometry, stochastic calculus, and quantum fields in a noncommutative space–time. Journal of Mathematical Physics, 2000, 41, 156-186.	0.5	30
87	GLUON CONDENSATE AND A VACUUM STRUCTURE FOR NONABELIAN GAUGE THEORY. , 2000, , 412-423.		1
88	MULTISTABILITY IN DYNAMICAL SYSTEMS. , 2000, , .		3
89	Mathematical Physics and Stochastic Analysis. , 2000, , .		2
90	Dynamics of networks and applications. , 1999, , 257-288.		0

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91	Clustering and synchronization with positive Lyapunov exponents. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 257, 132-138.	0.9	32
92	Non-commutative time-frequency tomography. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 263, 53-61.	0.9	116
93	Feigenbaum networks. Physica D: Nonlinear Phenomena, 1999, 126, 27-37.	1.3	4
94	On the computation of quantum characteristic exponents. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 239, 239-245.	0.9	3
95	Saddle scars: existence and applications. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 239, 223-227.	0.9	5
96	Conditional exponents, entropies and a measure of dynamical self-organization. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 248, 167-171.	0.9	16
97	On the nonlinearity interpretation of q- and f-deformation and some applications. Journal of Physics A, 1998, 31, 6037-6044.	1.6	23
98	Active Control of Ionized Boundary Layers. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 2449-2455.	0.7	0
99	Boundary-Layer Control by Electric Fields. Journal of Fluids Engineering, Transactions of the ASME, 1998, 120, 626-629.	0.8	35
100	Collision states and scar effects in charged three-body problems. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 233, 265-273.	0.9	10
101	Characteristic Functions and Process Identification by Neural Networks. Neural Networks, 1997, 10, 1465-1471.	3.3	12
102	The bi-orthogonal decomposition in image processing: Signal analysis and texture segmentation. Signal Processing: Image Communication, 1996, 8, 131-148.	1.8	6
103	A fully connected network of Bernoulli units with correlation learning. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 211, 87-93.	0.9	4
104	Quantum mechanics and non-commutative space-time. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 210, 232-240.	0.9	20
105	Stochastic process for the dynamics of the turbulent cascade. Physical Review E, 1996, 53, 3536-3540.	0.8	9
106	Title is missing!. Network: Computation in Neural Systems, 1996, 7, 123-139.	2.2	4
107	Entropy and quantum characteristic exponents. steps towards a quantum pesin theory. Lecture Notes in Physics, 1995, , 273-282.	0.3	4
108	UNSUPERVISED LEARNING IN NETWORKS WITH NODE PARAMETERS. , 1995, , .		0

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109	ELECTRON-POSITRON PRODUCTION IN STRONG FIELD PULSES. Modern Physics Letters A, 1994, 09, 2493-2506.	0.5	1
110	NEAR COLLISIONS IN A COULOMB SYSTEM: QUANTUM TREATMENT. Modern Physics Letters B, 1994, 08, 707-719.	1.0	2
111	Stochastic ground-state processes. Physical Review B, 1994, 50, 5035-5040.	1.1	7
112	On the existence of quantum characteristic exponents. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 187, 299-301.	0.9	6
113	Hierarchical structures and asymmetric stochastic processes on pâ€adics and adeles. Journal of Mathematical Physics, 1994, 35, 4637-4650.	0.5	56
114	Stochastic Techniques in Condensed Matter Physics. , 1994, , 239-281.		1
115	q-deformed Brownian motion. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 180, 39-42.	0.9	9
116	A new method for fast track recognition at present and future colliders. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1993, 332, 284-287.	0.7	1
117	NEAR-COLLISIONS IN A COULOMB SYSTEM: NUMERICAL SIMULATIONS â€" A PRELUDE TO HYBRID FUSION. Modern Physics Letters B, 1993, 07, 1929-1939.	1.0	0
118	PREDICTION OF TIME SERIES. , 1993, , 263-280.		0
119	Stochastic processes and the non-perturbative structure of the QCD vacuum. Zeitschrift FÃ¼r Physik C-Particles and Fields, 1992, 54, 273-281.	1.5	8
120	Large-deviation analysis of multiplicity fluctuations. Nuclear Physics B, 1992, 383, 622-642.	0.9	9
121	Sensitive dependence in quantum systems: some examples and results. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 171, 253-258.	0.9	15
122	Variational formulation and ergodic invariants. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 155, 388-396.	0.9	5
123	Sensitive dependence and entropy for quantum systems. Journal of Physics A, 1991, 24, 4349-4358.	1.6	13
124	ERGODIC MOTION AND NEAR COLLISIONS IN A COULOMB SYSTEM. Modern Physics Letters B, 1991, 05, 1179-1190.	1.0	2
125	On a stochastic process associated to non-abelian gauge fields. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 223, 83-89.	1.5	2
126	Stability of invariant circles in a class of dissipative maps. Nonlinear Analysis: Theory, Methods & Applications, 1988, 12, 1061-1067.	0.6	4

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127	Nonequivalent stochastic models in lattice gauge theory. Physical Review D, 1988, 37, 1608-1620.	1.6	3
128	Deformation Stability of Periodic and Quasi Periodic Motion in Dissipative Systems. , 1988, , 981-1013.		2
129	Stochastic mechanics of Abelian lattice theories. Journal of Physics A, 1987, 20, 6411-6427.	1.6	11
130	Excited states of light hadrons as a probe of QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1987, 196, 207-211.	1.5	0
131	Stochastic models for lattice gauge theories. Zeitschrift Für Physik C-Particles and Fields, 1987, 34, 451-463.	1.5	3
132	Stochastic mechanics at positive temperature. Physics Letters, Section A: General, Atomic and Solid State Physics, 1986, 116, 216-220.	0.9	4
133	Generating functions for noncanonical maps. Letters in Mathematical Physics, 1986, 11, 289-292.	0.5	3
134	Quantum dissipation, scattering and tunnelling. Societa Italiana Di Fisica Nuovo Cimento B-General Physics, Relativity Astronomy and Mathematical Physics and Methods, 1986, 96, 26-40.	0.2	1
135	Reconstruction of dynamics from an eigenstate. Journal of Mathematical Physics, 1986, 27, 178-184.	0.5	10
136	On potentials with fast growing point spectrum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1985, 155, 274-277.	1.5	3
137	Symmetries and stable periodic orbits for oneâ€dimensional maps. Journal of Mathematical Physics, 1984, 25, 855-857.	0.5	1
138	A variational formulation for dissipative maps. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 104, 391-395.	0.9	5
139	Reconstruction of dynamics from the vacuum in lattice theories. Zeitschrift Für Physik C-Particles and Fields, 1984, 24, 45-52.	1.5	4
140	Deformation of Hamiltonian dynamics and constants of motion in dissipative systems. Journal of Mathematical Physics, 1983, 24, 1772-1778.	0.5	11
141	Quantization of dissipative and volume-preserving dynamics. Physical Review D, 1982, 26, 3446-3451.	1.6	2
142	Arcs of discrete dynamics and constants of motion. Letters in Mathematical Physics, 1982, 6, 249-252.	0.5	3
143	Quantum dissipation and stochastic processes. , 1982, , 332-336.		1
144	Critical-point dependence of universality in maps of the interval. Physics Letters, Section A: General, Atomic and Solid State Physics, 1981, 84, 1-3.	0.9	17

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145	Decomposition of vector fields and mixed dynamics. Journal of Mathematical Physics, 1981, 22, 1420-1422.	0.5	21
146	Nonrelativistic bound states of the non-Abelian gauge potential. Physical Review D, 1981, 24, 3305-3311.	1.6	0
147	Extended relativity, T-violation and a new kind of particle. Journal of Physics A, 1980, 13, 479-501.	1.6	1
148	Large time behaviour of canonical quantized gauge theories. Nuclear Physics B, 1979, 161, 283-293.	0.9	4
149	Representations of the general covariance pseudogroup. Reports on Mathematical Physics, 1979, 15, 317-327.	0.4	0
150	Mass scales and confinement. A nonperturbative approach. Il Nuovo Cimento A, 1978, 43, 294-304.	0.2	1
151	Algorithms for multidimensional numerical integration with singularities. Computer Journal, 1978, 21, 355-358.	1.5	0
152	Asymptotic dynamics for gauge theories. Physical Review D, 1978, 18, 4726-4736.	1.6	1
153	On shadowing in electroproduction. Il Nuovo Cimento A, 1977, 41, 21-28.	0.2	0
154	Restored symmetries, quark puzzle, and the Pomeron as a Josephson current. International Journal of Theoretical Physics, 1976, 15, 487-495.	0.5	0
155	Faster-than-light particles andTviolation. Physical Review D, 1976, 14, 600-607.	1.6	1
156	New low-energy theorems for $\gamma \to 3\pi$ and $\gamma\gamma \to 3\pi$. Nuclear Physics B, 1974, 82, 213-220.	0.9	0
157	Deformed Quark Currents and Anomalous Ward Identities.$\gamma \to 3\pi, \pi^0 \to 2\gamma$, ande+e$^-$Annihilation. Physical Review D, 1973, 8, 3008-3018.	1.6	0
158	Formal language control of induction motor drives. , 0, , .		0
159	A Data-Reconstructed Fractional Volatility Model. SSRN Electronic Journal, 0, , .	0.4	6