References

1. Abramowitz M., Stegun I.A. *Handbook of Mathematical Functions*. Dover Publications, New York (1970).
2. Arnold L. *Stochastic Differential Equations: Theory and Applications*. Wiley, New York (1974).
3. Bachelier L. 'Théorie de la spéculation'. Doctoral dissertation, Faculté des Sciences de Paris (1900). *Annales Scientifiques de l'Ecole Normale Supérieure*, Suppl. 3, No. 1017, 21 (1900). Reprinted in 1995. Translated into English in Cootner P. *The Random Character of the Stock Market*. MIT Press, Cambridge MA (1964).
4. Bak P. *How Nature Works: The Science of Self-Organized Criticality*. Springer–Copernicus, New York (1996).
5. Bak P., Paczuski M., Shubik M. 'Price Variations in a Stock Market with Many Agents'. Physica A **246**, 430 (1997).
6. Binder K. (Ed.) *The Monte Carlo Method in Condensed Matter Physics*, 2nd edn. Springer, Berlin, Heidelberg (1995).
7. Binder K., Heermann D.W. *Monte Carlo Simulation in Statistical Physics*, 2nd edn. Springer, Berlin, Heidelberg (1997).
8. Bingham N.H., Kiesel R. *Risk-Neutral Valuation*. Springer, London (1998).
9. Binney J.J., Dowrick N.J., Fisher A.J., Newman, M.E.J. *The Theory of Critical Phenomena*. Clarendon Press, Oxford (1993).
10. Black F. 'How We Came Up with the Option Formula'. J. Portfolio Management **15**, 4 (1989).
11. Black F., Scholes M. 'The Pricing of Options and Corporate Liabilities'. J. Political Econom. **72**, 637 (1973).
12. Bouchaud J.-P. 'Elements for a Theory of Financial Risk'. Physica A **263**, 415 (1999).
13. Bouchaud J.-P., Cont R. 'A Langevin Approach to Stock Market Fluctuations and Crashes'. Eur. Phys. J. B **6**, 543 (1998).
14. Bouchaud J.-P., Georges A. 'Anomalous Diffusion in Disordered Media: Statistical Mechanisms, Models and Physical Applications'. Phys. Rep. **195**, 127 (1990).
15. Bouchaud J.-P., Potters M. *Theory of Financial Risk – From Data Analysis to Risk Management*. Cambridge University Press, Cambridge MA (2000).
16. Bouchaud J.-P., Potters M., Meyer M. 'Apparent Multifractality in Financial Time Series'. Eur. Phys. J. B **13**, 595 (2000). Preprint available at http://xxx.lanl.gov/abs/cond-mat/9906347
17. Breiman L. *Probability*. SIAM – Society for Industrial and Applied Mathematics, Philadelphia (1992).
18. Brown G., Randall C. 'If the Skew Fits'. RISK (April), 62 (1999).

19. Buffet W. Omaha World–Herald, October 28, 1993. Quoted from Reynolds S. 'Thoughts of Chairman Buffet: Thirty Years of Wisdom from the Sage of Omaha'. Harper Collins, New York (1998).

20. Bunde A., Havlin S. 'Percolation I'. In: Bunde A., Havlin S. (Eds.) *Fractals and Disordered Systems*. Springer, Berlin, Heidelberg (1996).

21. Chandrasekhar S. 'Stochastic Problems in Physics and Astronomy'. Rev. Mod. Phys. **15**, 1 (1943); also in [160].

22. Cizeau P., Liu Y., Meyer M., Peng C.-K., Stanley H.E. 'Volatility Distribution in the S&P500 Stock Index'. Physica A **245**, 441 (1997).

23. Cont R. 'Beyond Implied Volatility – Extracting Information from Option Prices'. In: Kondor I., Kértesz J. (Eds.) (in press) *Econophysics: An Emerging Science*. Kluwer, Dordrecht.

24. Cont R., Bouchaud J.-P. (in press) 'Herd Behavior and Aggregate Fluctuations in Financial Markets'. J. Macroeconomic Dynamics **4**, 170 (2000). Preprint available at http://xxx.lanl.gov/abs/cond-mat/9712318v2

25. Cont R., Potters M., Bouchaud J.-P. 'Scaling in Stock Market Data: Stable Laws and Beyond'. In: Dubrulle B., Grander F., Sornette D. (Eds.) *Scale Invariance and Beyond*. Springer, Berlin, Heidelberg (1997).

26. Dankel T.G. Jr. 'Mechanics on Manifolds and the Incorporation of Spin into Nelson's Stochastic Mechanics'. Arch. Rat. Mech. Anal. **37**, 192 (1970).

27. Des Cloizeaux J., Jannink G. *Polymers in Solution – Their Modelling and Structure*. Oxford University Press, Oxford (1990).

28. Deutsch H.-P., Eller R. *Derivatives and Internal Models*. Macmillan Business, Houndmill (1999).

29. Dohrn D., Guerra F. 'Nelson's Stochastic Mechanics on Riemannian Manifolds'. Lettere al Nuovo Cimento **22**, 121 (1978).

30. Dohrn D., Guerra F., Ruggiero P. 'Spinning Particles and Relativistic Particles in the Framework of Nelson's Stochastic Mechanics'. In: Albeverio S. (Ed.) *Feynman Path Integrals, Lecture Notes in Physics 106*. Springer, Berlin, Heidelberg (1979).

31. Doob J.L. 'The Brownian Movement and Stochastic Equations'. Annals of Mathematics **43**, 351 (1942); also in [160].

32. Dynkin E.B. *Markov Processes, Vol. 1*. Springer, Berlin, Heidelberg (1965).

33. Dynkin E.B. *Markov Processes, Vol. 2*. Springer, Berlin, Heidelberg (1965).

34. Einstein A. 'Über die von der molekularkinetischen Theorie der Wärme geförderte Bewegung von in ruhenden Flüssigkeiten suspendierten Teilchen'. Ann. Phys. **17**, 549 (1905).

35. Emery M. *Stochastic Calculus in Manifolds*. Springer, Berlin, Heidelberg (1989).

36. Fama E.F. 'Efficient Capital Markets: A Review of Theory and Empirical Work'. J. Fin. **25**, 383 (1970).

37. Feigenbaum J.A., Freund P.G.O. 'Discrete Scale Invariance in Stock Markets Before Crashes'. Int. J. Mod. Phys. B **10**, 3737 (1996).

38. Feigenbaum J.A., Freund P.G.O. 'Discrete Scale Invariance and the Second Black Monday'. Mod. Phys. Lett. B **12**, 57 (1998).

39. Feller W. *An Introduction to Probability Theory and its Applications, Vol. 1*. Wiley, New York (1966).

40. Feller W. *An Introduction to Probability Theory and its Applications, Vol. 2*. Wiley, New York (1966).

41. Fleming G.R., Hänggi P. (Eds.) *Activated Barrier Crossing: Applications in Physics, Chemistry and Biology*. World Scientific, Singapore (1993).

42. Flory P.J. *Statistical Mechanics of Chain Molecules*. Hanser, Munich (1988).

43. Fuchs M. 'The Kohlrausch Law as a Limit Solution to Mode Coupling Equations'. J. Non-Cryst. Solids **172–174**, 241 (1994).

44. Gardiner C.W. *Handbook of Stochastic Methods for Physics, Chemistry and the Natural Sciences.* Springer, Berlin, Heidelberg (1998).

45. Glauber R.J. 'Time-Dependent Statistics of the Ising Model'. J. Math. Phys. **4**, 294 (1963).

46. Glimm J., Jaffe A. *Quantum Physics – A Functional Integral Point of View*, 2nd edn. Springer, New York (1987).

47. Gnedenko B.W., Kolmogorov A.N. *Limit Distributions for Sums of Independent Random Variables.* Addison Wesley, Redwood City (1954).

48. Götze W. 'Aspects of Structural Glass Transitions'. In: Hansen J.P., Levesque D., Zinn-Justin J. (Eds.) *Liquids, Freezing and the Glass Transition, Part 1.* North-Holland, Amsterdam (1990).

49. Götze W. 'The Essentials of the Mode-Coupling Theory for Glassy Dynamics'. Cond. Matt. Phys. **1**, 873 (1998).

50. Gopikrishnan P., Plerou V., Nunes Amaral L.A., Meyer M., Stanley H.E. 'Scaling of the Distribution of Fluctuations of Financial Market Indices'. Phys. Rev. E **60**, 5305 (1999). Preprint available at http://xxx.lanl.gov/abs/cond-mat/9905305

51. Gouyet J.-F. *Physics and Fractal Structures.* Masson–Springer, Paris (1995).

52. Gradshteyn I.S., Ryzhik I.M., Jeffrey A. (Eds.) *Table of Integrals, Series and Products.* Academic Press, San Diego (1994).

53. Graham R. 'Macroscopic Theory of Activated Decay of Metastable States'. J. Stat. Phys. **60**, 675 (1990).

54. Guerra F. 'Structural Aspects in Stochastic Mechanics and Stochastic Field Theory'. In: DeWitt-Morette C., Elworthy K.D. (Eds.) *New Stochastic Methods in Physics.* Phys. Rep. **77**, 263 (1981).

55. Guerra F., Morato L.M. 'Quantization of Dynamical Systems and Stochastic Control Theory'. Phys. Rev. D **27**, 1774 (1983).

56. Hänggi P. 'Escape from a Metastable State'. J. Stat. Phys. **42**, 105 (1986).

57. Hänggi P., Grabert H., Talkner P., Thomas H. 'Bistable Systems: Master Equation versus Fokker–Planck Modeling'. Phys. Rev. A **29**, 371 (1984).

58. Hänggi P., Talkner P., Berkovec M. 'Reaction-Rate Theory: Fifty Years after Kramers'. Rev. Mod. Phys. **62**, 251 (1990).

59. Hänggi P., Thomas H. 'Stochastic Processes: Time Evolution, Symmetries and Linear Response'. Phys. Rep. **88**, 207 (1982).

60. Haus J.W., Kehr K. 'Diffusion in Regular and Disordered Lattices'. Phys. Rep. **150**, 263 (1987).

61. Hilfer R. (Ed.) *Applications of Fractional Calculus in Physics.* World Scientific, Singapore (1999).

62. Honerkamp J. *Statistical Physics.* Springer, Berlin, Heidelberg (1998).

63. Hughes B.D., Montroll E.W., Shlesinger M.F. 'Fractal Random Walks'. J. Stat. Phys. **28**, 111 (1982).

64. Hull J.C. *Options, Futures, and other Derivatives.* Prentice Hall International, London (1997).

65. Ikeda N., Watanabe S., Fukushima M., Kunita H. *Itô's Stochastic Calculus and Probability Theory.* Springer, Tokyo (1996).

66. Ilinski K. 'Critical Crashes?' Int. J. Mod. Phys. C **10**, 741 (1999). Preprint available at http://xxx.lanl.gov/abs/cond-mat/9903142

67. Imafuku K., Ichiro O., Yamanaka Y. 'Tunneling Time Based on the Quantum Diffusion Process Approach'. Phys. Lett. A **204**, 329 (1995).

68. Ising E. 'Beitrag zur Theorie des Ferromagnetismus'. Z. Phys. **31**, 253 (1925).

69. Itô K., McKean H.P. Jr. *Diffusion Processes and Their Sample Paths*. Springer, Berlin, Heidelberg (1996).
70. Janke W. 'Monte Carlo Simulations of Spin Systems'. In: Hoffmann K.H., Schreiber M. (Eds.) *Computational Physics*. Springer, Berlin, Heidelberg (1996).
71. Jameson R. 'Playing the Name Game'. RISK (October), 38 (1998).
72. Jameson R. 'Getting the Measure of the Beast'. RISK (November), 39 (1998).
73. Johansen A., Ledoit O., Sornette D. 'Crashes as Critical Points'. Int. J. Theor. Applied Finance **3**, 219 (2000). Preprint available at http://xxx.lanl.gov/abs/cond-mat/9810071v2
74. Johansen A., Sornette D. 'Stock Market Crashes are Outliers'. Eur. Phys. J. B **1**, 141 (1998).
75. Johansen A., Sornette D. 'Critical Crashes'. RISK (January), 91 (1999).
76. Johansen A., Sornette D., Ledoit O. 'Predicting Financial Crashes Using Discrete Scale Invariance'. J. of Risk **1**, 5 (1999).
77. Jona-Lasinio G., Martinelli F., Scoppola E. 'The Semi-Classical Limit of Quantum Mechanics: A Qualitative Theory via Stochastic Mechanics'. In: edited by DeWitt-Morette C., Elworthy K.D. (Eds.) *New Stochastic Methods in Physics*. Phys. Rep. **77**, 313 (1981).
78. Kac M. 'Random Walk and the Theory of Brownian Motion'. American Mathematical Monthly **54**, 369 (1947); also in [160].
79. van Kampen N.G. *Stochastic Processes in Physics and Chemistry*. North-Holland, Amsterdam (1985).
80. van Kampen N.G. 'Brownian Motion on a Manifold'. J. Stat. Phys. **44**, 1 (1986).
81. Karatzas I., Shreve S.E. *Brownian Motion and Stochastic Calculus*. Springer, Berlin, Heidelberg (1999).
82. Klafter J., Shlesinger M.F., Zumofen G. 'Beyond Brownian Motion'. Physics Today (February), 33 (1996).
83. Kloeden P.E., Platen E. *Numerical Solution of Stochastic Differential Equations*. Springer, Berlin, Heidelberg (1995).
84. Kolmogorov A. *Grundbegriffe der Wahrscheinlichkeitsrechnung*. Springer, Berlin, Heidelberg (1933).
85. Kondor I., Kértesz J. (Eds.) (in press) *Econophysics: An Emerging Science*. Kluwer, Dordrecht.
86. Koponen I. 'Analytic Approach to the Problem of Convergence of Truncated Lévy Flights Towards the Gaussian Stochastic Process'. Phys. Rev. E **52**, 1197 (1995).
87. Korn R., Korn E. *Optionsbewertung und Portfolio-Optimierung*. Vieweg Verlag, Braunschweig (1999).
88. Kramers H.A. 'Brownian Motion in a Field of Force and the Diffusion Model of Chemical Reactions'. Physica **7**, 284 (1940).
89. Kutner R. 'Hierachical Spatio-Temporal Coupling in Fractional Wanderings. (I) Continuous-Time Weierstrass Flights'. Physica A **264**, 84 (1999).
90. Kutner R., Regulski M. 'Hierachical Spatio-Temporal Coupling in Fractional Wanderings. (II) Diffusion Phase Diagram for Weierstrass Walks'. Physica A **264**, 107 (1999).
91. Laloux L., Potters M., Cont R., Aguilar J.-P., Bouchaud J.-P. 'Are Financial Crashes Predictable?' Europhys. Lett. **45**, 1 (1999).
92. Landauer R., Martin T. 'Barrier Interaction Time in Tunneling'. Rev. Mod. Phys. **66**, 217 (1994).
93. Lavis D.A., Bell G.M. *The Statistical Mechanics of Lattice Systems, Vol. 1*. Springer, Berlin, Heidelberg (1999).

94. Lavis D.A., Bell G.M. *The Statistical Mechanics of Lattice Systems, Vol. 2.* Springer, Berlin, Heidelberg (1999).

95. Lindenberg K., West B. *The Nonequilibrium Statistical Mechanics of Open and Closed Systems.* VCH, New York (1991).

96. Liu Y., Gopikrishnan P., Cizeau P., Meyer M., Peng C.-K., Stanley H.E. 'The Statistical Properties of the Volatility of Price Fluctuations'. Phys. Rev. E **60**, 1390 (1999).

97. MacBeth J.D., Merville L.J. 'An Empirical Examination of the Black–Scholes Call Option Pricing Model'. J. Fin. **34**, 1173 (1979).

98. Madelung E. 'Quantentheorie in Hydrodynamischer Form'. Z. Phys. **40**, 322 (1926).

99. Madras N., Slade G. *The Self-Avoiding Walk.* Birkhäuser, Boston (1995).

100. Mandelbrot B.B. 'The Variation of Certain Speculative Prices'. J. Business **36**, 394 (1963).

101. Mandelbrot B.B. *The Fractal Geometry of Nature.* Freeman, New York (1983).

102. Mandelbrot B.B. *Fractals and Scaling in Finance.* Springer, New York (1997).

103. Mantegna R.N. (Ed.) *Proceedings of the International Workshop on Econophysics and Statistical Finance.* Physica A **269**, 1–187 (1999).

104. Mantegna R.N., Stanley H.E. 'Stochastic Process with Ultraslow Convergence to a Gaussian: The Truncated Lévy Flight'. Phys. Rev. Lett. **73**, 2946 (1994); Shlesinger M.E. Comment on 'Stochastic Process with Ultraslow Convergence to a Gaussian: The Truncated Lévy Flight'. Phys. Rev. Lett. **74**, 4959 (1995).

105. Mantegna R.N., Stanley H.E. 'Scaling Behaviour in the Dynamics of an Economic Index'. Nature **376**, 46 (1995).

106. Mantegna R.N., Stanley H.E. 'Econophysics: Scaling and Its Breakdown in Finance'. J. Stat. Phys. **89**, 469 (1997).

107. Mantegna R.N., Stanley H.E. *An Introduction to Econophysics: Correlations and Complexity in Finance.* Cambridge University Press, Cambridge MA (2000).

108. McClendon M., Rabitz H. 'Numerical Simulations in Stochastic Mechanics'. Phys. Rev. A **37**, 3479 (1988).

109. McCoy B.M., Wu T.T. *The Two-dimensional Ising Model.* Cambridge University Press, Cambridge MA (1973).

110. Merton R. 'Theory of Rational Option Pricing'. Bell J. Econom. Managem. Sci. **4**, 141 (1973).

111. Messiah A. *Quantum Mechanics, Vol. 1.* North-Holland, Amsterdam (1969).

112. Messiah A. *Quantum Mechanics, Vol. 2.* North-Holland, Amsterdam (1969).

113. Metiu H., Kitahara K., Ross J. 'Statistical Mechanical Theory of the Kinetics of Phase Transitions'. In: Montroll E.W., Lebowitz J.L. (Eds.) *Fluctuation Phenomena.* North-Holland, Amsterdam (1987).

114. Metropolis N., Rosenbluth A.W., Rosenbluth M.N., Teller A.H., Teller E. 'Equation of State Calculations by Fast Computing Machines'. J. Chem. Phys. **21**, 1087 (1953).

115. Montroll E.W., Bendler J.T. 'On Lévy (or Stable) Distributions and the Williams–Watts Model of Dielectric Relaxation'. J. Stat. Phys. **34**, 129 (1984).

116. Montroll E.W., Shlesinger M.F. 'On the Wonderful World of Random Walks'. In: Lebowitz J.L., Montroll E.W. (Eds.) *Nonequilibrium Phenomena II: From Stochastics to Hydrodynamics.* Elsevier Science Publishers BV (1984).

117. Montroll E.W., Weiss G.H. 'Random Walks on Lattices II'. J. Math. Phys. **6**, 167 (1965).

222   References

118. Montroll E.W., West B.J. 'On an Enriched Collection of Stochastic Processes'. In: Montroll E.W., Lebowitz J.L. (Eds.) *Fluctuation Phenomena*. North-Holland, Amsterdam (1987).

119. Moss de Oliveira S., de Oliveira P.M.C., Stauffer D. *Evolution, Money, War, and Computers*. Teubner, Stuttgart (1999).

120. Nelson E. 'Derivation of the Schrödinger Equation from Newtonian Mechanics'. Phys. Rev. **150**, 1079 (1966).

121. Nelson E. *Quantum Fluctuations*. Princeton University Press, Princeton (1985).

122. Nelson E. *Dynamical Theories of Brownian Motion*. Princeton University Press, Princeton (1967).

123. Niemeijer Th., van Leeuwen J.M.J. 'Renormalization Theory for Ising-like Spin Systems'. In: Domb C., Green M.S. (Eds.) *Phase Transitions and Critical Phenomena, Vol. 6*. Academic Press, London (1976).

124. Nobel Prize in Economic Sciences (1970). Available at: http://www.nobel.se/laureates/economy-1970.html

125. Nobel Prize in Economic Sciences (1997). Available at: http://www.nobel.se/laureates/economy-1997.html or http://www.nobel.se/announcement-97/economy97.html

126. Onsager L. 'Crystal Statistics I: A Two-dimensional Model with Order Disorder Transition'. Phys. Rev. **65**, 117 (1944).

127. Oppenheim I., Shuler K., Weiss G.H. *The Master Equation*. MIT Press, Cambridge MA (1977).

128. Pagan A. 'The Econometrics of Financial Markets'. J. Empirical Finance **3**, 15 (1996).

129. Pavon M. 'A New Formulation of Stochastic Mechanics'. Phys. Lett. A **209**, 143 (1995).

130. Pavon M. 'Lagrangian Dynamics for Classical, Brownian and Quantum Mechanical Particles'. J. Math. Phys. **37**, 3375 (1996).

131. Pavon M. 'Hamilton's Principle in Stochastic Mechanics'. J. Math Phys. **36**, 6774 (1995).

132. Paul W., Heermann D.W., Binder K. 'Relaxation of Metastable States in Mean-Field Kinetic Ising Systems'. J. Phys. A: Math. Gen. **22**, 3325 (1989).

133. Pearson K. *The History of Statistics in the 17th and 18th Centuries*. MacMillan, London (1978).

134. Peng C.-K., Mietus J., Hausdorff J.M., Havlin S., Stanley H.E., Goldberger A.L. 'Long-Range Anticorrelations and Non-Gaussian Behavior of the Heartbeat'. Phys. Rev. Lett. **70**, 1343 (1993).

135. Perelomov A.M. *Generalized Coherent States and Their Applications*. Springer, Berlin, Heidelberg (1986).

136. Potters M., Cont R., Bouchaud J.-P. 'Financial Markets as Adaptive Systems'. Europhys. Lett. **41**, 239 (1998).

137. Press W.H., Flannery B.P., Teukolsky S.A., Vetterling W.T. *Numerical Recipes – The Art of Scientific Computing*. Cambridge University Press, New York (1989).

138. Prum B., Fort J.C. *Stochastic Processes on a Lattice and Gibbs Measures*. Kluwer, Dordrecht (1991).

139. Reichl L.E. *A Modern Course in Statistical Physics*. Wiley, New York (1997).

140. Risken H. *The Fokker–Planck Equation: Methods of Solution and Applications*. Springer, Berlin, Heidelberg (1996).

141. Ruelle D. *Statistical Mechanics – Rigorous Results*. Benjamin, New York (1969).

142. Samko S.G., Kilbas A.A., Marichev O.I. *Fractional Integrals and Derivatives – Theory and Applications.* Gordon and Breach, New York (1993).

143. Samuelson P.A. 'Rational Theory of Warrant Pricing'. Industrial Management Review **6**, 13 (1965).

144. Schneider, I. (Ed.). *Die Entwicklung der Wahrscheinlichkeitsrechnung von den Anfängen bis 1933.* Wissenschaftliche Buchgesellschaft, Darmstadt (1986).

145. Shlesinger M.F. 'Fractal Time in Condensed Matter'. Ann. Rev. Phys. Chem. **39**, 269 (1988).

146. Shlesinger M.F., Hughes B.D. 'Analogs of Renormalization Group Transformations in Random Processes'. Physica A **109**, 597 (1981).

147. Shlesinger M.F., Zaslavsky G.M., Frisch U. (Eds.) *Lévy Flights and Related Topics in Physics.* Springer, Berlin, Heidelberg (1995).

148. von Smoluchowski M. *Abhandlungen über die Brownsche Bewegung und verwandte Erscheinungen.* Akademische Verlagsgesellschaft, Leipzig (1923).

149. Sokal A.D. 'Monte Carlo Methods for the Self-Avoiding Walk'. In: Binder K. (Ed.) *Monte Carlo and Molecular Dynamics Simulations in Polymer Science.* Oxford University Press, New York (1995).

150. Solomon S. 'Generalized Lotka–Volterra (GLV) Models'. In: Kondor I., Kértesz J. (Eds.) (in press) *Econophysics: An Emerging Science.* Kluwer, Dordrecht.

151. Sornette D. 'Discrete Scale Invariance and Complex Dimensions'. Physics Reports **297**, 239 (1998).

152. Sornette D., Johansen A. 'Large Financial Crashes'. Physica A **245**, 411 (1997).

153. Sornette D., Johansen A., Bouchaud J.-P. 'Stock Market Crashes, Precursors and Replicas'. J. Phys. I France **6**, 167 (1996).

154. Stauffer D. 'Can Percolation Theory Be Applied to the Stock Market?' Annalen der Physik **7**, 529 (1998).

155. Talkner P. 'Mean First Passage Time and the Lifetime of a Metastable State'. Z. Phys. B **68**, 201 (1987).

156. Uhlenbeck G.E., Ornstein L.S. 'On the Theory of Brownian Motion'. Phys. Rev. **36**, 823 (1930); also in [160].

157. Vandewalle N., Ausloos M., Boveroux Ph., Minguet A. 'How the Financial Crash of October 1997 Could Have Been Predicted'. Eur. Phys. J. B **4**, 139 (1998).

158. Vandewalle N., Boveroux Ph., Minguet A., Ausloos M. 'The Crash of October 1987 Seen as a Phase Transition: Amplitude and Universality'. Physica A **255**, 201 (1998).

159. Wang C.W., Uhlenbeck G.E. 'On the Theory of Brownian Motion II'. Rev. Mod. Phys. **17**, 323 (1945); also in [160].

160. Wax N. (Ed.) *Selected Papers on Noise and Stochastic Processes.* Dover Publications, New York (1954).

161. Weiss G.H. *Aspects and Applications of the Random Walk.* North-Holland, Amsterdam (1994).

162. West B.J., Deering W. 'Fractal Physiology for Physicists: Lévy Statistics'. Phys. Rep. **246**, 1 (1994).

163. Williams D. *Probability with Martingales.* Cambridge University Press, Cambridge MA (1997).

164. Wilmott P., Dewynne J., Howison S. *Option Pricing – Mathematical Models and Computation.* Oxford Financial Press, Oxford (1993).

165. Yasue K. 'Stochastic Calculus of Variations'. J. Funct. Anal. **41**, 327 (1981).