

Benoît B Mandelbrot

List of Publications by Year in descending order

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80
papers

27,845
citations

94433

37
h-index

114465

63
g-index

87
all docs

87
docs citations

87
times ranked

12485
citing authors

#	ARTICLE	IF	CITATIONS
1	Fractional Brownian Motions, Fractional Noises and Applications. SIAM Review, 1968, 10, 422-437.	9.5	6,147
2	Fractal character of fracture surfaces of metals. Nature, 1984, 308, 721-722.	27.8	1,702
3	Intermittent turbulence in self-similar cascades: divergence of high moments and dimension of the carrier. Journal of Fluid Mechanics, 1974, 62, 331-358.	3.4	1,683
4	Noah, Joseph, and Operational Hydrology. Water Resources Research, 1968, 4, 909-918.	4.2	910
5	Fractals and Scaling in Finance. , 1997, , .		862
6	Self-Affine Fractals and Fractal Dimension. Physica Scripta, 1985, 32, 257-260.	2.5	836
7	Some long-run properties of geophysical records. Water Resources Research, 1969, 5, 321-340.	4.2	825
8	Robustness of the rescaled range R/S in the measurement of noncyclic long run statistical dependence. Water Resources Research, 1969, 5, 967-988.	4.2	788
9	Computer Experiments With Fractional Gaussian Noises: Part 1, Averages and Variances. Water Resources Research, 1969, 5, 228-241.	4.2	476
10	Critical Phenomena on Fractal Lattices. Physical Review Letters, 1980, 45, 855-858.	7.8	408
11	Solvable Fractal Family, and Its Possible Relation to the Backbone at Percolation. Physical Review Letters, 1981, 47, 1771-1774.	7.8	364
12	When Can Price be Arbitraged Efficiently? A Limit to the Validity of the Random Walk and Martingale Models. Review of Economics and Statistics, 1971, 53, 225.	4.3	362
13	The Science of Fractal Images. , 1988, , .		292
14	A Fast Fractional Gaussian Noise Generator. Water Resources Research, 1971, 7, 543-553.	4.2	263
15	On the geometry of homogeneous turbulence, with stress on the fractal dimension of the iso-surfaces of scalars. Journal of Fluid Mechanics, 1975, 72, 401.	3.4	243
16	Geometric Implementation of Hypercubic Lattices with Noninteger Dimensionality by Use of Low Lacunarity Fractal Lattices. Physical Review Letters, 1983, 50, 145-148.	7.8	227
17	FRACTAL ASPECTS OF THE ITERATION OF $z \mapsto z(1-z)$ FOR COMPLEX β AND z . Annals of the New York Academy of Sciences, 1980, 357, 249-259.	3.8	216
18	Fractals and Chaos. , 2004, , .		197

#	ARTICLE	IF	CITATIONS
19	Multifractals and $1/\mathcal{E}^{\beta}$ Noise. , 1999, , .		197
20	Possible refinement of the lognormal hypothesis concerning the distribution of energy dissipation in intermittent turbulence. Lecture Notes in Physics, 1972, , 333-351.	0.7	159
21	Computer Experiments with Fractional Gaussian Noises: Part 2, Rescaled Ranges and Spectra. Water Resources Research, 1969, 5, 242-259.	4.2	144
22	Negative fractal dimensions and multifractals. Physica A: Statistical Mechanics and Its Applications, 1990, 163, 306-315.	2.6	143
23	Limit theorems on the self-normalized range for weakly and strongly dependent processes. Zeitschrift für Wahrscheinlichkeitstheorie Und Verwandte Gebiete, 1975, 31, 271-285.	0.8	142
24	Multifractal products of cylindrical pulses. Probability Theory and Related Fields, 2002, 124, 409-430.	1.8	142
25	Fractals in physics: Squig clusters, diffusions, fractal measures, and the unicity of fractal dimensionality. Journal of Statistical Physics, 1984, 34, 895-930.	1.2	125
26	Computer Experiments with Fractional Gaussian Noises: Part 3, Mathematical Appendix. Water Resources Research, 1969, 5, 260-267.	4.2	115
27	Physical Properties of a New Fractal Model of Percolation Clusters. Physical Review Letters, 1984, 52, 1853-1856.	7.8	94
28	The potential distribution around growing fractal clusters. Nature, 1990, 348, 143-145.	27.8	93
29	Multifractal Measures, Especially for the Geophysicist. , 1989, , 5-42.		81
30	Is Nature Fractal?. Science, 1998, 279, 783-783.	12.6	74
31	Exactly self-similar left-sided multifractal measures. Physical Review A, 1990, 42, 4528-4536.	2.5	71
32	Plane DLA is not self-similar; is it a fractal that becomes increasingly compact as it grows?. Physica A: Statistical Mechanics and Its Applications, 1992, 191, 95-107.	2.6	69
33	Towards a Second Stage of Indeterminism in Science. Interdisciplinary Science Reviews, 1987, 12, 117-127.	1.4	61
34	Renewal sets and random cutouts. Zeitschrift für Wahrscheinlichkeitstheorie Und Verwandte Gebiete, 1972, 22, 145-157.	0.8	56
35	New "anomalous" multiplicative multifractals: Left sided $\mathcal{E}^{\beta}(\hat{\pm})$ and the modelling of DLA. Physica A: Statistical Mechanics and Its Applications, 1990, 168, 95-111.	2.6	53
36	Comments on: "A Subordinated Stochastic Process Model with Finite Variance for Speculative Prices," by Peter K. Clark. Econometrica, 1973, 41, 157.	4.2	52

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37	Angular Gaps in Radial Diffusion-Limited Aggregation: Two Fractal Dimensions and Nontransient Deviations from Linear Self-Similarity. <i>Physical Review Letters</i> , 2002, 88, 055501.	7.8	46
38	On the quadratic mapping $z \mapsto z^2 - \frac{1}{4}$ for complex $\frac{1}{4}$ and z : The fractal structure of its set, and scaling. <i>Physica D: Nonlinear Phenomena</i> , 1983, 7, 224-239.	2.8	42
39	Title is missing!. <i>Journal of Statistical Physics</i> , 2003, 110, 739-774.	1.2	42
40	LÃ©vy dusts, Mittag-Leffler statistics, mass fractal lacunarity, and perceived dimension. <i>Physical Review E</i> , 1997, 56, 112-118.	2.1	38
41	Invariant multifractal measures in chaotic Hamiltonian systems, and related structures. <i>Physical Review Letters</i> , 1988, 60, 673-676.	7.8	37
42	Multifractality of the harmonic measure on fractal aggregates, and extended self-similarity. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1991, 177, 386-393.	2.6	37
43	On the Secular Pole Motion and the Chandler Wobble. <i>Geophysical Journal International</i> , 1970, 21, 217-232.	2.4	32
44	Broken line process derived as an approximation to fractional noise. <i>Water Resources Research</i> , 1972, 8, 1354-1356.	4.2	28
45	Self-similarity of harmonic measure on DLA. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992, 185, 77-86.	2.6	28
46	The Canopy and Shortest Path in a Self-Contacting Fractal Tree. <i>Mathematical Intelligencer</i> , 1999, 21, 18-27.	0.2	25
47	Measures of Fractal Lacunarity: Minkowski Content and Alternatives. , 1995, , 15-42.		25
48	Local Regularity of Nonsmooth Wavelet Expansions and Application to the Polya Function. <i>Advances in Mathematics</i> , 1996, 120, 265-282.	1.1	23
49	Parallel diffusion-limited aggregation. <i>Physical Review E</i> , 1995, 52, 5602-5609.	2.1	22
50	On Dvoretzky coverings for the circle. <i>Zeitschrift für Wahrscheinlichkeitstheorie Und Verwandte Gebiete</i> , 1972, 22, 158-160.	0.8	21
51	Inverse Measures, the Inversion Formula, and Discontinuous Multifractals. <i>Advances in Applied Mathematics</i> , 1997, 18, 50-58.	0.7	21
52	Exceptions to the multifractal formalism for discontinuous measures. <i>Mathematical Proceedings of the Cambridge Philosophical Society</i> , 1998, 123, 133-157.	0.4	21
53	A Class of Multinomial Multifractal Measures with Negative (Latent) Values for the "Dimension" $f(\pm)$. , 1989, , 3-29.		20
54	Gap Independence and Lacunarity in Percolation Clusters. <i>Physical Review Letters</i> , 1996, 77, 877-880.	7.8	19

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55	“New Methods of Statistical Economics,” revisited: Short versus long tails and Gaussian versus power-law distributions. Complexity, 2009, 14, 55-65.	1.6	18
56	The inescapable need for fractal tools in finance. Annals of Finance, 2005, 1, 193-195.	0.8	17
57	Inversion Formula for Continuous Multifractals. Advances in Applied Mathematics, 1997, 19, 332-354.	0.7	15
58	Squig sheets and some other squig fractal constructions. Journal of Statistical Physics, 1984, 36, 519-539.	1.2	13
59	Parallel cartoons of fractal models of finance. Annals of Finance, 2005, 1, 179-192.	0.8	12
60	Exactly Self-Similar Left-Sided Multifractals. , 1991, , 323-344.		10
61	Heavy Tails in Finance for Independent or Multifractal Price Increments. , 2003, , 1-34.		10
62	Comment on the equivalence between fracton/spectral dimensionality, and the dimensionality of recurrence. Journal of Statistical Physics, 1984, 36, 541-543.	1.2	9
63	A PRIMER OF NEGATIVE TEST DIMENSIONS AND DEGREES OF EMPTINESS FOR LATENT SETS. Fractals, 2009, 17, 1-14.	3.7	9
64	Stable Fractal Sums of Pulses: The Cylindrical Case. Bernoulli, 1995, 1, 201.	1.3	8
65	Comment on “Stochastic Models in Hydrology” by Adrian E. Scheidegger. Water Resources Research, 1970, 6, 1791-1791.	4.2	7
66	Reply [to “Comments on “Noah, Joseph, and Operational Hydrology” by Benoit B. Mandelbrot and James R. Wallis”]. Water Resources Research, 1969, 5, 917-920.	4.2	6
67	Fractal aggregates, and the current lines of their electrostatic potentials. Physica A: Statistical Mechanics and Its Applications, 1991, 177, 589-592.	2.6	6
68	Variability of the form and of the harmonic measure for small off-off-lattice diffusion-limited aggregates. Physical Review A, 1992, 45, 5798-5804.	2.5	6
69	OPINIONS. Fractals, 1993, 01, 117-123.	3.7	5
70	Peano-ply motions, when time is intrinsic or binomial (uniform or multifractal). Mathematical Intelligencer, 1997, 19, 21-26.	0.2	5
71	SELF-AFFINE FRACTAL SETS, III: HAUSDORFF DIMENSION ANOMALIES AND THEIR IMPLICATIONS. , 1986, , 21-28.		3
72	Fractals. , 2003, , 185-207.		3

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73	Easy and Natural Generation of Multifractals: Multiplying Harmonics of Periodic Functions. , 1999, , 113-122.		2
74	ON THE AGGREGATIVE FRACTALS CALLED "SQUIGGS", WHICH INCLUDE RECURSIVE MODELS OF POLYMERS AND OF PERCOLATION CLUSTERS. , 1984, , 5-7.		2
75	SELECTED TOPICS IN MATHEMATICS, PHYSICS, AND FINANCE ORIGINATING IN FRACTAL GEOMETRY. , 2004, , .		1
76	Fractal Sums of Pulses and a Practical Challenge to the Distinction Between Local and Global Dependence. Lecture Notes in Physics, 2003, , 118-135.	0.7	1
77	TOPICS ON FRACTALS IN MATHEMATICS AND PHYSICS. , 2001, , .		1
78	A new model of percolation clusters. Journal of Statistical Physics, 1984, 36, 545-545.	1.2	0
79	Continuous Interpolation of the Complex Discrete Map $z \mapsto z(1-z)$, and Related Topics. On the dynamics of iterated maps. Physica Scripta, 1985, T9, 59-63.	2.5	0
80	Exactly Self-similar Left-sided Multifractals. , 1996, , 367-399.		0