

## Cumulative bibliography, including copyright credits

This bibliography's overlapping parts have different motivations and very unequal lengths.

The shorter part consolidates the lists of references of the reprints and of the new chapters. The originals of the reprints tended to have few references, most of them either generic or ancient. The reason was a lack of items to refer to. Indeed, the topics I dealt with were themselves ancient but their study had long been interrupted. Extensive activity in developing those old works of mine came too late to be referenced. To propose a balanced reading list usable in 2003, I feel neither duty-bound nor competent.

The longer part in the middle of this bibliography lists most of my publications, together with copyright credits for those reproduced in this book. Such a list used to be a must in volumes of Selected Papers. The internet – a new high-tech form of samizdat – may have transformed it into an obsolete symptom of Vanitas Vanitarum. The publications reprinted in a Selecta volume are preceded by an annotation of the form \*N16, which refers to Volume N, Chapter 16. The letter code is E=M1997E, N=M1999N, H=M2002H, FE=M1997FE.

The sources of the references in this list are very diverse and some are known to few readers. Therefore available variants are included and the only abbreviations used are J. for Journal, Proc. for Proceeding, Tr. for Transactions, and Z. for Zeitschrift.

AHARONY, A. & FEDER, J. Eds. 1989. *Fractals in Physics*. Amsterdam: North-Holland, *Physica*: **D 38**, 1-398.

ALEXANDER, D.S. *A History of Complex Dynamics from Schröder to Fatou and Julia*, Braunschweig/Wiesbaden: Vieweg, 1994.

APOSTEL, L., MANDELBROT, B. & MORF, A. 1957. *Logique, langage et théorie de l'information*. Paris: Presses Universitaires de France.

APPELL, P. & GOURSAT, E. 1895, deuxième édition, 1929-1930. *Théorie des fonctions algébriques*. Paris: Gauthier-Villars.

ASIKAINEN, J. AHARONY, A., RAUSCH, E., HOVI, J.P., & MANDELBROT, B.B., 2003. Fractal properties of critical Potts clusters. *European Physical Journal*: **B34**, 479- .

BARRAL, J., COPPENS, M-O. & MANDELBROT, B.B. 2003. Multiperiodic multifractal martingale measures. *Journal des mathématiques pures et appliquées*, in the press.

BARRAL, J. & MANDELBROT, B.B. 2002. Multifractal products of cylindrical pulses. *Probability Theory and Related Fields*: **124**, 409-430.

BARRAL, J. & MANDELBROT, B.B. 2004. Multifractal products of independent random functions: *Fractals*. Ed. Michael L. Lapidus, Providence, RI: American Mathematical Society.

BARTON, C. & LAPOINTE, P. Eds. 1994. *Fractal Geometry and its Use in the Earth Sciences*. New York: Plenum.

- BARTON, C. & LAPOINTE, P. Eds. 1995. *Fractals in Petroleum Geology and Earth Processes*. New York: Plenum.
- BEARDON, A. 1983. *The Geometry of Discrete Groups*, New York: Springer-Verlag.
- BEDFORD, T. J. 1984. *Crinkly Curves, Markov Partitions and Dimension*. Unpublished Ph.D. Thesis, Warwick University, U.K..
- N6 BERGER, J.M. & MANDELBROT, B.B., 1963. A new model for the clustering of errors on telephone circuits. *IBM Journal of Research and Development*: 7, 224-236.
- BIDAUX, R., BOCCARA, N. SARMA, G., SÈZE, L., DE GENNES, P. G., PARODI, O., 1973. Statistical properties of focal conic textures in smectic liquid crystals. *Le J. de Physique* 34, 661-672.
- BLANCHARD, P. 1984. Complex analytic dynamics on the Riemann sphere. *Bull. American Mathematical Society*: 11(1), 85-141.
- BLUMENFELD, R., & AHARONY, A. 1989. Breakdown of multifractal behavior in diffusion-limited aggregates. *Physical Review Letters*: 62, 2977-2980.
- BLUMENFELD, R. & MANDELBROT, B.B., 1997. Lévy dusts, Mittag-Leffler statistics, mass fractal lacunarity, and perceived dimension. *Physical Review*: E 56. 112-118.
- BOURBAKI, N. 1960. *Éléments d'histoire des mathématiques*. Paris: Hermann.
- BOURGUIGNON, J. P. 1999. An interview concerning the "World Mathematical year 2000." [wmy2000.math.jussieu.fr/wmy\\_6.html](http://wmy2000.math.jussieu.fr/wmy_6.html).
- BOX, G. E. & JENKINS, G. M. 1970. *Time Series Analysis, Forecasting and Control*. San Francisco: Holden-Day.
- BOYD, D. W. 1973a. The residual set dimension of the Apollonian packing. *Mathematika*: 20, 170-174.
- BOYD, D. W. 1973b. Improved bounds for the disk packing constant. *Aequationes Mathematicae*: 9, 99-106.
- BRAGG, W. H. 1934. Liquid crystals. *Nature*: 133, 445-456.
- BROLIN, H. 1965. Invariant sets under iteration of rational functions. *Arkiv för Matematik*: 6, 103-144.
- BROOKS, R. 1989. The Mandelbrot set (Letter to the Editor). *The Mathematical Intelligencer*: 12(1), 3.
- BROOKS, R. & METELSKI, J. P. 1981. The dynamics of 2-generator subgroups of  $PSL(2, \mathbb{C})$ . *Riemann Surfaces and Related Topics*, Eds. I. Kra and B. Maskit, Princeton University Press.
- CALVET, L., FISHER, A., & MANDELBROT, B.B. 1997. *Large Deviations and the Distribution of Price Changes*. See under Mandelbrot, Calvet & Fisher 1997.
- CANTOR, G. 1932. *Gesammelte Abhandlungen mathematischen und philosophischen Inhalts*. Ed. E. Zermelo. Berlin: Teubner. Olms reprint.
- CARLESON, L. & JONES, P.W. 1992. On coefficient problems of univalent functions and conformal dimension, *Duke Mathematical J.*: 66, 169-206.
- CARPENTER, L.C., FOURNIER, A., and FUSSEL, D., Display of fractal curves and surfaces, to appear, *Communications of the Association for Computing Machinery*.
- CHOUCHAN, M. 1995. *Nicolas Bourbaki: Faits et légendes*. Argenteuil: Éditions du Choix.
- CIOCZEK-GEORGES, R. & MANDELBROT, B. B. 1995. A class of micropulses and antipersestent fractional Brownian motion. *Stochastic Processes and their Applications*: 60, 1-18.
- CIOCZEK-GEORGES, R. & MANDELBROT, B. B. 1996. Alternative micropulses and fractional Brownian motion (with Renata Cioczek-Georges). *Stochastic Processes and their Applications*: 64, 143-152.
- CIOCZEK-GEORGES, R. & MANDELBROT, B. B. 1996. Stable fractal sums of pulses: the general case.
- CIOCZEK-GEORGES, R., MANDELBROT, B. B., SAMORODNITSKY, G., & TAQQU, M. S. 1995. Stable fractal sums of pulses: the cylindrical case. *Bernoulli*: 1, 201-216.
- COLLET, P. and ECKMAN, J. P. 1980. *Iterated Maps on the Interval as Dynamical Systems*. Boston: Birkhauser.

- COPPENS, M-O. & MANDELBROT, B.B. 1999. Easy and natural generation of multifractals; multiplying harmonics of periodic functions. *Fractals in Engineering*. Eds. J. Lévy-Véhel, E. Lutton, & C. Tricot. New York. Springer, 113-122.
- COXETER, H. S. M., 1979. The non-Euclidean symmetry of Escher's picture "Circle Limit III." *Leonardo* **12**, 19-25.
- CVITANOVIC, P. & MYRHEIM, J. 1982. Universal for period  $n$ -triplings in complex mappings, *Physics Letters*: **94A**, 329-333.
- \*H29 DAMERAU, F.J. & MANDELBROT, B.B. 1973. Tests of the degree of word clustering in samples of written English. *Linguistics*: **102**, 1973, 58-75.
- DENJOY, A. 1932. Sur quelques points de la théorie des fonctions: *Comptes rendus* (Paris): **194**, 44-46.
- DENJOY, A. 1938. Sur une fonction réelle de Minkowski, *Journal des Mathématiques Pures et Appliquées*: **62**, 105-151.
- DENJOY, A. 1955. *Articles et mémoires*, Paris, Gauthier-Villars, 1955, **2**, 925-971.
- DEVANEY, R., & KEEN, L. Eds. 1989. *Chaos and Fractals. The Mathematics Behind the Computer Graphics*, Providence, RI: American Mathematical Society.
- DEWDNEY, A.K. 1985. A computer microscope zooms in for a look at the most complex object of mathematics. *Scientific American*, August, cover and 16-21.
- DIEUDONNÉ, J. 1975. L'abstraction et l'intuition mathématique, *Dialectica*: **29**, 39-54.
- DOUADY, A. 1982. Systems dynamiques holomorphes. *Séminaire Boubaki*. *Astérisque*: **599**.
- DOUADY, A. 1986. Julia sets and the Mandelbrot set, *The Beauty of Fractals*, by Heinz-Otto Peitgen & Peter H. Richter, New York: Springer, 161-173.
- DOUADY, A. and HUBBARD, J. 1982. Iteration des polynomes quadratiques complexes. *Comptes rendus* (Paris): **294-I**, 123-126.
- DOUADY, A. and HUBBARD, J. 1984. *Étude dynamique des polynomes complexes. I, II*, Publications Mathématiques d'Orsay, Université de Paris-Sud, Orsay, France.
- DOUADY, A. and HUBBARD, J. 1985. On the dynamics of polynomial-like mappings. *Ann. Scientifiques de l'École Normale Supérieure*: **18**, 287-343.
- DUBUC, S. 1982. Theoretical and numerical study of the Dekarlin-McGregor function. *J. Analyse Mathématique*: **42**, 15-37.
- EVERTSZ, C. J. G., JONES, P. W., & MANDELBROT, B. B. 1991. Behavior of the harmonic measure at the bottom of fjords. *J. Physics*: **A24**, 1889-1901.
- EVERTSZ, C. J. G. & MANDELBROT, B. B. 1991n. Steady state noises in diffusion limited fractal growth. *Europhysics Letters*: **15**, 245-250.
- EVERTSZ, C. J. G. & MANDELBROT, B. B. 1992a. Multifractal measures. Appendix in *Chaos and Fractals: New Frontiers in Science*, by H.-O. Peitgen, H. Jürgens & D. Saupe. New York: Springer, 849-881.
- EVERTSZ, C. J. G. & MANDELBROT, B. B. 1992b. Self-similarity of the harmonic measure on DLA. *Physica*: **A185**, 77-86.
- EVERTSZ, C. J. G., MANDELBROT, B. B., & NORMANT, F. 1991f. Fractal aggregates, and the current lines of their electrostatic potentials. *Physica*: **A177**, 589-592.
- EVERTSZ, C. J. G., MANDELBROT, B. B., & NORMANT, F. 1992t. Harmonic measure around linearly self-similar trees. *J. Physics*: **A25**, 1781-1797.
- EVERTSZ, C. J. G., MANDELBROT, B. B., NORMANT, F., & WOOG, L. 1992. Variability of the form and the harmonic measure for small off-off lattice diffusion limited aggregates. *J. Physics*: **A45**, 5798-5804 & 8985-8986.
- EVERTSZ, C. J. G., MANDELBROT, B. B., & WOOG, L. 1992. Variability of the form and of the harmonic measure for small off-off-lattice diffusion limited aggregates. *Physical Review*: **A 45**, 5798-5804.
- FATOU, P. 1906. Sur les solutions uniformes de certaines équations fonctionnelles. *Comptes rendus* (Paris): **143**, 546-548.

- FATOU, P. 1919-1920. Sur les solutions équations fonctionnelles. *Bull. Société Mathématique de France*: **47**, 161-271; **48**, 33-94, & **48**, 208-314.
- FEDER, J. 1988. *Fractals*. New York: Plenum.
- FEIGENBAUM, M. J. 1978. Quantitative universality for a class of nonlinear transformations. *J. of Statistical Physics*: **19**, 25-52.
- FEIGENBAUM, M. J. 1981. Universal behavior in nonlinear systems. *Los Alamos Science*: **1**, 4-27.
- FISHER, A., CALVET, L., & MANDELBROT, B. B. 1997. The Multifractality of the Deutshmark / US Dollar Exchange Rates. See under Mandelbrot, Calvet & Fisher 1997.
- FRAME, M.L. & MANDELBROT, B.B. 2002. *Fractals, Graphics, and Mathematics Education*, Washington, DC: Mathematical Association of America & Cambridge: The University Press.
- FRAME, M.L. & MANDELBROT, B.B. 2003. *Panorama of Fractals and their Uses*. Scheduled to become a book. At this point, a version under construction can be found at the following internet address: <http://math.yale.edu/panorama/panorama.htm/>.
- FRICKE, R & KLEIN, F. 1897. *Vorlesungen über die Theorie der automorphen Functionen*. Leipzig: Teubner (Johnson reprint).
- \*N2 FRISCH, U. & PARISI, G. 1985. Fully developed turbulence and intermittency, in *Turbulence and Predictability in Geophysical Fluid Dynamics and Climate Dynamics*. International School of Physics "Enrico Fermi." Course 88, Eds. M. Ghil et. al. Amsterdam: North-Holland, 84-88.
- GEFEN, Y., AHARONY, A., & MANDELBROT, B. B. 1983. Phase transitions on fractals: I. Quasi-linear lattices. *J. of Physics: A* **16**, 1267-1278.
- GEFEN, Y., AHARONY, A., & MANDELBROT, B. B. 1984. Phase transitions on Fractals: III. Infinitely ramified lattices. *J. of Physics: A* **17**, 1277-1289.
- GEFEN, Y., AHARONY, A., MANDELBROT, B. B. & KIRKPATRICK, S. 1981. Solvable fractal family, and its possible relation to the backbone at percolation. *Physical Review Letters*: **47**, 1771-1774.
- GEFEN, Y., AHARONY, A., MANDELBROT, B. B. & SHAPIR, Y. 1984. Phase transitions on fractals: II. Sierpinski gaskets. *J. of Physics: A* **17**, 435-444.
- GEFEN, Y., MANDELBROT, B. B., & AHARONY, A. 1980. Critical phenomena on fractals. *Physical Review Letters*: **45**, 855-858.
- GEFEN, Y., MEIR, Y., MANDELBROT, B. B. & AHARONY, A. 1983. Geometric implementation of hypercubic lattices with noninteger dimensionality, using low lacunarity fractal lattices. *Physical Review Letters*: **50**, 145-148.
- GERNSTEIN, G. L. & MANDELBROT, B. B. 1964. Random walk models for the spike activity of a single neuron. *The Biophysical J.*: **4**, 41-68.
- GILLESPIE, C.C. (Ed.) 1970-6. *Dictionary of Scientific Biography*. New York: Scribner's.
- GISPERT, H. 1991. La France mathématique, 1890-1914. *Cahiers d'Histoire et de Philosophie des Sciences*: **34**.
- GIVEN, J. A. & MANDELBROT, B. B. 1983. Diffusion on fractal lattices and the fractal Einstein relation. *J. Physics: A* **16**, L565-L569.
- GNEDENKO, B.V. 1967. *The Theory of Probability*. New York: Chelsea.
- GNEDENKO, B.V. & KOLMOGOROV, A.N. 1968. *Limit Distributions for Sums of Independent Random Variables*. Reading, MA: Addison-Wesley.
- GROSSMAN, S. & THOMAE, S. 1977. Invariant distributions and stationary correlation functions of one-dimensional discrete processes. *Z. für Naturforschung*: **32A**, 1353-1363.
- GUCKENHEIMER, J. & MCGEHEE, R. 1984. *A Proof of the Mandelbrot N<sup>2</sup> Conjecture*, [http://www.math.umn.edu/~mcgehee/publications/Mandelbrot N2/Mandelbrot N2.pdf](http://www.math.umn.edu/~mcgehee/publications/Mandelbrot%20N2/Mandelbrot%20N2.pdf). See Report No. 15, Djursholm (Sweden): Institut Mittag-Leffler.
- GUREL, O. & RÖSSLER, O. E. Eds., 1979. Bifurcation theory and applications in scientific disciplines, *Annals of the New York Academy of Sciences*: **316**, 1-708.
- GUTZWILLER, M. C., 1980. Classical quantization of a Hamiltonian with ergodic behavior. *Physical Review Letters*: **45**, 150-153.

- GUTZWILLER, M. C. 1983. Stochastic behavior in quantum scattering. *Physica* (Amsterdam): **7D**, 341-355.
- \*C GUTZWILLER, M. C. & MANDELBROT, B. B. 1988. Invariant multifractal measures in chaotic Hamiltonian systems, and related structures. *Physical Review Letters*: **60**, 673-676.
- HADAMARD, J. 1912. L'oeuvre mathématique de Poincaré. *Acta Mathematica*: **38**, 203-287. Reprints in Poincaré 1916-, XI, 152-242 and Hadamard 1968, 4, 1921-2005.
- HADAMARD, J. 1934. L'oeuvre scientifique de Paul Painlevé. *Revue de Métaphysique et de Morale*: **XLI** (3), 289-325.
- HADAMARD, J. 1968. *Oeuvres de Jacques Hadamard*. Paris: Editions de CNRS.
- HALSEY, T. C., JENSEN, M. H., KADANOFF, L. P., PROCACCIA, I. & SHRAIMAN, B. I. 1986. Fractal measures and their singularities: the characterization of strange sets. *Physical Review*: **A33**, 1141-1151. IMPORTANT ERRATA: *Physical Review*: **A34**, 1986, 1601.
- HARDY, G. H. & WRIGHT, E. M. 1960. *An Introduction to the Theory of Numbers* (4th edition) Oxford: Clarendon Press.
- HELLEMAN, R. H. G. Ed. 1980. Nonlinear dynamics. *Annals of the New York Academy of Sciences*: **357**, 1-507.
- HERMANN, R. 1991. Fractal Theory. *Mathematical Intelligencer*: **13**, 4.
- HEWITT, E. 1990. So far, so good: my life up to now. *Mathematical Intelligencer*: **12** (4), pp. 58-63.
- HOKUSAI, K. 1834. *Fugaku Hyakkei or One Hundred Views of Mt. Fuji*. The Original in three small volumes is a priceless library treasure. *Reprint with commentaries*. New York: George Braziller, 1988.
- HOFSTADTER, D. R. 1981. Strange attractors: mathematical patterns delicately poised between order and chaos. *Scientific American*: **245**, (November issue), 16-29.
- HOVI, J.-P., AHARONY, A., STAUFFER, D., & MANDELBROT, B.B. 1996. Gap independence and lacunarity in percolation clusters. *Physical Review Letters*: **77**, 877-890.
- HUGHES, B.D. 1995-1996. *Random walks and random environments*. Oxford: Clarendon Press.
- HURD, A. J., MANDELBROT, B. B. & WEITZ, D. A. (eds) 1987. *Fractal Aspects of Materials: Disordered Systems*. Extended Abstracts of a MRS Symposium, Boston. Pittsburgh PA: Materials Research Society.
- JAFFARD, S. & MANDELBROT, B. B. 1996. Local regularity of nonsmooth wavelet expansions and application to the Polyà function. *Advances in Mathematics*: **120**, 265-282.
- JULIA, G. 1918. Mémoire sur l'itération des fonctions rationnelles. *J. de Mathématiques Pures et Appliquées*: **4** 47-245. Reprinted (with related texts) in Julia 1968, 121-319.
- JULIA, G. 1968. *Oeuvres de Gaston Julia*, Paris: Gauthier-Villars.
- \*N11 KAHANE, J. P. & MANDELBROT, B. B. 1965. Ensembles de multiplicité aléatoires. *Comptes rendus* (Paris): **261**, 3931-3933.
- KAHANE, J. P. & SALEM, R. 1963. *Ensembles parfaits et séries trigonométriques*. Paris: Hermann.
- KAKUTANI, S. 1944. 2-dimensional Brownian motion and harmonic functions. *Proc. Imperial Academy of Sciences* (Tokyo): **20**, 706-714.
- KINNEY, J.R. 1960. Note on a singular function of Minkowski. *Proc. American Mathematical Society*: **11**, 788-794.
- KRANTZ, S.G. 1989. Fractal geometry. *Mathematical Intelligencer*: **11**(4), 12-16.
- KRANTZ, S.G. 1990. Mathematical anecdotes. *Mathematical Intelligencer*: **12**(3), 32-39.
- KRANTZ, S.G. 1991. Mathematical anecdotes. *Mathematical Intelligencer*: **13**(4), 5.
- LAIBOWITZ, R. B., MANDELBROT, B. B. & PASSOJA, D. E. Eds. 1985. *Fractal Aspects of Materials*. Extended Abstracts of a MRS Symposium, Boston. Pittsburgh PA: Materials Research Society.
- LAM, C.-H., KAUFMAN, H. & MANDELBROT, B. B. 1994. Orientation of particle attachment and local isotropy in diffusion limited aggregates (DLA). *J. Physics*: **A28**, L 213-217.

- LATTÈS, S. 1918a. Sur l'itération des substitutions rationnelles et les fonctions de Poincaré. *Comptes rendus* (Paris): **166**, 26-28.
- LATTÈS, S. 1918b. Sur l'itération des substitutions rationnelles à deux variables. *Comptes rendus* (Paris): **166**, 151-153.
- LATTÈS, S. 1918c. Sur l'itération des fractions irrationnelles. *Comptes rendus* (Paris): **166**, 486-488.
- LEE, J. & STANLEY, H.E. 1988. Phase transition in the multifractal spectrum of diffusion-limited aggregates. *Physical Review Letters*: **61**, 2945-2948.
- LEE, J., ALSTROM, P. & STANLEY, H.E. 1989. Scaling of the minimum growth probability for the "typical" diffusion-limited aggregation configuration. *Physical Review*: **A39**, 6545-6556; *Physical Review Letters Comm.*: **62**, 3013-3013.
- LEIBNIZ, G. W. 1849-. *Mathematische Schriften*. Ed. C.I. Gerhardt. Halle: H.W. Schmidt (Olms reprint).
- LÉVY, P., MANDELBROJT, S., MALGRANGE, B. & MALLIAVIN, P. 1967. *La vie et l'oeuvre de J. Hadamard*. Genève: Monographies de l'Enseignement Mathématique: **16**.
- LUCAS, E. 1891. *Théorie des nombres*. Paris: Gauthier-Villars.
- MAGNUS, W. 1974. *Noneuclidean Tesselations and their Groups*. New York: Academic Press.
- MAKAROV, N.G. 1998. Fine structure of harmonic measure. *Algebra i Analiz*: **10**, 1-62; translation in *St. Petersburg Mathematical J.*: **10(2)**, 217-268.
- MANDELBROJT, S. 1952. Pourquoi je fais des mathématiques. *Revue de Métaphysique et de Morale*: **57(4)**, 442-429.
- MANDELBROJT, S. 1985. Souvenirs à bâtons rompus. *Publications du Séminaire d'Histoire des Mathématiques de l'Université de Paris*: **6**, 1-46.
- MANDELBROT, B. B. 1951. Adaptation d'un message à la ligne de transmission, I & II. *Comptes rendus* (Paris): **232**, 1638-1740 & 2003-2005.
- MANDELBROT, B. B. 1953i. An informational theory of the statistical structure of language, in *Communication Theory*. Ed. W. Jackson. London: Butterworth, 486-504.
- MANDELBROT, B. B. 1953t. Contribution à la théorie mathématique des jeux de communication (Ph.D. Thesis). *Publications de l'Institut de Statistique de l'Université de Paris*: **2**, 1-124.
- MANDELBROT, B. B. 1954w. Structure formelle des textes et communication (deux études). *Word* **10**, 1-27. Corrections. *Word*: **11**, 424. Translations into English, Czech and Italian.
- MANDELBROT, B. B. 1955b. On recurrent noise limiting coding. *Information Networks, the Brooklyn Polytechnic Institute Symposium*, 205-221. Ed. E. Weber. New York: Interscience. Translation into Russian.
- MANDELBROT, B.B. 1955t. Théorie de la précorrection des erreurs de transmission. *Annales des Télécommunications*: **10**, 122-134.
- MANDELBROT, B. B. 1956c. La distribution de Willis-Yule, relative au nombre d'espèces dans les genres taxonomiques. *Comptes rendus* (Paris) **242**, 2223-2225.
- MANDELBROT, B. B. 1956g. Memorandum. University of Geneva: Mathematics Institute.
- MANDELBROT, B. B. 1956m. A purely phenomenological theory of statistical thermodynamics: canonical ensembles. *IRE Tr. on Information Theory*: **112**, 190-203.
- MANDELBROT, B. B. 1956t. Exhaustivité de l'énergie d'un système, pour l'estimation de sa température. *Comptes rendus* (Paris): **243**, 1835-1837.
- MANDELBROT, B.B. 1956w. On the language of taxonomy: an outline of a thermo-statistical theory of systems of categories, with Willis (natural) structure. *Information Theory, the Third London Symposium*. Ed. C. Cherry. London: Butterworth; New York: Academic, 1956, 135-145.
- MANDELBROT, B. B. 1957b. Note on a law of J. Berry and on insistence stress. *Information and Control* : **1**, 76-81.
- MANDELBROT, B. B. 1957p. *Linguistique statistique macroscopique*. In Apostel, Mandelbrot and Morf, 1-80.
- MANDELBROT, B. B. 1957r. *Application of Thermodynamical Methods in Communication Theory and Econometrics*. Memorandum of the University of Lille Mathematics Institute.

- MANDELBROT, B. 1957t. *Application of thermodynamical methods in communication theory and in econometrics*. Institut Mathématique de l'Université de Lille.
- MANDELBROT, B. B. 1958p. Les lois statistiques macroscopiques du comportement (rôle de la loi de Gauss et des lois de Paul Lévy). *Psychologie Française*: **3**, 237-249.
- MANDELBROT, B. B. 1959g. Ensembles grand canoniques de Gibbs; justification de leur unicité basée sur la divisibilité infinie de leur énergie aléatoire. *Comptes rendus* (Paris): **249**, 1464-1466.
- \*E10 MANDELBROT, B. B. 1959p. Variables et processus stochastiques de Pareto-Lévy et la répartition des revenus, I & II. *Comptes rendus* (Paris): **249**, 613-615 & 2153-2155.
- MANDELBROT, B. B. 1959s. A note on a class of skew distribution functions. Analysis and critique of a paper by H. A. Simon. *Information and Control*: **2**, 90-99.
- \*E10 MANDELBROT, B. B. 1960i. The Pareto-Lévy law and the distribution of income. *International Economic Review*: **1**, 79-106.
- MANDELBROT, B. B. 1961b. On the theory of word frequencies and on related Markovian models of discourse. *Structures of language and its mathematical aspects*. Ed. R. Jakobson. 120-219. New York: American Mathematical Society
- \*E11 MANDELBROT, B. B. 1961e. Stable Paretian random functions and the multiplicative variation of income. *Econometrica*: **29**, 517-543.
- MANDELBROT, B. B. 1961s. Final note on a class of skew distribution functions (with a postscript). *Information and Control*: **4**, 198-216 & 300-304.
- \*E1 FE MANDELBROT, B.B. 1962c. Sur certains prix spéculatifs: faits empiriques et modèle basé sur les processus stables additifs de Paul Lévy. *Comptes rendus* (Paris): **254**, 3968-3970.
- \*E14,15 MANDELBROT, B.B. 1962i. *The Variation of Certain Speculative Prices*. IBM External Research Report: NC-87, March, 1962.
- MANDELBROT, B. B. 1962n. Statistics of natural resources and the law of Pareto. IBM External Research Note: NC-146, June 29, 1962. See Mandelbrot 1995b.
- E12 MANDELBROT, B. B. 1962q. Paretian distributions and income maximization. *Quarterly J. of Economics of Harvard University*: **76**, 57-85.
- MANDELBROT, B. B. 1962t. The role of sufficiency and estimation in thermodynamics. *The Annals of Mathematical Statistics*: **33**, 1021-1038.
- MANDELBROT, B. B. 1963. *Towards a Revival of the Statistical Law of Pareto*. IBM Research Report: NC-227, March, 1963.
- \*E14 MANDELBROT, B. B. 1963b. The variation of certain speculative prices (Abstract). *Econometrica*: **31**, 757-758.
- \*E14 MANDELBROT, B. B. 1963b. The variation of certain speculative prices. *J. of Business* (Chicago): **36**, 394-419. Reprinted in Cootner 1964: 297-337.
- \*E3 MANDELBROT, B. B. 1963e. New methods in statistical economics. *J. of Political Economy*: **71**, 421-440. Reprint in *Bulletin of the International Statistical Institute*, Ottawa Session: **40** (2), 669-720.
- \*E8 MANDELBROT, B. B. 1963g. *A Survey of Growth and Diffusion Models of the Law of Pareto*. IBM External Research Note: NC-253.
- \*E10 MANDELBROT, B. B. 1963i. The stable Paretian income distribution when the apparent exponent is near two. *International Economic Review*: **4**, 111-115.
- MANDELBROT, B. B. 1963j. *The Stable Paretian Income Distribution when the Apparent Exponent is Near Two*. Memorandum appended to a joint reprint of M 1960i and M 1963i.
- MANDELBROT, B. B. 1963o. *Oligopoly, Mergers, and the Paretian Size Distribution of Firms*. IBM External Research Note: NC-246, March 1963.
- MANDELBROT, B.B. 1964h. *Self-Similar Random Processes and the Range*, IBM External Research Report: RC-1163.
- MANDELBROT, B.B. 1964i. *Self-similar Random Processes: Extrapolation, Interpolation and Decay of Perturbations*, IBM External Research Report: RC-1241.

- MANDELBROT, B. B. 1964j. The epistemology of chance in certain newer sciences. Read at *The Jerusalem International Congress on Logic, Methodology and the Philosophy of Science* (unpublished).
- \*E8 MANDELBROT, B. B. 1964o. Random walks, fire damage amount, and other Paretian risk phenomena. *Operations Research*: **12**, 582-585.
- MANDELBROT, B. B. 1964s. *Self-similar random processes and the range*. IBM External Research Report: **RC-1163**, April 13.
- MANDELBROT, B. B. 1964t. Derivation of statistical thermodynamics from purely phenomenological principles. *J. of Mathematical Physics*: **5**, 164-171.
- \*N5 MANDELBROT, B. B. 1964w. *Self-similar Turbulence and Non-Wienerian Conditioned Spectra*. IBM Research Report: **RC-134**.
- \*N8 MANDELBROT, B. B. 1965b. Time-varying channels,  $1/f$  noises and the infrared catastrophe, or: why does the low frequency energy sometimes seem infinite. *IEEE Communication Convention*. Boulder, CO.
- \*N7 MANDELBROT, B. B. 1965c. Self-similar error clusters in communications systems and the concept of conditional stationarity. *IEEE Transaction on Communications Technology*: **13**, 71-90.
- \*H9 MANDELBROT, B. B. 1965h. Une classe de processus stochastiques homothétiques à soi; application à la loi climatologique de H. E. Hurst. *Comptes rendus* (Paris): **260**, 3274-3277.
- MANDELBROT, B. B. 1965m. Very long-tailed probability distributions and the empirical distribution of city sizes. *Mathematical Explorations in Behavioral Science* (Cambria Pines CA, 1964). Eds. F. Massarik & P. Ratoosh. Homewood, Ill.: R. D. Irwin, 322-332.
- MANDELBROT, B. B. 1965s. Leo Szilard and unique decipherability. *IEEE Tr. on Information Theory* **IT-11**, 455-456.
- \*FE MANDELBROT, B. B. 1965z. Information theory and psycholinguistics. *Scientific Psychology: Principles and Approaches* Eds. B. B. Wolman & E. N. Nagel. New York: Basic Books 550-562.. Reprint in *Language, Selected Readings*. Eds. R. C. Oldfield & J. C. Marshall. London: Penguin. Reprint with appendices, *Readings in Mathematical Social Science*. Eds. P. Lazarsfeld and N. Henry. Chicago, Ill.: Science Research Associates (1966: hardcover). Cambridge, MA: M.I.T. Press (1968: paperback). Russian translation.
- \*E19 MANDELBROT, B. B. 1966b. Forecasts of future prices, unbiased markets, and "martingale" models. *J. of Business* (Chicago): **39**, 242-255. Important errata in a subsequent issue of the same journal.
- \*FE MANDELBROT, B. B. 1966r. Nouveaux modèles de la variation des prix (cycles lents et changements instantanés). *Cahiers du Séminaire d'Économétrie*: **9**, 1966, 53-66.
- \*N10 MANDELBROT, B. B. 1967b. Sporadic random functions and conditional spectral analysis; self-similar examples and limits. *Proc. of the Fifth Berkeley Symposium on Mathematical Statistics and Probability*: **3**, 155-179. Eds. L. LeCam & J. Neyman. Berkeley: University of California Press.
- \*N9 MANDELBROT, B. B. 1967i. Some noises with  $1/f$  spectrum, a bridge between direct current and white noise. *Institute of Electrical and Electronic Engineers Tr. on Information Theory*: **13**, 289-298.
- \*E15 MANDELBROT, B. B. 1967j. The variation of some other speculative prices. *J. of Business* (Chicago): **40**, 393-413.
- \*N12 MANDELBROT, B. B. 1967k. Sporadic turbulence. *Proc. International Symposium on Boundary Layers and Turbulence, including Geophysical Applications* (Kyoto, 1966). Supplement to *The Physics of Fluids*: **10**, Sept. 1967, S302-303.
- MANDELBROT, B. B. 1967p. Sur l'épistémologie du hasard dans les sciences sociales: invariance des lois et vérification des hypothèses, *Encyclopédie de la Pléiade: Logique et Connaissance Scientifique*. Ed. J. Piaget. 1097-1113. Paris: Gallimard.
- MANDELBROT, B. B. 1967s. How long is the coast of Britain? Statistical self-similarity and fractional dimension. *Science*: **155**, 636-638.
- MANDELBROT, B. B. 1968i. Some aspects of the random walk model of stock market prices: comment. *International Economic Review*: **9**, 258.

- MANDELBROT, B. B. 1968p. Les constantes chiffrées du discours. *Encyclopédie de la Pléiade: Linguistique*, Ed. J. Martinet, Paris: Gallimard, 46-56.
- \*N13 MANDELBROT, B. B. 1969b. On intermittent free turbulence: Abstract, followed by unpublished draft. *Proc. of the Symposium on Turbulence of Fluids and Plasmas*. (Polytechnic Institute of Brooklyn). New York: Interscience.
- \*H30 MANDELBROT, B. B. 1969e. Long-run linearity, locally Gaussian processes, H-spectra and infinite variances. *International Economic Review*: **10**, 82-111.
- MANDELBROT, B. B. 1970a. Long-run interdependence in price records and other economic time series. *Econometrica*: **38**, 122-123.
- \*H30 MANDELBROT, B. B. 1970e. Statistical dependence in prices and interest rates. *Papers of the Second World Congress of the Econometric Society*, Cambridge, England (8-14 Sept. 1970).
- MANDELBROT, B. B. 1970n. Analysis of long-run dependence in time series: the R/S technique. *Fiftieth Annual Report of the National Bureau of Economic Research*, 107-108.
- MANDELBROT, B. B. 1970p. On negative temperature for discourse. Discussion of a paper by Prof. N. F. Ramsey. *Critical Review of Thermodynamics*, 230-232. Ed. E. B. Stuart et al. Baltimore, MD: Mono Book.
- MANDELBROT, B. B. 1970y. *Statistical Self-Similarity and Non-Laplacian Chance*. Unpublished Trumbull Lectures, Yale University.
- MANDELBROT, B. B. 1971. Comments on "Application of linear random models to four annual streamflow series." *Water Resources Research*: **7**, 1360-1362.
- \*E20 MANDELBROT, B. B. 1971e. When can a price be arbitrated efficiently? A limit to the validity of the random walk and martingale models. *Review of Economics and Statistics*: **53**, 225-236.
- \*H15 MANDELBROT, B. B. 1971f. A fast fractional Gaussian noise generator. *Water Resources Research*: **7**, 543-553.
- MANDELBROT, B. B. 1971g. *The conditional cosmographic principle and the fractional dimension of the universe*. (Submitted unsuccessfully to several periodicals; first published as part of Mandelbrot 1975O.)
- \*H30 MANDELBROT, B. B. 1971n. Statistical dependence in prices and interest rates. *Fifty-first Annual Report of the National Bureau of Economic Research*: 141-142.
- MANDELBROT, B. B. 1971q. Analysis of long-run dependence in economics: the R/S technique. *Econometrica*: **39** (July Supplement): 68-69.
- \*E14 MANDELBROT, B. B. 1972b. Correction of an error in "The variation of certain speculative prices (1963)." *J. of Business*: **40**, 542-543.
- \*H30 MANDELBROT, B. B. 1972c. Statistical methodology for nonperiodic cycles: from the covariance to R/S analysis. *Annals of Economic and Social Measurement*: **1**, 259-290.
- MANDELBROT, B. B. 1972d. On Dvoretzky coverings for the circle. *Z. für Wahrscheinlichkeitstheorie*: **22**, 158-160.
- \*N14 MANDELBROT, B. B. 1972j. Possible refinement of the lognormal hypothesis concerning the distribution of energy dissipation in intermittent turbulence. *Statistical Models and Turbulence*. Eds. M. Rosenblatt & C. Van Atta. Lecture Notes in Physics: **12**, New York: Springer, 333-351.
- \*H16 MANDELBROT, B. B. 1972w. Broken line process derived as an approximation to fractional noise. *Water Resources Research*: **8**, 1354-1356.
- MANDELBROT, B. B. 1972z. Renewal sets and random cutouts. *Z. für Wahrscheinlichkeitstheorie*: **22**, 145-157.
- \*E21 MANDELBROT, B. B. 1973c. Comments on "A subordinated stochastic process model with finite variance for speculative prices," by Peter K. Clark. *Econometrica*: **41**, 157-160.
- FE MANDELBROT, B. B. 1973f. Formes nouvelles du hasard dans les sciences. *Economie Appliquée*: **26**, 307-319.
- FE MANDELBROT, B. B. 1973j. Le problème de la réalité des cycles lents, et le syndrome de Joseph. *Economie Appliquée*: **26**, 349-365.
- FE MANDELBROT, B. B. 1973v. Le syndrome de la variance infinie, et ses rapports avec la discontinuité des prix. *Economie Appliquée*: **26**, 321-348.

- \*N16 MANDELBROT, B. B. 1974c. Multiplications aléatoires itérées et distributions invariantes par moyenne pondérée. *Comptes rendus* (Paris): **278A**, 289-292 & 355-358.
- \*E8 MANDELBROT, B. B. 1974d. A population birth and mutation process, I: Explicit distributions for the number of mutants in an old culture of bacteria. *J. of Applied Probability*: **11**, 437-444. (Part II distributed privately).
- \*N15 MANDELBROT, B. B. 1974f. Intermittent turbulence in self-similar cascades: divergence of high moments and dimension of the carrier. *J. of Fluid Mechanics*: **62**, 331-358.
- \*H17 MANDELBROT, B. B. 1975b. Fonctions aléatoires pluritemporales: approximation poissonienne du cas brownien et généralisations. *Comptes rendus* (Paris): **280A**, 1075-1078.
- \*H18 MANDELBROT, B. B. 1975f. On the geometry of homogeneous turbulence, with stress on the fractal dimension of the iso-surfaces of scalars. *J. of Fluid Mechanics*: **72**, 401-416.
- MANDELBROT, B. B. 1975m. Hasards et tourbillons: quatre contes à clef. *Annales des Mines* (November): 61-66.
- MANDELBROT, B. B. 1975O, 1984O, 1989O, 1995O. *Les objets fractals: forme, hasard et dimension*. Paris: Flammarion.
- MANDELBROT, B. B. 1975u. Sur un modèle décomposable d'univers hiérarchisé: déduction des corrélations galactiques sur la sphère céleste. *Comptes rendus* (Paris): **280A**, 1551-1554.
- \*H19 MANDELBROT, B. B. 1975w. Stochastic models for the Earth's relief, the shape and the fractal dimension of the coastlines, and the number-area rule for islands. *Proc. of the National Academy of Sciences USA*: **72**, 3825-3828.
- \*H26 MANDELBROT, B. B. 1975z. Limit theorems on the self-normalized range for weakly and strongly dependent processes. *Z. für Wahrscheinlichkeitstheorie*: **31**, 271-285.
- \*N19 MANDELBROT, B. B. 1976c. Géométrie fractale de la turbulence. Dimension de Hausdorff, dispersion et nature des singularités du mouvement des fluides. *Comptes rendus* (Paris): **282A**, 119-120.
- \*N18 MANDELBROT, B. B. 1976o. Intermittent turbulence and fractal dimension: kurtosis and the spectral exponent  $5/3 + B$ . In *Turbulence and Navier Stokes Equations*. Ed. R. Temam. (Lecture Notes in Mathematics **565**.) New York: Springer, 121-145.
- MANDELBROT, B. B. 1977b. Fractals and turbulence: attractors and dispersion. *Turbulence Seminar Berkeley 1976/1977*. Eds. P. Bernard & T. Ratiu. *Lecture Notes in Mathematics*: **615** 83-93. New York: Springer. Russian translation.
- MANDELBROT, B. B. 1977F. *Fractals: Form, Chance, and Dimension*. San Francisco: W. H. Freeman.
- MANDELBROT, B. B. 1977h. Geometric facets of statistical physics: scaling and fractals. *Statistical Physics 13*, International IUPAP Conference, 1977. Eds. D. Cabib et al. *Annals of the Israel Physical Society*: **2**, 225-233.
- MANDELBROT, B. B. 1977l. Physical objects with fractional dimension: seacoasts, galaxy clusters, turbulence and soap. *The Institute of Mathematics and its Applications* (Great Britain) Bulletin: **13**, 189-196. Also in *Fluid Dynamics - les Houches*. 1973. Eds. R. Balian & J. L. Peube. New York: Gordon & Breach, 557-578.
- MANDELBROT, B. B. 1978b. The fractal geometry of trees and other natural phenomena. *Buffon Bicentenary Symposium on Geometrical Probability*, Eds. R. Miles & J. Serra. *Lecture Notes in Biomathematics*: **23** 235-249. New York: Springer.
- MANDELBROT, B. B. 1978c. Colliers aléatoires et une alternative aux promenades au hasard sans boucle: les cordonnets discrets et fractals. *Comptes rendus* (Paris): **286A**, 933-936.
- \*N5 MANDELBROT, B. B. 1978h. Geometric facets of statistical physics: scaling and fractals. *Annals of the Israel Physical Society*: **2** (1), 225-233.
- MANDELBROT, B. B. 1978r. Les objets fractals. *La Recherche*: **9**, 1-13.
- MANDELBROT, B. B. 1979n. Comment on bifurcation theory and fractals. *Bifurcation Theory and Applications*, Eds. Gurel & O. Rössler. *Annals of the New York Academy of Sciences*: **316**, 463-464.
- MANDELBROT, B. B. 1979u. Corrélations et texture dans un nouveau modèle d'Univers hiérarchisé, basé sur les ensembles trémas. *Comptes rendus* (Paris): **288A**, 81-83.
- MANDELBROT, B. B. 1980b. Fractals and geometry with many scales of length. *Encyclopedia Britannica 1981 Yearbook of Science and the Future*: 168-181.

- \*C3 MANDELBROT, B. B. 1980n. Fractal aspects of the iteration of  $z \rightarrow \lambda z(1 - z)$  for complex  $\lambda$  and  $z$ . *Non Linear Dynamics*, Ed. R. H. G. Helleman. *Annals of the New York Academy of Sciences*: 357, 249-259.
- MANDELBROT, B. B. 1981s. Scalebound or scaling shapes: a useful distinction in the visual arts and in the natural sciences. *Leonardo*: 14, 45-47.
- \*E14 MANDELBROT, B. B. 1982c. The variation of certain speculative prices. *Current Contents*: 14, 20.
- MANDELBROT, B.B. 1982f. Comments on computer rendering of fractal stochastic models. *Communications of the Association for Computing Machinery*: 25, cover and pp. 581-584.
- \*C4, 16 MANDELBROT, B. B. 1982F {FGN}. *The Fractal Geometry of Nature*. New York: W. H. Freeman.
- MANDELBROT, B. 1982n. Des monstres de Cantor et Peano à la géométrie fractale de la nature. *Penser les mathématiques*, textes réunis par J. Dieudonné, M. Loi & R. Thom, Paris: Editions du Seuil, 226-251.
- \*C23 MANDELBROT, B. B. 1982s. The inexhaustible function  $z$  squared plus  $c$ . Invited by *Scientific American*, never published there, but adapted into this book's Chapter C23.
- MANDELBROT, B. B. 1982t. The many faces of scaling: fractals, geometry of nature and economics. *Self-Organization and Dissipative Structures*. Eds. W. C. Schieve & P. M. Allen: 91-109.
- MANDELBROT, B. B. 1983d. Les fractales, les monstres et la beauté. *Le Débat* : 24, 54-72.
- MANDELBROT, B. 1983. In *Percolation Structures and Processes*. Eds. G. Deutscher, R. Zallen, & J. Adler. *Annals of the Israel Physical Society*: 5, 59-80.
- \*C18 MANDELBROT, B. 1983m. Self-inverse fractals osculated by sigma discs, and the limit sets of inversion groups. *Mathematical Intelligencer*: 5 (Spring), (2), Front and back covers and pp. 9-17.
- \*C5 MANDELBROT, B. B. 1983p. On the quadratic mapping  $z \rightarrow z^2 - \mu$  for complex  $\mu$  and  $z$ : the fractal structure of its  $M$ -set, and scaling. *Physica*: D7, 224-239.
- MANDELBROT, B. B. 1984. Some "facts" that evaporate upon examination. *Mathematical Intelligencer*: 11 (Fall) 17-19.
- MANDELBROT, B. B. 1984c. *Fractal Sums of Pulses, and New Random Variables and Functions*. (Memorandum superseded by M 1995n and four papers coauthored by R. Cioczek-Georges.)
- MANDELBROT, B. B. 1984d. Profile by Monte Davis. *Omni* (New York) (February issue) 65.
- MANDELBROT, B. B. 1984e. Fractals and physics: squig clusters, diffusions, fractal measures and the unicity of fractal dimensionality. *J. of Statistical Physics*: 34, 1984, 895-910.
- MANDELBROT, B. B. 1984f. Squig sheets and some other squig fractal constructions. *J. of Statistical Physics*: 36, 519-539.
- MANDELBROT, B. B. 1984j. *Fraktal Kikagaku*. Traduction japonaise de Mandelbrot 1982F{FGN}, par H. Hironaka. Tokyo: Nikkei Science.
- \*C13 MANDELBROT, B. B. 1984k. On the dynamics of iterated maps, VIII: The map  $z \rightarrow \lambda(z + 1/z)$ , from linear to planar chaos, and the measurement of chaos. *Chaos and Statistical Mechanics*. (Kyoto Summer Institute.) Ed. Y. Kuramoto, New York: Springer, 32-41.
- MANDELBROT, B. B. 1984r. Comment on the equivalence between fracton/spectral dimensionality and the dimensionality of recurrence. *J. of Statistical Physics*: 36, 543-545.
- MANDELBROT, B. 1984s. Les images fractales: un art pour l'amour de la science et ses applications. *Sciences et Techniques*: Mai 1984, 16-19, 34-35, & 65.
- \*N5 MANDELBROT, B. B. 1984w. On fractal geometry and a few of the mathematical questions it had raised. *Proc. of the Twelfth International Congress of Mathematicians* (Warsaw, 1983). Ed. Z. Ciesielski. Warsaw: PWN & Amsterdam: North-Holland, 1984, 1661-1675.
- MANDELBROT, B. B. 1985b. Interview by Anthony Barcellos. *Mathematical People*. Eds. D. J. Albers and G. L. Alexanderson, Boston: Birkhauser, 205-225.
- \*C6, 7, 8, 9, 10 MANDELBROT, B. B. 1985g. On the dynamics of iterated maps. Paper III: The individual molecules of the  $M$ -set: self-similarity properties, the  $N$ -2 rule, and the  $N$ -2 conjecture. Paper IV: The notion of "normalized radical"  $R$ , and the fractal dimension of the boundary of  $R$ . Paper V: Conjecture that the boundary of the  $M$ -set has a fractal dimension equal to 2. Paper VI: Conjecture that certain Julia sets include smooth components. Paper VII:

Domain-filling ("Peano") sequences of fractal Julia sets, and an intuitive rationale for the Siegel discs. *Chaos, Fractals and Dynamical Systems*. Eds. P. Fischer & W. Smith. New York: Marcel Dekker, 213-253.

\*H21 MANDELBROT, B. B. 1985l. Self-affine fractals and fractal dimension. *Physica Scripta*: 32, 257-260.

\*C11 MANDELBROT, B. B., 1985n. Continuous interpolation of the complex discrete map  $z \rightarrow \lambda(1-z)$ , and related topics (On the dynamics of iterated maps, IX). Ed. N. R. Nilsson, *Physica Scripta*: T 9, 59-63.

MANDELBROT, B.B. 1986k. Multifractals and fractals (letter to the Editor). *Physics Today* (September issue): 11-12.

MANDELBROT, B.B. 1986p. Fractals and the rebirth of iteration theory. *The Beauty of Fractals*, by Heinz-Otto Peitgen & Peter H. Richter, New York: Springer, 151-160.

MANDELBROT, B. 1986r. Comment j'ai découvert les fractales. (Entretien avec Marc Lesort) *La Recherche* (Mars 1986): 420-424.

\*H22,23,24 MANDELBROT, B. B. 1986t. Self-affine fractal sets, I: The basic fractal dimensions, II: Length and surface measurements, III: Hausdorff dimension anomalies and their implications. *Fractals in Physics* (Trieste, 1985). Eds. L. Pietronero & E. Tosatti. Amsterdam: North-Holland, 3-28.

MANDELBROT, B. 1987c. Propos à bâtons rompus. *Fractals: dimensions non entières et applications*, dirigé par G. Cherbit, Paris: Masson, 4-15.

• English translation: Sundry observations. *Fractals: Non Integer Dimensions and Applications*. Ed. G. Cherbit. Chichester & New York: John Wiley, 1991, 3-9.

MANDELBROT, B. B. 1987d. *Die fraktale Geometrie der Natur*. German translation of 1982F{FGN}, by R. & U. Zähle. Basel: Birkhauser.

MANDELBROT, B. B. 1987e. Fractals. *The Encyclopedia of Physical Science and Technology* : 5, 579-593. San Diego, CA: Academic Press.

MANDELBROT, B. 1987i. *Gli oggetti frattali*. Traduction italienne de Mandelbrot 1975O, par R. Pignoni; préface par L. Peliti & A. Vulpiani. Torino: Giulio Einaudi.

MANDELBROT, B. 1987m, 1989m. *La geometria della natura*. Milano: Montedison. Roma: Edizioni Theoria.

MANDELBROT, B. B. 1987r. Towards a second stage of indeterminism in science (preceded by historical reflections), *Interdisciplinary Science Reviews*: 12, 117-127.

MANDELBROT, B. 1987s. *Los objetos fractales*. Spanish translation of M 1975O by J. M. Llosa. Barcelona: Tusquets.

MANDELBROT, B. B. 1988c. An introduction to multifractal distribution functions. *Fluctuations and Pattern Formation* (Cargèse, 1988). Eds. H. E. Stanley & N. Ostrowsky. Dordrecht-Boston: Kluwer, 345- 360.

MANDELBROT, B. B. 1988f. Flare: A by-product of the study of a two-dimensional dynamical system, *IEEE Tr. on Circuits and Systems*: 36, 1988, 768-769.

MANDELBROT, B. B. 1988m. Naturally creative. Interview by Mike Dibb. *Modern Painters* (London), Premier Issue (Spring), 52-53.

\*H20 MANDELBROT, B. B. 1988p. Fractal landscapes without creases and with rivers. *The Science of Fractal Images*. Eds. H.-O. Peitgen & D. Saupe, New York: Springer, 1988, 243-260.

MANDELBROT, B. B. 1988s. People and events behind the science of fractal images. *The Science of Fractal Images*. Eds. H.-O. Peitgen & D. Saupe, New York: Springer, 1-19.

MANDELBROT, B. B. 1989a. The principles of multifractal measures. *The Fractal Approach to Heterogeneous Chemistry*. Ed. D. Avnir, New York: Wiley, 45-51.

MANDELBROT, B. B. 1989b. An overview of the language of fractals. *The Fractal Approach to Heterogeneous Chemistry*. Ed. D. Avnir. New York: Wiley, 3-9.

MANDELBROT, B. B. 1989e. A class of multifractal measures with negative (latent) values for the "dimension"  $f(\alpha)$ . *Fractals' Physical Origin and Properties* (Erice, 1988). Ed. L. Pietronero. New York: Plenum, 3-29.

MANDELBROT, B. B. 1989g. Multifractal measures, especially for the geophysicist. *Pure and Applied Geophysics*: 131, 5-42 Also *Fractals in Geophysics*. Eds. C. H. Scholz & B. B. Mandelbrot. Boston: Birkhauser.

- MANDELBROT, B. B. 1989h. Lewis Fry Richardson and prematurity in science. *The British Society for the History of Mathematics, Newsletter*: **12**, October, 2-4.
- MANDELBROT, B. B. 1989l. Survol du langage fractal: *Les objets fractals* (3e édition). Paris: Flammarion, 185-240.
- MANDELBROT, B. B. 1989m. Chaos, Bourbaki and Poincaré. *Mathematical Intelligencer*: **11** (Summer) 10-12.
- MANDELBROT, B. B. 1989p. Temperature fluctuations: a well-defined and unavoidable notion. *Physics Today*. January : **42**, 71 & 73.
- MANDELBROT, B. B. 1989r. Fractal geometry: What is it, and what does it do? *Proc. Royal Society (London)*: **A423**, 3-16.
- MANDELBROT, B. B. 1989s. Fractals: an art for the sake of Science. *Leonardo* : **22** (Special SIGGRAPH issue), 21-24.
- MANDELBROT, B. B. 1989t. The fractal range of the distribution of galaxies: crossover to homogeneity and multifractals. *Large-scale structure and Motions in the Universe*. Eds. F. Mardirossian et al., Dordrecht-Boston: Kluwer, 259-279.
- MANDELBROT, B. B. 1990d. New "anomalous" multiplicative multifractals: left-sided  $f(\alpha)$  and the modeling of DLA. *Condensed Matter Physics, in Honor of Cyril Domb*. *Physica*: **A168**, 95-111.
- MANDELBROT, B. B. 1990n. Fractals: a geometry of nature. *The New Scientist*: September 15, 1990, cover & pp. 38-43.
- MANDELBROT, B. B. 1990r. Negative fractal dimensions and multifractals. *Statistical Physics 17, International IUPAP Conference*. Ed. C. Tsallis. *Physica*: **A 163**, 306-315.
- MANDELBROT, B. B. 1990t. Limit lognormal multifractal measures. *Frontiers of Physics: Landau Memorial Conference* (Tel Aviv, 1988). Eds. E. A. Gotsman, Y. Ne'eman & A. Voronel New York: Pergamon, 309-340.
- MANDELBROT, B. B. 1990w. Two meanings of multifractality, and the notion of negative fractal dimension. *Chaos/Xaoc: Soviet-American Perspectives on Nonlinear Science*. Ed. D. K. Campbell. New York: American Institute of Physics, 79-90.
- MANDELBROT, B. B. 1991g. The gray and the green. *Fractal Forms*. Eds. E. Guyon & H. E. Stanley. Paris: Palais de la Découverte, 1991.
- MANDELBROT, B. B. 1991k. Random multifractals: negative dimensions and the resulting limitations of the thermodynamic formalism. *Proc. of the Royal Society (London)*: **A434**, 79-88. Also in *Turbulence and Stochastic Processes: Kolmogorov's ideas 50 years on*. Eds. J. C. R. Hunt, O. M. Phillips & D. Williams. London: The Royal Society, 1991.
- MANDELBROT, B. B. 1991n. Fractal craft. (Letter to the Editor.) *The New Scientist*: September 14, 1991.
- \*C MANDELBROT, B. B. 1991p. Fractals and the rebirth of experimental mathematics. *Fractals for the Classroom*, by H.-O. Peitgen, H. Jürgens, & D. Saupe, E. M. Matelski, T. Perciante, & L. E. Yunker. New York: Springer, 1991.
- MANDELBROT, B. B. 1992g. Avant-propos: *Physique et structures fractales*, par J.-F. Gouyet. Paris: Masson, 1992.
- MANDELBROT, B. B. 1992h. Plane DLA is not self-similar; is it a fractal that becomes increasingly compact as it grows? *Physica*: **A 191**, 95-107.
- MANDELBROT, B. B. 1992s. Avant-propos: *Dieu joue-t-il aux dés?*, par I. Stewart. Paris: Flammarion, 1992, 7-13.
- MANDELBROT, B. B. 1993f. Opinions. *Fractals*: **1**, 117-123. Reprint in a special issue on Symmetry: *Culture and Science*. **4**, 1993, 319-328.
- MANDELBROT, B. B. 1993g. Fractals. *Chaos: The New Science*. (Gustavus Adolphus Nobel Conference XXVI.) Ed. J. M. Holte. Lanham MD: University Press of America, 1993, 1-27.
- MANDELBROT, B. B. 1993n. A fractal's lacunarity, and how it can be tuned and measured. *Fractals in Biology and Medicine*. Eds. T. F. Nonnenmacher et al. Basel: Birkhauser, 8-21.
- \*C21 MANDELBROT, B. B. 1993s. The Minkowski measure and multifractal anomalies in invariant measures of parabolic dynamic systems. *Chaos in Australia* (Sydney, 1990). Eds. G. Brown & A. Opie. Singapore: World Publishing, 1993, 83-94. Slightly edited reprint: *Fractals*

*and Disordered Systems*. Second edition. Eds. A. Bunde & S. Havlin. New York: Springer: 1995.

MANDELBROT, B. B. 1994d. Les fractales, l'art algorithmique et le test de Turing. *La science et la métamorphose des arts*, textes réunis par R. Daudel. Paris: Presses Universitaires de France, 39-52.

MANDELBROT, B. B. 1994h. Fractals as a morphology of the amorphous. Preface of *Fractal Landscapes from the Real World*, by William Hirst. Manchester, UK: Cornerhouse Publications, 1994.

MANDELBROT, B. B. 1994j. Comment on "Theoretical mathematics..." by A. Jaffe and F. Quinn, *Bulletin of the American Mathematical Society*: 1994, 193-196.

MANDELBROT, B. B. 1994q. Fractals, the computer, and mathematics education. *Proc. of the International Congress of Mathematics Education*, ICME-7 (Québec, 1992), Québec: Presses de l'Université Laval, 1994, 77-98.

MANDELBROT, B.B. 1995b. Statistics of natural resources and the law of Pareto. *Fractal Geometry and its Uses in the Geosciences and in Petroleum Geology*. Eds. C. C. Barton & P. La Pointe. New York: Plenum, 1-12. First appeared as Mandelbrot 1962n.

MANDELBROT, B.B. 1995k. Negative dimensions and Hölders, multifractals and their Hölder spectra, and the role of lateral preasymptotics in science. *J.P. Kahane meeting* (Paris, 1993). Eds. Aline Bonami & Jacques Peyrière. *J. of Fourier Analysis and its Applications* 1995, special issue: 409-432.

MANDELBROT, B. B. 1995l. The Paul Lévy I knew. *Lévy Flights and Related Phenomena in Physics* (Nice, 1994). Eds. M. F. Schlesinger, G. Zaslavsky, & U. Frisch (Lecture Notes in Physics). New York: Springer, 1995, ix-xii.

MANDELBROT, B. B. 1995n. Introduction to fractal sums of pulses. *Lévy Flights and Related Phenomena in Physics*. Eds. M. F. Shlesinger, G. Zaslavsky, & U. Frisch. New York: Springer, 110-123.

\*C MANDELBROT, B. B. 1995s. The Minkowski measure and multifractal anomalies in invariant measures of parabolic dynamic systems. *Fractals and Disordered Systems*. Second edition. Eds. A. Bunde & S. Havlin. New York: Springer, 345-353.

MANDELBROT, B. B. 1995z. Measures of fractal lacunarity: Minkowski content and alternatives. *Fractal Geometry and Statistics*. Eds. C. Bandt, S. Graf & M. Zähle. Basel & Boston: Birkhauser, 12-38.

\*E MANDELBROT, B. B. 1997E. *Fractals and Scaling in Finance: Discontinuity, Concentration, Risk*. New York: Springer-Verlag.

\*FE MANDELBROT, B.B. 1997FE. *Fractales, hasard et finance*. Paris: Flammarion.

MANDELBROT, B.B. 1998e. Fractality, lacunarity and the near-isotopic distribution of galaxies. *Current Topics in Astrofundamental Physics*. Eds. N. Sanchez & A. Zichichi. Dordrecht: Kluwer, 585-603.

\*N MANDELBROT, B.B. 1999N. *Multifractals & 1/f Noise: Wild Self-Affinity in Physics*. New York: Springer-Verlag.

MANDELBROT, B.B. 1999s. Multifractal walk down Wall Street. *Scientific American*: February issue, cover & 70-73.

MANDELBROT, B.B. 1999p. Renormalization and fixed points in finance, since 1962. *Statistical Physics 20, International IUPAP Conference* (Paris, 1998). Ed. D. Iagolnitzer. *Physica*: A26, 477-487.

MANDELBROT B. B. 2000p. Some mathematical questions arising in fractal geometry. *Development of Mathematics 2000*: Ed. J-P. Pier. Basel: Birkhäuser, 795-811.

MANDELBROT, B.B. 2001a. Scaling in financial prices: I. Tails and dependence. *Quantitative Finance*: 1, 113-123.

MANDELBROT, B.B. 2001b. Scaling in financial prices: II. Multifractals and the star equation. *Quantitative Finance*: 1, 124-130.

MANDELBROT, B.B. 2001c. Scaling in financial prices: III. Cartoon Brownian motions in multifractal time. *Quantitative Finance*: 1, 427-440.

MANDELBROT, B.B. 2001d. Scaling in financial prices: IV. Multifractal concentration. *Quantitative Finance*: 1, 641-649.

- MANDELBROT, B. B. 2001e. Stochastic volatility, power-laws, and long memory. *Quantitative Finance*: **1**, 588-589.
- MANDELBROT, B.B. 2001R. *Nel mondo dei frattali*. Roma: di Renzo.
- \*H MANDELBROT, B.B. 2002H. *Gaussian Self-Affinity and Fractals: R/S, 1/f, Globality, Reliefs & Rivers*, New York: Springer-Verlag.
- \*C17 MANDELBROT, B.B. 2002w. Symmetry by dilation/reduction, fractals, and roughness, *Symmetry 2000*. Eds. I. Hargittai and T. Laurent, **I**, 133-141.
- MANDELBROT, B.B. 2003b. Fractal sums of pulses and a practical challenge to the distinction between local and global dependence. *Long Range Dependent Stochastic Processes: Theory and Applications* (Bengalore, India, 2002). Eds. Govindan Rangarajan and Ming Ding. New York: Springer, 118-135.
- MANDELBROT, B.B. 2003P. *Fractals and Multifractals in Finance*. Webbook.
- MANDELBROT, B.B. 2003f. Multifractal power-law distributions, other "anomalies," and critical dimensions, explained by a simple example. *Journal of Statistical Physics*: **110**, 739-777.
- MANDELBROT, B.B. 2003r. Heavy tails in finance for independent or multifractal price increments. *Handbook on Heavy Tailed Distributions in Finance*. Ed. Svetlozar T. Rachev (Volume 30 of *Handbooks in Finance*, Senior Ed.: William T. Ziemba): **1**, 1-34.
- \*C MANDELBROT, B.B. 2004C (This book's self-reference). *Fractals and Chaos: the Mandelbrot Set and Beyond*, New York: Springer-Verlag.
- MANDELBROT, B.B. 2004f (expected). Fractal sums of pulses: self-affine global dependence and lateral limit theorems.
- MANDELBROT, B. B., CALVET, L & FISHER, A. 1997. *The Multifractal Model of Asset Returns; Large Deviations and the Distribution of Price Changes; The Multifractality of the Deutschmark/US Dollar Exchange Rate*. New Haven CT: Cowles Foundation Discussion Papers **1164**, **1165** and **1166**. On Mandelbrot's Internet homepage.
- \*C19 MANDELBROT, B. B. & EVERTSZ, C. J. G. 1990. The potential distribution around growing fractal clusters. *Nature*: **378** (6296), front cover & pp. 143-145.
- \*C22 MANDELBROT, B. B. & EVERTSZ, C. J. G. 1991. Multifractality of harmonic measure on fractal aggregates, and extended self-similarity. *Physica*: **A177**, 386-393.
- MANDELBROT, B. B. & EVERTSZ, C. J. G. 1991n. Exactly self-similar multifractals with left-sided  $f(\alpha)$ . *Fractals and Disordered Systems*. Eds. A. Bunde & S. Havlin. 323-346.
- MANDELBROT, B. B., EVERTSZ, C. J. G. & HAYAKAWA, Y. 1990. Exactly self-similar "left-sided" multifractal measures. *Physical Review*: **A42**, 4528-4536.
- MANDELBROT, B.B. & FRAME, M. 1999. The canopy and shortest path in a self-contacting tree. *The Mathematical Intelligencer*: **21**(#2), 1999, 18-27.
- MANDELBROT, B. B., GEFEN, Y., AHARONY, A., & PEYRIÈRE, J. 1985. Fractals, their transfer matrices and their eigen-dimensional sequences. *J. of Physics*: **A18**, 335-354.
- MANDELBROT, B. B. & GIVEN, J. A. 1984. Physical properties of a new fractal model of percolation clusters. *Physical Review Letters*: **52**, 1853-1856.
- MANDELBROT, B. B., KAUFMAN, H., VESPIGNANI, A., YEKUTIELI, I., & LAM, C.-H. 1995. Deviations from self-similarity in plane DLA and the infinite drift scenario. *Europhysics Letters*: **29**, 599-604.
- MANDELBROT, B.B., KOL, B., & AHARONY, A., 2002. Angular gaps in radial diffusion-limited aggregation fractal dimensions and non-transient deviations from linear self-similarity. *Physical Review Letters*: **88**, 055501-1-4.
- \*H28 MANDELBROT, B. B. & MCCAMY, K. 1970. On the secular pole motion and the Chandler wobble. *Geophysical J.*: **21**, 217-232.
- MANDELBROT, B.B. & NORTON, A. Fractal Surfaces Defined by Iteration of Rational Functions in the Quaternions, to appear.
- MANDELBROT, B. B. & PASSOJA, D. E. Eds. 1984. *Fractal Aspects of Materials: Metal and Catalyst Surfaces, Powders and Aggregates*. Extended Abstracts of a MRS Symposium, Boston. Pittsburgh PA: Materials Research Society.
- MANDELBROT, B. B., PASSOJA, D., & PAULLAY, A. 1984. The fractal character of fracture surfaces of metals. *Nature*: **308**, 721-722.

- MANDELBROT, B.B. & RIEDI, R.H. 1995. Multifractal formalism for infinite multinomial measures. *Advances in Applied Mathematics*: **16**, 132-150.
- MANDELBROT, B. B. & STAUFFER, D. 1994. Antipodal correlations and texture (fractal lacunarity) in critical percolation clusters. *J. of Physics*: **A27**, L237-L242.
- MANDELBROT, B. B., STAUFFER, D. & AHARONY, A. 1993. Self-similarity of fractals: a random walk test. *Physica*: **A196**, 1-5.
- \*E21 MANDELBROT, B. B. & TAYLOR, H. M. 1967. On the distribution of stock price differences. *Operations Research*: **15**, 1057-1062.
- \*H11 MANDELBROT, B. B. & VAN NESS, J. W. 1968. Fractional Brownian motions, fractional noises and applications. *SIAM Review*: **10**, 422-437.
- MANDELBROT, B. B., VESPIGNANI, A. & KAUFMAN, H., 1995a. Cross-cut analysis of large radial DLA: departures from self-similarity and lacunarity effects, *Europhysics Letters*: **32**, 199-204.
- MANDELBROT, B. B., VESPIGNANI, A. & KAUFMAN, H., 1995b. The geometry of DLA: different aspects of the departure from self-similarity. *Fractal Aspects of Materials*. Eds. F. Family, P. Meakin, B. Sapoval & R. Wool. Pittsburgh, PA: Materials Research Society, 1995, 73-79.
- MANDELBROT, B. B. & VICSEK, T. 1989. Directed recursive models for fractal growth. *J. Physics*: **A22**, L377-383
- \*H10 MANDELBROT, B. B. & WALLIS, J. R. 1968. Noah, Joseph and operational hydrology. *Water Resources Research*: **4**, 909-918.
- \*H12.13.14 MANDELBROT, B. B. & WALLIS, J. R. 1969a. Computer experiments with fractional Gaussian noises, Part 1, 2 & 3. *Water Resources Research*: **5**, 228-267.
- \*H27 MANDELBROT, B. B. & WALLIS, J. R. 1969b. Some long-run properties of geophysical records. *Water Resources Research*: **5**, 321-340. Reprinted in Barton & La Pointe, 1994, 41-64.
- \*H25 MANDELBROT, B. B. & WALLIS, J. R. 1969c. Robustness of the rescaled range R/S in the measurement of noncyclic long run statistical dependence. *Water Resources Research*: **5**, 967-988.
- \*H7 MANDELBROT, B. B. & WALLIS, J. R. 1969d. Operational hydrology using self similar processes. *Proc. of the Fifth International Conference on Operations Research*. Ed. John Lawrence. London: Tavistock.
- MANDELBROT, B. B. & ZARNFALLER, F. 1959. *Five-place Tables of Certain Stable Distributions*. IBM Research Technical Report: RC-421.
- NOTE: In other items co-authored by Mandelbrot the first-listed author is one of the following: Apostel, Asikainen, Barral, Berger, Blumenfeld, Calvet, Cioczek-Georges, Coppens, Damerau, Evertsz, Fisher, Frame, Gefen, Gerstein, Given, Gutzwiller, Hovi, Hurd, Jaffard, Kahane, Kaufman, Laibowitz, Lovejoy, Musgrave, Riedi, Schaefer, Sholz, Shlesinger, Voldman, Wallis, Weitz, or Yekutieli.
- MAY, R. 1976. Simple mathematical models with very complicated dynamics. *Nature*: **261**, 459-467.
- McMULLEN, C.T. 1998. Hausdorff dimension and conformal dynamics. III: Computation of dimension. *American J. Mathematics*: **120**, 691-721.
- MEAKIN, P. 1988. The growth of fractal aggregates and their fractal measures. in: *Phase Transitions and Critical Phenomena*, Eds. C. Domb and J. Lebowitz: **12**, 335-489.
- METROPOLIS, N., STEIN, M. L. & STEIN, P. R. 1973. On finite limit sets for transformations on the unit interval. *J. of Combinatorial Theory*: **A15**, 25-44.
- MINKOWSKI, H. 1911. *Gesammelte Abhandlungen*, Chelsea reprint.
- MONTEL, P. 1927. *Leçons sur les familles normales de fonctions analytiques et leurs applications*, Paris: Gauthier-Villars.
- MONTEL, P. 1957. *Leçons sur les récurrences et leurs applications*, Paris, Gauthier-Villars.
- MUMFORD, D., SERIES, C., & WRIGHT, D. 2002. *Indra's Pearls; The Vision of Felix Klein*. Cambridge: the University Press.
- MUSGRAVE, F. K. & MANDELBROT, B. B. 1989. Natura ex machina. *IEEE Computer Graphics and its Applications*: **9**, Jan. Cover & 4-7.

- MUSGRAVE, F. K. & MANDELBROT, B. B. 1991. The art of fractal landscapes. *IBM J. of Research and Development*: **35** 1991, front and back covers & pp. 535-540.
- MYRBERG, P. J. 1962. Sur l'itération des polynomes réels quadratiques. *J. des Mathématiques pures et appliquées*: **(9)41**, 339-351.
- NEVALINNA, R. 1970. *Analytic Functions*, New York: Springer.
- NIEMEYER, I., PIETRONERO, L., & WIESMANN, H.J. 1984. Fractal dimension of dielectric breakdown. *Physical Review Letters*: **52**, 1033-1036.
- PAINLEVÉ, P. 1895. *Leçon d'ouverture faite en présence de Sa Majesté le Roi de Suède et de Norvège*, In Painlevé 1972, **1**, 200-204.
- PAINLEVÉ, P. 1972-. *Oeuvres de Paul Painlevé*. Paris: Éditions du CNRS.
- PEANO, G. 1980. Sur une coube, qui remplit une aire plane. *Mathematische Annalen*: **36**, 157-160. Translation in Peano 1973.
- PEITGEN, H. O. & RICHTER, P. H., 1986. *The Beauty of Fractals*, New York: Springer.
- PERES, Y. 1994. The self-affine carpets of McMullen and Bedford have infinite Hausdorff measure. *Mathematical Proc. of the Cambridge Philosophical Society*: **116**, 513-526.
- PERES, Y. & KENYON R. 1996. Hausdorff dimensions of affine-invariant sets. *Israel J. Mathematics*: **94**, 157-178.
- PIETRONERO, L. & TOSATTI, E. Eds. 1986. *Fractals in Physics*, Amsterdam: North-Holland.
- POINCARÉ, H. 1916-. *Oeuvres de Henri Poincaré*, Paris: Gauthier Villars.
- RIEDI, R. H. & MANDELBROT, B. B., 1997a. Inverse measures, the inversion formula, and discontinuous multifractals. *Advances in Applied Mathematics*: **18**, 50-58.
- RIEDI, R.H. & MANDELBROT, B.B. 1997b. Inversion formula for continuous multifractals. *Advances in Applied Mathematics*: **19**, 332-354.
- RIEDI, R. H. & MANDELBROT, B. B., 1998. Exceptions to the multifractal formalism for discontinuous measures. *Mathematical Proc. of the Cambridge Philosophical Society*: **123**, 133-157.
- RUELLE, D. 1970. Repellers for real analytic maps. *Ergodic Theory and Dynamic Systems*: **2**, 99-107.
- SALEM, R. 1943. Singular monotone functions. *Trans. American Mathematical Society*: **53**, 427-439.
- SALEM, R., 1967. *Oeuvres Mathématiques*. Paris: Hermann.
- SALEM, R. & ZYGMUND, A., 1945. Lacunary power series and Peano curves. *Duke Mathematical J.*: **12**, 569-578. Also in Salem 1967, pp. 336-345.
- SCHAEFER, D. W., LAIBOWITZ, R. B., MANDELBROT, B. B. & LIU, S. H. Eds. 1986. *Fractal Aspects of Materials II*. Extended Abstracts of a Symposium, Boston. Pittsburgh PA: Materials Research Society.
- SCHOLZ, C. H. & MANDELBROT, B. B. Eds. 1989. *Fractals in Geophysics*. Special issue of *Pure and Applied Geophysics*: **131 (1-2)**. Also issued as a book, Basel & Boston: Birkhauser.
- SCHWARTZ, L. 1997. *Un mathématicien aux prises avec le siècle*, Paris: Odile Jacob. Translation: *A Mathematician Grappling with his Century*. Basel & Boston: Birkhauser, 2001.
- SCHWARZER, S., LEE, J., BUNDE, A., HAVLIN, S., ROMAN, H.E. & STANLEY, H.E., 1990. Minimum growth possibility of diffusion-limited aggregates. *Physical Review Letters*: **65**, 603-606.
- SERIES, C. 1985. The modular surface and continued fractions. *J. London Mathematical Society*: **(2) 31**, 69-80.
- SERIES, C. 1985. The geometry of Markoff numbers. A geometric interpretation is found in *Mathematical Intelligencer*: **7**, 20-29.
- SERIES, C. 1986. Geometrical Markov coding of geodesics on surfaces of constant negative curvature, *Ergodic Theory Dynamical Systems*: **6**, 601-625.
- SHLESINGER, M. F., MANDELBROT, B. B. & RUBIN, R. J. Eds. 1984. *Fractals in the Physical Sciences* (Gaithersburg, 1983). Special issue of *J. of Statistical Physics*: **36**, 516.

- SHISHIKURA, M. M. 1994. The boundary of the Mandelbrot set has Hausdorff dimension two. *Complex analytic methods in dynamical systems*: (Rio de Janeiro, 1992). *Astérisque*: **222**, 389-405.
- SHISHIKURA, M. M. 1998. The Hausdorff dimension of the boundary of the Mandelbrot set and Julia sets. *Annals of Mathematics*: **147**, 225-267.
- SHISHIKURA, M. M. 2000. Bifurcation of parabolic points, in Tan 2000.
- SIEGEL, C. L., 1942. Iteration of analytic functions. *Annals of Mathematics*: **43**, 607-612.
- SIERPINSKI, W. 1915. Sur une courbe dont tout point est un point de ramification. *Comptes rendus (Paris)*: **160**, 302. More detail in Sierpiński 1974-, II, 99-106.
- SIERPINSKI, W. 1974. *Oeuvres choisies*. Ed. S. Hartman et al. Warsaw: Éditions scientifiques.
- STEIN, P. R. & ULAM, S. 1964. Non-linear transformation studies on electronic computers. *Rozprawy Matematyczne*: **39**, 1-66. Also in Ulam 1974, 401-484.
- STONE, M. 1961. The revolution in mathematics. *American Mathematical Monthly*: **68**, 715-734.
- SULLIVAN, D. 1979. The density at infinity of a discrete group of hyperbolic motions. *Institut des Hautes Etudes Scientifiques. Publications Mathématiques*: **50**.
- TAN, L. 1984. In *Étude dynamique des polynomes complexes* Eds. Adrien Douady & John H. Hubbard, Vol. II, pp. 139-152, *Publications Mathématique d'Orsay*, Orsay, France.
- TAN, L. Ed. 2000. *The Mandelbrot Set, Theme and Variations*, London Mathematical Society Lecture Notes: **274**. Cambridge University Press, Cambridge.
- TANNERY, J. & MOLK, J. 1898. Éléments de la théorie des fonctions elliptiques. Tome III, Paris: Gauthier-Villars.
- THOMAS, P. B. & DHAR, D. 1994. The Hausdorff dimension of the Apollonian packing of circles. *J. of Physics*: **A27**, 2257-2268.
- URBANSKI, M. 2003. Measures and dimensionalities in conformal dynamics. *Bull. American Mathematical Society*: **40**, 281-321.
- VICSEK, T. 1989. *Fractal Growth Phenomena*. Singapore: World Scientific.
- \*H31 VOLDMAN, J. MANDELBROT, B.B., HOEVEL, L.W., KNIGHT, J. & ROSNFELD, P. 1983. Fractal nature of software-cache interaction. *IBM J. of Research and Development*: **27**, 164-170.
- VON KARMAN, T. 1940. The engineer grapples with nonlinear problems. *Bull. of the American Mathematical Society*: **46**, 615-683.
- WALLIS, J.R. & MANDELBROT, B.B. 1968. *2nd Symposium on the Use of Analog and Digital Computers in Hydrology*, Tucson, AZ, Publication 81 of the International Association of Scientific Hydrology: **2**, 738-755.
- WALSH, J. L. 1956. *Interpolation and Approximation by Rational Functions in the Complex Domain*, Colloquium Publications: **20**. Providence, RI: American Mathematical Society.
- WEGENER, A. 1915-1929-1966. *The Origins of Continents and Oceans*. The 1966 date is that of the Dover translation of the 1929 German edition.
- WEIERSTRASS, K. 1872. Über continuirliche Functionen eines reellen Arguments, die für keinen Werth des letzteren einen bestimmten Differential-quotienten besitzen. Unpublished until Weierstrass 1895-, *Mathematische Werke*: **II**, 71-74.
- WEIL, A. 1992. *A Mathematician's Apprenticeship*. Basel-Boston: Birkhäuser.
- WEITZ, D. A., SANDER, L. M. & MANDELBROT, B. B. Eds. 1988. *Fractal Aspects of Materials: Disordered Systems*. Extended Abstracts of a MRS Symposium, Boston. Pittsburgh PA: Materials Research Society.
- WHITTAKER, E.T. & WATSON, G.N. 1902-1927. *A Course of Modern Analysis* (4th edition). Cambridge: The University Press.
- WITTEN, T.A. & SANDER, L.M. 1981. Diffusion-limited aggregation, a kinetic critical phenomenon, *Physical Review Letters*: **47**, 1400-1403.