

Benoît B Mandelbrot

List of Publications by Citations

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79
papers

18,735
citations

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h-index

87
g-index

87
ext. papers

21,213
ext. citations

5.4
avg, IF

6.6
L-index

#	Paper	IF	Citations
79	Fractional Brownian Motions, Fractional Noises and Applications. <i>SIAM Review</i> , 1968 , 10, 422-437	7.4	4766
78	Fractal character of fracture surfaces of metals. <i>Nature</i> , 1984 , 308, 721-722	50.4	1450
77	Intermittent turbulence in self-similar cascades: divergence of high moments and dimension of the carrier. <i>Journal of Fluid Mechanics</i> , 1974 , 62, 331-358	3.7	1431
76	Noah, Joseph, and Operational Hydrology. <i>Water Resources Research</i> , 1968 , 4, 909-918	5.4	747
75	Self-Affine Fractals and Fractal Dimension. <i>Physica Scripta</i> , 1985 , 32, 257-260	2.6	682
74	Some long-run properties of geophysical records. <i>Water Resources Research</i> , 1969 , 5, 321-340	5.4	621
73	Fractals and Scaling in Finance 1997 ,		591
72	Robustness of the rescaled range R/S in the measurement of noncyclic long run statistical dependence. <i>Water Resources Research</i> , 1969 , 5, 967-988	5.4	574
71	Computer Experiments With Fractional Gaussian Noises: Part 1, Averages and Variances. <i>Water Resources Research</i> , 1969 , 5, 228-241	5.4	386
70	Critical Phenomena on Fractal Lattices. <i>Physical Review Letters</i> , 1980 , 45, 855-858	7.4	359
69	Solvable Fractal Family, and Its Possible Relation to the Backbone at Percolation. <i>Physical Review Letters</i> , 1981 , 47, 1771-1774	7.4	343
68	When Can Price be Arbitraged Efficiently? A Limit to the Validity of the Random Walk and Martingale Models. <i>Review of Economics and Statistics</i> , 1971 , 53, 225	3.7	237
67	The Science of Fractal Images 1988 ,		215
66	A Fast Fractional Gaussian Noise Generator. <i>Water Resources Research</i> , 1971 , 7, 543-553	5.4	198
65	On the geometry of homogeneous turbulence, with stress on the fractal dimension of the iso-surfaces of scalars. <i>Journal of Fluid Mechanics</i> , 1975 , 72, 401	3.7	194
64	Geometric Implementation of Hypercubic Lattices with Noninteger Dimensionality by Use of Low Lacunarity Fractal Lattices. <i>Physical Review Letters</i> , 1983 , 50, 145-148	7.4	189
63	FRactal ASPECTS OF THE ITERATION OF $z \rightarrow \bar{z}(1-z)$ FOR COMPLEX $\bar{\alpha}$ AND z . <i>Annals of the New York Academy of Sciences</i> , 1980 , 357, 249-259	6.5	168

62	Multifractals and 1/Noise 1999 ,		154
61	Possible refinement of the lognormal hypothesis concerning the distribution of energy dissipation in intermittent turbulence. <i>Lecture Notes in Physics</i> , 1972 , 333-351	0.8	125
60	Limit theorems on the self-normalized range for weakly and strongly dependent processes. <i>Zeitschrift für Wahrscheinlichkeitstheorie Und Verwandte Gebiete</i> , 1975 , 31, 271-285		124
59	Multifractal products of cylindrical pulses. <i>Probability Theory and Related Fields</i> , 2002 , 124, 409-430	1.4	122
58	Negative fractal dimensions and multifractals. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1990 , 163, 306-315	3.3	120
57	Computer Experiments with Fractional Gaussian Noises: Part 2, Rescaled Ranges and Spectra. <i>Water Resources Research</i> , 1969 , 5, 242-259	5.4	115
56	Fractals in physics: Squig clusters, diffusions, fractal measures, and the unicity of fractal dimensionality. <i>Journal of Statistical Physics</i> , 1984 , 34, 895-930	1.5	114
55	Fractals and Chaos 2004 ,		98
54	Computer Experiments with Fractional Gaussian Noises: Part 3, Mathematical Appendix. <i>Water Resources Research</i> , 1969 , 5, 260-267	5.4	89
53	The potential distribution around growing fractal clusters. <i>Nature</i> , 1990 , 348, 143-145	50.4	86
52	Physical Properties of a New Fractal Model of Percolation Clusters. <i>Physical Review Letters</i> , 1984 , 52, 1853-1856	7.4	86
51	Exactly self-similar left-sided multifractal measures. <i>Physical Review A</i> , 1990 , 42, 4528-4536	2.6	64
50	Plane DLA is not self-similar; is it a fractal that becomes increasingly compact as it grows?. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992 , 191, 95-107	3.3	63
49	Is Nature Fractal?. <i>Science</i> , 1998 , 279, 783c-783	33.3	59
48	New Anomalous Multiplicative multifractals: Left sided and the modelling of DLA. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1990 , 168, 95-111	3.3	48
47	Renewal sets and random cutouts. <i>Zeitschrift für Wahrscheinlichkeitstheorie Und Verwandte Gebiete</i> , 1972 , 22, 145-157		47
46	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	7.4	42
45	Multifractal Power Law Distributions: Negative and Critical Dimensions and Other Anomalies, Explained by a Simple Example. <i>Journal of Statistical Physics</i> , 2003 , 110, 739-774	1.5	38

44	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	3.3	34
43	Towards a Second Stage of Indeterminism in Science. <i>Interdisciplinary Science Reviews</i> , 1987 , 12, 117-127	0.7	34
42	Invariant multifractal measures in chaotic Hamiltonian systems, and related structures. <i>Physical Review Letters</i> , 1988 , 60, 673-676	7.4	34
41	Lyapunov exponents, Mittag-Leffler statistics, mass fractal lacunarity, and perceived dimension. <i>Physical Review E</i> , 1997 , 56, 112-118	2.4	33
40	On the quadratic mapping $z \rightarrow z^2 - \lambda$ for complex λ and z : The fractal structure of its set, and scaling. <i>Physica D: Nonlinear Phenomena</i> , 1983 , 7, 224-239	3.3	31
39	On the Secular Pole Motion and the Chandler Wobble. <i>Geophysical Journal International</i> , 1970 , 21, 217-232	3.6	30
38	Self-similarity of harmonic measure on DLA. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992 , 185, 77-86	3.3	24
37	Comments on: "A Subordinated Stochastic Process Model with Finite Variance for Speculative Prices," by Peter K. Clark. <i>Econometrica</i> , 1973 , 41, 157	4.9	22
36	Broken line process derived as an approximation to fractional noise. <i>Water Resources Research</i> , 1972 , 8, 1354-1356	5.4	21
35	The Canopy and Shortest Path in a Self-Contacting Fractal Tree. <i>Mathematical Intelligencer</i> , 1999 , 21, 18-27	0.2	20
34	Parallel diffusion-limited aggregation. <i>Physical Review E</i> , 1995 , 52, 5602-5609	2.4	20
33	Local Regularity of Nonsmooth Wavelet Expansions and Application to the Polya Function. <i>Advances in Mathematics</i> , 1996 , 120, 265-282	1.3	20
32	Multifractal Measures, Especially for the Geophysicist 1989 , 5-42		20
31	On Dvoretzky coverings for the circle. <i>Zeitschrift für Wahrscheinlichkeitstheorie Und Verwandte Gebiete</i> , 1972 , 22, 158-160		19
30	New Methods of Statistical Economics, Revisited: Short versus long tails and Gaussian versus power-law distributions. <i>Complexity</i> , 2009 , 14, 55-65	1.6	17
29	Inverse Measures, the Inversion Formula, and Discontinuous Multifractals. <i>Advances in Applied Mathematics</i> , 1997 , 18, 50-58	0.8	17
28	Gap Independence and Lacunarity in Percolation Clusters. <i>Physical Review Letters</i> , 1996 , 77, 877-880	7.4	17
27	A Fractal's Lacunarity, and how it can be Tuned and Measured 1994 , 8-21		17

26	Exceptions to the multifractal formalism for discontinuous measures. <i>Mathematical Proceedings of the Cambridge Philosophical Society</i> , 1998 , 123, 133-157	0.7	14
25	Inversion Formula for Continuous Multifractals. <i>Advances in Applied Mathematics</i> , 1997 , 19, 332-354	0.8	13
24	Squig sheets and some other squig fractal constructions. <i>Journal of Statistical Physics</i> , 1984 , 36, 519-539	1.5	12
23	Measures of Fractal Lacunarity: Minkowski Content and Alternatives 1995 , 15-42		12
22	A Class of Multinomial Multifractal Measures with Negative (Latent) Values for the Dimension D_f 1989 , 3-29		11
21	A PRIMER OF NEGATIVE TEST DIMENSIONS AND DEGREES OF EMPTINESS FOR LATENT SETS. <i>Fractals</i> , 2009 , 17, 1-14	3.2	8
20	The inescapable need for fractal tools in finance. <i>Annals of Finance</i> , 2005 , 1, 193-195	1	8
19	Parallel cartoons of fractal models of finance. <i>Annals of Finance</i> , 2005 , 1, 179-192	1	7
18	Comment on the equivalence between fracton/spectral dimensionality, and the dimensionality of recurrence. <i>Journal of Statistical Physics</i> , 1984 , 36, 541-543	1.5	7
17	Stable Fractal Sums of Pulses: The Cylindrical Case. <i>Bernoulli</i> , 1995 , 1, 201	1.6	6
16	OPINIONS. <i>Fractals</i> , 1993 , 01, 117-123	3.2	5
15	Fractal aggregates, and the current lines of their electrostatic potentials. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1991 , 177, 589-592	3.3	5
14	Variability of the form and of the harmonic measure for small off-off-lattice diffusion-limited aggregates. <i>Physical Review A</i> , 1992 , 45, 5798-5804	2.6	5
13	Comment on "Stochastic Models in Hydrology" by Adrian E. Scheidegger. <i>Water Resources Research</i> , 1970 , 6, 1791-1791	5.4	5
12	Exactly Self-Similar Left-Sided Multifractals 1991 , 323-344		5
11	Heavy Tails in Finance for Independent or Multifractal Price Increments 2003 , 1-34		5
10	Peano-type motions, when time is intrinsic or binomial (uniform or multifractal). <i>Mathematical Intelligencer</i> , 1997 , 19, 21-26	0.2	4
9	Reply [to "Comments on 'Loah, Joseph, and Operational Hydrology'" by Benoit B. Mandelbrot and James R. Wallis] <i>Water Resources Research</i> , 1969 , 5, 917-920	5.4	3

8	Fractals 2003 , 185-207		3
7	SELF-AFFINE FRACTAL SETS, III: HAUSDORFF DIMENSION ANOMALIES AND THEIR IMPLICATIONS 1986 , 21-28		2
6	ON THE AGGREGATIVE FRACTALS CALLED "QUIGGS" WHICH INCLUDE RECURSIVE MODELS OF POLYMERS AND OF PERCOLATION CLUSTERS 1984 , 5-7		2
5	Easy and Natural Generation of Multifractals: Multiplying Harmonics of Periodic Functions 1999 , 113-122		1
4	Fractal Sums of Pulses and a Practical Challenge to the Distinction Between Local and Global Dependence. <i>Lecture Notes in Physics</i> , 2003 , 118-135	0.8	1
3	A new model of percolation clusters. <i>Journal of Statistical Physics</i> , 1984 , 36, 545-545	1.5	
2	Continuous Interpolation of the Complex Discrete Map $z \mapsto (1-z)$, and Related Topics. On the dynamics of iterated maps IX. <i>Physica Scripta</i> , 1985 , T9, 59-63	2.6	
1	Exactly Self-similar Left-sided Multifractals 1996 , 367-399		