

# Benoît B Mandelbrot

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/11567144/publications.pdf>

Version: 2024-02-01

80  
papers

27,845  
citations

94269

37  
h-index

114278

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.  | 4.2  | 6,147     |
| 2  | Fractal character of fracture surfaces of metals. Nature, 1984, 308, 721-722.   | 13.7 | 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.             | 1.4  | 1,683     |
| 4  | Noah, Joseph, and Operational Hydrology. Water Resources Research, 1968, 4, 909-918.  | 1.7  | 910       |
| 5  | Fractals and Scaling in Finance. , 1997, , .  |      | 862       |
| 6  | Self-Affine Fractals and Fractal Dimension. Physica Scripta, 1985, 32, 257-260.   | 1.2  | 836       |
| 7  | Some long-run properties of geophysical records. Water Resources Research, 1969, 5, 321-340.  | 1.7  | 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.                     | 1.7  | 788       |
| 9  | Computer Experiments With Fractional Gaussian Noises: Part 1, Averages and Variances. Water Resources Research, 1969, 5, 228-241.                                     | 1.7  | 476       |
| 10 | Critical Phenomena on Fractal Lattices. Physical Review Letters, 1980, 45, 855-858.   | 2.9  | 408       |
| 11 | Solvable Fractal Family, and Its Possible Relation to the Backbone at Percolation. Physical Review Letters, 1981, 47, 1771-1774.                                      | 2.9  | 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.        | 2.3  | 362       |
| 13 | The Science of Fractal Images. , 1988, , .  |      | 292       |
| 14 | A Fast Fractional Gaussian Noise Generator. Water Resources Research, 1971, 7, 543-553.   | 1.7  | 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.            | 1.4  | 243       |
| 16 | Geometric Implementation of Hypercubic Lattices with Noninteger Dimensionality by Use of Low Lacunarity Fractal Lattices. Physical Review Letters, 1983, 50, 145-148. | 2.9  | 227       |
| 17 | FRACTAL ASPECTS OF THE ITERATION OF $z \mapsto z(1-z)$ FOR COMPLEX $\beta$ AND $z$ . Annals of the New York Academy of Sciences, 1980, 357, 249-259.                  | 1.8  | 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.                      | 0.3  | 159       |
| 21 | Computer Experiments with Fractional Gaussian Noises: Part 2, Rescaled Ranges and Spectra. Water Resources Research, 1969, 5, 242-259.  | 1.7  | 144       |
| 22 | Negative fractal dimensions and multifractals. Physica A: Statistical Mechanics and Its Applications, 1990, 163, 306-315.   | 1.2  | 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.   | 0.9  | 142       |
| 25 | Fractals in physics: Squig clusters, diffusions, fractal measures, and the unicity of fractal dimensionality. Journal of Statistical Physics, 1984, 34, 895-930.                              | 0.5  | 125       |
| 26 | Computer Experiments with Fractional Gaussian Noises: Part 3, Mathematical Appendix. Water Resources Research, 1969, 5, 260-267.  | 1.7  | 115       |
| 27 | Physical Properties of a New Fractal Model of Percolation Clusters. Physical Review Letters, 1984, 52, 1853-1856.   | 2.9  | 94        |
| 28 | The potential distribution around growing fractal clusters. Nature, 1990, 348, 143-145.   | 13.7 | 93        |
| 29 | Multifractal Measures, Especially for the Geophysicist. , 1989, , 5-42.   |      | 81        |
| 30 | Is Nature Fractal?. Science, 1998, 279, 783c-783.   | 6.0  | 74        |
| 31 | Exactly self-similar left-sided multifractal measures. Physical Review A, 1990, 42, 4528-4536.  | 1.0  | 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.                      | 1.2  | 69        |
| 33 | Towards a Second Stage of Indeterminism in Science. Interdisciplinary Science Reviews, 1987, 12, 117-127.   | 1.0  | 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. | 1.2  | 53        |
| 36 | Comments on: "A Subordinated Stochastic Process Model with Finite Variance for Speculative Prices," by Peter K. Clark. Econometrica, 1973, 41, 157.   | 2.6  | 52        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 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.            | 2.9 | 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. | 1.3 | 42        |
| 39 | Title is missing!. <i>Journal of Statistical Physics</i> , 2003, 110, 739-774.  | 0.5 | 42        |
| 40 | LÃ©vy dusts, Mittag-Leffler statistics, mass fractal lacunarity, and perceived dimension. <i>Physical Review E</i> , 1997, 56, 112-118.   | 0.8 | 38        |
| 41 | Invariant multifractal measures in chaotic Hamiltonian systems, and related structures. <i>Physical Review Letters</i> , 1988, 60, 673-676.   | 2.9 | 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.                     | 1.2 | 37        |
| 43 | On the Secular Pole Motion and the Chandler Wobble. <i>Geophysical Journal International</i> , 1970, 21, 217-232.   | 1.0 | 32        |
| 44 | Broken line process derived as an approximation to fractional noise. <i>Water Resources Research</i> , 1972, 8, 1354-1356.  | 1.7 | 28        |
| 45 | Self-similarity of harmonic measure on DLA. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1992, 185, 77-86.  | 1.2 | 28        |
| 46 | The Canopy and Shortest Path in a Self-Contacting Fractal Tree. <i>Mathematical Intelligencer</i> , 1999, 21, 18-27.  | 0.1 | 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.  | 0.5 | 23        |
| 49 | Parallel diffusion-limited aggregation. <i>Physical Review E</i> , 1995, 52, 5602-5609.   | 0.8 | 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.   | 0.4 | 21        |
| 52 | Exceptions to the multifractal formalism for discontinuous measures. <i>Mathematical Proceedings of the Cambridge Philosophical Society</i> , 1998, 123, 133-157.                                   | 0.3 | 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.  | 2.9 | 19        |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 55 | “New Methods of Statistical Economics,” revisited: Short versus long tails and Gaussian versus power-law distributions. Complexity, 2009, 14, 55-65.         | 0.9 | 18        |
| 56 | The inescapable need for fractal tools in finance. Annals of Finance, 2005, 1, 193-195.  | 0.3 | 17        |
| 57 | Inversion Formula for Continuous Multifractals. Advances in Applied Mathematics, 1997, 19, 332-354.  | 0.4 | 15        |
| 58 | Squig sheets and some other squig fractal constructions. Journal of Statistical Physics, 1984, 36, 519-539.  | 0.5 | 13        |
| 59 | Parallel cartoons of fractal models of finance. Annals of Finance, 2005, 1, 179-192.   | 0.3 | 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. | 0.5 | 9         |
| 63 | A PRIMER OF NEGATIVE TEST DIMENSIONS AND DEGREES OF EMPTINESS FOR LATENT SETS. Fractals, 2009, 17, 1-14.   | 1.8 | 9         |
| 64 | Stable Fractal Sums of Pulses: The Cylindrical Case. Bernoulli, 1995, 1, 201.  | 0.7 | 8         |
| 65 | Comment on “Stochastic Models in Hydrology” by Adrian E. Scheidegger. Water Resources Research, 1970, 6, 1791-1791.  | 1.7 | 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.  | 1.7 | 6         |
| 67 | Fractal aggregates, and the current lines of their electrostatic potentials. Physica A: Statistical Mechanics and Its Applications, 1991, 177, 589-592.      | 1.2 | 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.          | 1.0 | 6         |
| 69 | OPINIONS. Fractals, 1993, 01, 117-123.   | 1.8 | 5         |
| 70 | Peano-ply motions, when time is intrinsic or binomial (uniform or multifractal). Mathematical Intelligencer, 1997, 19, 21-26.                                | 0.1 | 5         |
| 71 | SELF-AFFINE FRACTAL SETS, III: HAUSDORFF DIMENSION ANOMALIES AND THEIR IMPLICATIONS. , 1986, , 21-28.  |     | 3         |
| 72 | Fractals. , 2003, , 185-207.   |     | 3         |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 73 | Easy and Natural Generation of Multifractals: Multiplying Harmonics of Periodic Functions. , 1999, , 113-122.   |     | 2         |
| 74 | ON THE AGGREGATIVE FRACTALS CALLED "SQUIGS", 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.               | 0.3 | 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.   | 0.5 | 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. | 1.2 | 0         |
| 80 | Exactly Self-similar Left-sided Multifractals. , 1996, , 367-399.   |     | 0         |