

References

- [1] S. Fishman, *Quantum Localization*, in *Quantum Dynamics of Simple Systems*, Proc. of the 44-th Scottish Universities Summer School in Physics, Stirling, Aug. 1994, Edited by G.L. Oppo, S.M. Barnett, E. Riis and M. Wilkinson.
- [2] S. Fishman, in Proc. International School of Physics Enrico Fermi: Varenna Course CXIX (Edited by G. Casati, I. Guarneri, and U. Smilansky), (North Holland, 1993), p 187.
- [3] S. Fishman and S. Rahav, *Relaxation and Noise in Chaotic Systems*, in *Dynamics of Dissipation*, Lecture Notes in Physics Vol. 597, (Springer-Verlag, Berlin Heidelberg 2002), Edited by P. Garbaczewski and R. Olkiewicz (Proceeding of 38 Winter School of Theoretical Physics: Dynamical Semigroups: Dissipation, Chaos, Quanta, February 2002, Ladek, Poland).

- [4] F. Haake, *Quantum Signatures of Chaos* (Springer, New York, 1991).
- [5] A.J. Lichtenberg, M.A. Lieberman, *Regular and stochastic motion*, (Springer, New York, 1983).
- [6] E. Ott, *Chaos in Dynamical Systems*, (Cambridge University Press, Cambridge, 1997).
- [7] V.I. Arnold and A. Avez, *Ergodic Problems of Classical Mechanics*, (Addison-Wesley NY, 1989).
- [8] P. Gaspard, *Chaos, Scattering and Statistical Mechanics*, (Cambridge Press, Cambridge 1998).
- [9] J.R. Dorfman, *An Introduction to Chaos in Non-Equilibrium Statistical Mechanics*, (Cambridge Press, Cambridge 1999).
- [10] B.V. Chirikov, *Phys. Rep.* **52**, 263 (1979).
- [11] For a review of many one dimensional models see K Ishii, *Prog. Theor. Phys. Suppl.* **53**, 77 (1973) and I.M. Lifshits, S.A. Gredeskul and L.A. Pastur, *Introduction to the theory of disordered systems* (Wiley, New York, 1988).
- [12] P.A. Lee and T.V. Ramakrishnan, *Rev. Mod. Phys.* **57**, 287 (1985).

- [13] G. Casati, B.V. Chirikov, F.M. Izrailev and J. Ford in *Stochastic Behaviour in Classical and Quantum Hamiltonian Systems*, Vol 93 of lecture Notes in Physics, edited by G. Casati and J. Ford (Springer, Berlin 1979), p 334.

- [14] B.V. Chirikov, F.M. Izrailev and D.L. Shepelyansky, *Sov. Sci. Rev. Sec. C* **2**, 209 (1981).
-

- [15] G.M. Zaslavsky, M. Edelman and B.A. Niyazov, *Chaos* **7**, 159 (1997).
- [16] A.B. Rechester and R.B. White, *Phys. Rev. Lett.* **44**, 1586 (1980); A.B. Rechester M.N. Rosenbluth and R.B. White, *Phys. Rev. A* **23**, 2664 (1981).
- [17] A. Iomin, S. Fishman and G.M. Zaslavsky, *Phys. Rev. E* **65**, 036215 (2002).
- [18] J. Weber, F. Haake, P.A. Braun, C. Manderfeld and P. Šeba, *J. Phys. A* **34**, 7195 (2001).
- [19] D. Ruelle, *Phys. Rev. Lett.* **56**, 405 (1986).
- [20] S. Fishman, in *Supersymmetry and Trace Formulae, Chaos and Disorder*, edited by I.V. Lerner, J.P. Keating, D.E. Khmelnitskii (Kluwer Academic / Plenum Publishers, New York, 1999).
- [21] H.H. Hasegawa and W.C. Saphir, *Phys. Rev. A* **46**, 7401 (1992).
- [22] G. Blum and O. Agam, *Phys. Rev. E* **62**, 1977 (2000).
- [23] J. Weber, F. Haake and P. Šeba, *Phys. Rev. Lett.* **85**, 3620 (2000).
- [24] C. Manderfeld, J. Weber and F. Haake, *J. Phys. A* **34**, 9893 (2001).
-
- [26] P.W. Anderson, *Phys. Rev.* **109**, 1492 (1958).
- [27] M.V. Berry and S. Klein, *Eur. J. Phys.* **18**, 222 (1997).
- [28] T. Schwartz, G. Bartal, S. Fishman and M. Segev, *Nature* **446**, 52 (2007) and references therein.
- [29] H. Furstenberg, *Trans. Am. Math. Soc.* **108**, 377 (1963).
- [30] R.E. Borland, *Proc. Roy. Soc. A* **274**, 529 (1963).
- [31] F. Delyon, Y. Levy and B. Souillard, *J. Stat. Phys.* **41**, 375 (1985); *Phys. Rev. Lett.*, **55**, 618 (1985) and references therein.
- [32] I. Goldsheid, S. Molchanov and L.A. Pastur, *Funct. Anal. Appl.* **11**, 1 (1977); L.A. Pastur, *Comm. Math. Phys.* **75**, 179 (1980)

- [33] H. Kunz and B. Souillard, Comm. Math. Phys. **78**, 201 (1980); F. Delyon, H. Kunz and B. Souillard, J. Phys. A **16**, 25 (1983).
 - [34] P. Lloyd, J. Phys. C **2**, 1717 (1969).
 - [35] D.J. Thouless, J. Phys. C **5**, 77 (1972).
 - [36] R. Jones and D. Herbert, J. Phys. C **4**, 1145 (1971).
 - [37] D.J. Thouless, Phys. Rev. Lett. **39**, 1167 (1977).
 - [38] E. Abrahams, P.W. Anderson, D.C. Licciardello, T.V. Ramakrishnan, Phys. Rev. Lett. **42**, 673 (1979).
-

- [39] Ya.B. Zeldovich, Soviet. Phys. JETP **24**, 1006 (1967).
 - [40] S. Fishman, D.R. Grempel and R.E. Prange, Phys. Rev. Lett. **49**, 509 (1982); D.R. Grempel, R.E. Prange and S. Fishman, Phys. Rev. A **29**, 1639 (1984).
 - [41] F.M. Izrailev and D.L. Shepelyansky, Teor. Mat. Fiz. **43**, 417 (1980) [Theor. Math. Phys. **43**, 417 (1980)].
 - [42] D.L. Shepelyansky, Phys. Rev. Lett. **56**, 677 (1986); Physica D **28** 103 (1987).
 - [43] D.L. Shepelyansky, Physica D **8**, 208 (1983).
 - [44] R. Blumel, S. Fishman, M. Griniasty and U. Smilansky, in *Quantum Chaos and Statistical Nuclear Physics*, Proc. of the 2nd International Conference on Quantum Chaos, Curnevaca, Mexico, Edited by T.H. Seligman and H. Nishioka, (Springer-Verlag, Heidelberg, 1986).
 - [45] J.D. Hanson, E. Ott, T.M. Antonsen, Phys. Rev. A **29**, 819 (1984).
 - [46] A. Bäcker, R. Ketzmerick and A.G. Monastra, Phys. Rev. Lett. **94**, 054102 (2005)
-

- [47] M. Griniasty and S. Fishman, Phys. Rev. Lett. **60**, 1334 (1988).
- [48] D.J. Thouless, Phys. Rev. Lett. **61**, 2141 (1988).
- [49] D.J. Thouless, J. Phys. C **6**, L49 (1973).
- [50] B. Derrida and E. Gardner, J.Phys. (Paris) **45**, 1283 (1984); M. Kappus and E. Wegner, Z.Phys. B **45** 15 (1981).
- [51] A. Bovier and A. Klein, J. Stat. Phys **51**, 501 (1988).

- [52] J.M. Luck, Phys. Rev. B **39**, 5834 (1989).
- [53] G.H. Hardy and J.E. Littlewood, Acta. Math. **37**, 192 (1914).
- [54] M.V.Berry and J. Goldberg, Nonlinearity **1**, 1 (1988).
- [55] N. Brenner and S. Fishman, Nonlinearity **4**, 211 (1992).
- [56] D. Knuth, *Seminumerical Algorithms* (Eddison-Wesley, Hoovavu, 1981).
-

- [57] R. Blümel, S. Fishman and U. Smilansky, J. Chem. Phys. **84**, 2604 (1986).
- [58] G.M. Zaslavsky and B.V. Chirikov, Sov. Phys. Uspekhi **14**, 549 (1972).
- [59] R. Graham, M. Schlautmann and P. Zoller, Phys. Rev. A **45**, R19 (1992).
- [60] F.L. Moore, J.C. Robinson, C.F. Bharucha, Bala Sundaram, and M.G. Raizen, Phys. Rev. Lett. **75**, 4598 (1995); M.G. Raizen, F.L. Moore, J.C. Robinson, C.F. Bharucha, and Bala Sundaram, Quantum Semiclass. Opt. **8**, 687 (1996); F.L. Moore, J.C. Robinson, C.F. Bharucha, P.E. Williams and M.G. Raizen, Phys. Rev. Lett. **73**, 2974 (1994).
- [61] B.G. Klappauf, W.H. Oskay, D.A. Steck and M.G. Raizen, Phys. Rev. Lett. **81**, 4044 (1998).
- [62] R.M. Godun, M.B. d'Arcy, M.K. Oberthaler, G.S. Summy, and K. Burnett, Phys. Rev. A **62**, 013411 (2000); M.K. Oberthaler, R.M. Godun, M.B. d'Arcy, G.S. Summy, and K. Burnett, Phys. Rev. Lett. **83**, 4447 (1999); S. Schlunk, M.B. d'Arcy, S.A. Gardiner, and G.S. Summy, Phys. Rev. Lett. **90**, 124102 (2003).
- [63] M.B. d'Arcy, G.S. Summy, S. Fishman, and I. Guarneri, Physica Scripta **69**, C25 (2004).
- [64] S. Fishman, I. Guarneri, and L. Rebuzzini, J. Stat. Phys. **110**, 911 (2003); S. Fishman, I. Guarneri, and L. Rebuzzini, Phys. Rev. Lett. **89**, 084101 (2002).
- [65] A. Buchleitner, M.B. d'Arcy, S. Fishman, S.A. Gardiner, I. Guarneri, Y.Z. Ma, L. Rebuzzini and G.S. Summy, Phys. Rev. Lett. **96**, 164101 (2006).
- [66] R. Hihinashvili, T. Oliker, Y.S. Avizrats, A. Iomin, S. Fishman, I. Guarneri, Physica D **226**, 1 (2007), (quant-ph/0604006).
- [67] I. Guarneri, L. Rebuzzini and S. Fishman, *Arnol'd Tongues and Quantum Accelerator Modes*, Nonlinearity **19**, 1141 (2006).