

PUBLICATIONS OF V. E. KOREPIN

- [1] I. Ya. Aref'eva and V. E. Korepin, "Scattering in two-dimensional model with Lagrangian $L = \gamma^{-1} [\frac{1}{2}(\partial_\mu u)^2 + m^2(\cos u - 1)]$," *Pis'ma Zh. Eksp. Teor. Fiz.* **20**, 680–684 (1974), English transl. *JETP Lett.* **20**, 312–314 (1974).
- [2] V. E. Korepin, P. P. Kulish, and L. D. Faddeev, "Soliton quantization," *Pis'ma Zh. Eksp. Teor. Fiz.* **21**, 302–305 (1975), English transl. *JETP Lett.* **21**, 138–139 (1974).
- [3] V. E. Korepin and L. D. Faddeev, "Quantization of solitons," *Teoret. Mat. Fiz.* **25**, 147–162 (1975), English transl. *Theor. Math. Phys.* **25**, 1039–1049 (1975).
- [4] V. E. Korepin, "Above-barrier soliton reflection," *Pis'ma Zh. Eksp. Teor. Fiz.* **23**, 224–228 (1976), English transl. *JETP Lett.* **21**, 201–204 (1976).
- [5] L. D. Faddeev and V. E. Korepin, "About the zero mode problem in the quantization of solitons," *Phys. Lett. B* **63**, 435–438 (1976).
- [6] V. E. Korepin, "Above-barrier reflection of solitons," *Teoret. Mat. Fiz.* **34**, 3–14 (1978), English transl. *Theor. Math. Phys.* **34**, 1–8 (1978).
- [7] L. D. Faddeev and V. E. Korepin, "Quantum theory of solitons," *Phys. Rep.* **42**, 1–87 (1978).
- [8] A. G. Izergin and V. E. Korepin, "Reduction of one loop diagrams in a scalar field theory," *Vestnik LGU (Proceedings of Leningrad State University)* No. 16, 17–24 (1979).
- [9] A. G. Izergin, V. E. Korepin, M. A. Semenov-Tian-Shansky, and L. D. Faddeev, "Gauge conditions for the Yang-Mills field," *Teoret. Mat. Fiz.* **38**, 3–14 (1979), English transl. *Theor. Math. Phys.* **38**, 1–9 (1979).
- [10] V. E. Korepin, "Direct calculation of the S matrix in the massive Thirring model," *Teoret. Mat. Fiz.* **41**, 169–189 (1979), English transl. *Theor. Math. Phys.* **41**, 953–967 (1979).
- [11] V. E. Korepin, "New effects in the sine-Gordon model for a large coupling constant," *Pis'ma Zh. Eksp. Teor. Fiz.* **30**, 633–638 (1979), English transl. *JETP Lett.* **21**, 596–600 (1979).
- [12] V. E. Korepin, "The mass spectrum and the S matrix of the massive Thirring model in the repulsive case," *Commun. Math. Phys.* **76**, 165–176 (1980).
- [13] V. E. Korepin, "Quantization of the non-Abelian Toda chain," *Zap. Nauchn. Sem. LOMI* **101**, 90–100 (1981), English transl. *J. Math. Sci. (NY)* **23**, 2429–2434 (1983).

- [14] A. G. Izergin and V. E. Korepin, “The inverse scattering method approach to the quantum Shabat-Mikhailov model,” *Commun. Math. Phys.* **79**, 303–316 (1981).
- [15] A. G. Izergin and V. E. Korepin, “The lattice quantum sine-Gordon model,” *Lett. Math. Phys.* **5**, 199–205 (1981).
- [16] A. G. Izergin, V. E. Korepin, and F. A. Smirnov, “Trace formulas for the quantum nonlinear Schrödinger equation,” *Teoret. Mat. Fiz.* **48**, 319–323 (1981), English transl. *Theor. Math. Phys.* **48**, 773–776 (1981).
- [17] A. G. Izergin and V. E. Korepin, “A lattice model related to the nonlinear Schrödinger equation,” *Dokl. Akad. Nauk SSSR* **259**, 76–79 (1981), English transl. *Sov. Phys. Dokl.* **26**, 653–654 (1981).
- [18] A. G. Izergin and V. E. Korepin, “Pauli principle for one-dimensional bosons and the algebraic Bethe ansatz,” *Lett. Math. Phys.* **6**, 283–288 (1982).
- [19] A. G. Izergin and V. E. Korepin, “Lattice versions of quantum field theory models in two dimensions,” *Nucl. Phys. B* **205**, 401–413 (1982).
- [20] A. G. Izergin and V. E. Korepin, “Lattice regularizations of two-dimensional quantum-field models,” *Zap. Nauchn. Sem. LOMI* **120**, 75–91 (1982), English transl. *J. Math. Sci. (NY)* **34**, 1937–1948 (1986).
- [21] V. E. Korepin, “Calculation of norms of Bethe wave functions,” *Commun. Math. Phys.* **86**, 391–418 (1982).
- [22] V. E. Korepin, “Analysis of bilinear relation for the six-vertex model,” *Dokl. Akad. Nauk SSSR* **265**, 1361–1364 (1982), English transl. *Sov. Phys. Dokl.* **27**, 612–613 (1982).
- [23] Izergin A. G. and V. E. Korepin, “Quantum inverse scattering method,” *Fiz. Elem. Chastits At. Yadra (Physics of Elementary Particles and Atomic Nuclei)* **13**, 501–541 (1982).
- [24] V. E. Korepin and S. L. Shatashvili, “Rational parametrization of the three-instanton solutions of the Yang-Mills equations,” *Dokl. Akad. Nauk SSSR* **273**, 1342–1344 (1983), English transl. *Sov. Phys. Dokl.* **28**, 1018–1019 (1983).
- [25] A. G. Izergin and V. E. Korepin, “Problem of describing all L -operators for the R -matrices of the XXX and XXZ models,” *Zap. Nauchn. Sem. LOMI* **131**, 80–87 (1983), English transl. *J. Math. Sci. (NY)* **30**, 2292–2298 (1985).
- [26] V. E. Korepin and S. L. Shatashvili, “Three instanton solution,” *Izv. Akad. Nauk SSSR Ser. Mat.* **48**, 331–346 (1984), English transl. *Math. USSR. Izv.* **24**, 307–320 (1985).

- [27] A. G. Izergin and V. E. Korepin, “The most general L operator for the R -matrix of the XXX model,” *Lett. Math. Phys.* **8**, 259–265 (1984).
- [28] N. M. Bogolyubov and V. E. Korepin, “Correlation functions of one-dimensional Bose gas in thermodynamic equilibrium,” *Teoret. Mat. Fiz.* **60**, 262–269 (1984), English transl. *Theor. Math. Phys.* **60**, 808–814 (1984).
- [29] A. G. Izergin and V. E. Korepin, “The quantum inverse scattering method approach to correlation functions,” *Commun. Math. Phys.* **94**, 67–92 (1984).
- [30] A. Izergin and V. Korepin, “Correlation functions in the quantum inverse scattering method,” *Zap. Nauchn. Sem. LOMI* **133**, 92–112 (1984), English transl. *J. Math. Sci. (NY)* **31**, 3317–3330 (1985).
- [31] V. E. Korepin, “Correlation functions of the one-dimensional Bose gas in the repulsive case,” *Commun. Math. Phys.* **94**, 93–113 (1984).
- [32] V. E. Korepin, “Dressing equation for correlation functions,” *Zap. Nauchn. Sem. LOMI* **145**, 134–139 (1985), English transl. *J. Math. Sci. (NY)* **35**, 2644–2647 (1986).
- [33] N. M. Bogoliubov and V. E. Korepin, “Correlation length of the one-dimensional Bose gas,” *Nucl. Phys. B* **257**, 766–778 (1985).
- [34] N. M. Bogolyubov and V. E. Korepin, “Temperature dependence of the correlation length in a one-dimensional Bose gas,” *Teoret. Mat. Fiz.* **64**, 92–102 (1985), English transl. *Theor. Math. Phys.* **64**, 708–715 (1985).
- [35] A. G. Izergin and V. E. Korepin, “Correlation functions for the Heisenberg XXZ antiferromagnet,” *Commun. Math. Phys.* **99**, 271–302 (1985).
- [36] N. M. Bogoliubov, V. E. Korepin, and A. G. Izergin, “Structure of the vacuum in the quantum sine-Gordon model,” *Phys. Lett. B* **159**, 345–347 (1985).
- [37] A. G. Izergin and V. E. Korepin, “Critical indices in a XXZ Heisenberg magnet,” *Pis'ma Zh. Eksp. Teor. Fiz.* **42**, 414–416 (1985), English transl. *JETP Lett.* **42**, 512–514 (1985).
- [38] N. V. Antonov and V. E. Korepin, “Cancellation of infrared divergences in quantum theory of solitons,” *Teoret. Mat. Fiz.* **64**, 339–346 (1985), English transl. *Theor. Math. Phys.* **64**, 873–877 (1985).
- [39] N. M. Bogoliubov and V. E. Korepin, “Correlation length of the one-dimensional Bose gas,” *Phys. Lett. A* **111**, 419–422 (1985).
- [40] A. N. Kirillov and V. E. Korepin, “Norms of bound states,” *Zap. Nauchn. Sem. LOMI* **146**,

- 20–30 (1985), English transl. *J. Math. Sci. (NY)* **40**, 13–21 (1988).
- [41] N. M. Bogoliubov, A. G. Izergin, and V. E. Korepin, “Quantum inverse scattering method and correlation functions,” in *Exactly Solvable Problems in Condensed Matter and Relativistic Field Theory*, Lecture Notes in Physics, Vol. 242 (Springer-Verlag, Berlin, 1985) pp. 220–316.
- [42] N. M. Bogoliubov, A. G. Izergin, and V. E. Korepin, “Critical exponents for integrable models,” *Nucl. Phys. B* **275**, 687–705 (1986).
- [43] N. M. Bogolyubov and V. E. Korepin, “Quantum nonlinear Schrödinger equation on a lattice,” *Teoret. Mat. Fiz.* **66**, 455–462 (1986), English transl. *Theor. Math. Phys.* **66**, 300–305 (1986).
- [44] A. G. Izergin, V. E. Korepin, and N. Yu. Reshetikhin, “Field correlation functions in a one-dimensional Bose gas,” *Zap. Nauchn. Sem. LOMI* **150**, 26–36 (1986), English transl. *J. Math. Sci. (NY)* **46**, 1581–1588 (1989).
- [45] N. M. Bogolyubov and V. E. Korepin, “Complete screening in a one-dimensional Bose gas,” *Zap. Nauchn. Sem. LOMI* **150**, 3–6 (1986), English transl. *J. Math. Sci. (NY)* **46**, 1567–1569 (1989).
- [46] V. E. Korepin, “Quasiperiodic tilings and quasicrystals,” *Zap. Nauchn. Sem. LOMI* **155**, 116–135 (1986), English transl. *J. Math. Sci. (NY)* **41**, 956–966 (1988).
- [47] V. E. Korepin, “Eight-vertex model of the quasicrystal,” *Phys. Lett. A* **118**, 285–286 (1986).
- [48] V. E. Korepin and N. A. Slavnov, “Correlation function of currents in a one-dimensional Bose gas,” *Teoret. Mat. Fiz.* **68**, 471–478 (1986), English transl. *Theor. Math. Phys.* **68**, 955–960 (1986).
- [49] N. M. Bogolyubov, A. G. Izergin, and V. E. Korepin, “Critical exponents in completely integrable models of quantum statistical physics,” *Teoret. Mat. Fiz.* **70**, 135–145 (1987), English transl. *Theor. Math. Phys.* **70**, 94–102 (1987).
- [50] V. E. Korepin, “Completely integrable models in quasicrystals,” *Commun. Math. Phys.* **110**, 157–171 (1987).
- [51] N. V. Antonov and V. E. Korepin, “Critical properties and correlation functions of the eight-vertex model on a quasicrystal,” *Zap. Nauchn. Sem. LOMI* **161**, 13–23 (1987), English transl. *J. Math. Sci. (NY)* **46**, 2058–2065 (1989).
- [52] A. G. Izergin, V. E. Korepin, and N. A. Slavnov, “Finite-temperature correlation functions of Heisenberg antiferromagnet,” *Teoret. Mat. Fiz.* **72**, 277–285 (1987), English transl. *Theor.*

- Math. Phys. **72**, 878–884 (1987).
- [53] A. G. Izergin, V. E. Korepin, and N. Yu. Reshetikhin, “Correlation functions in a one-dimensional Bose gas,” *J. Phys. A: Math. Gen.* **20**, 4799–4822 (1987).
- [54] V. E. Korepin, “Dual field formulation of quantum integrable models,” *Commun. Math. Phys.* **113**, 177–190 (1987).
- [55] N. M. Bogoliubov and V. E. Korepin, “Formation of Cooper pairs in the Hubbard model,” *Mod. Phys. Lett. B* **1**, 349–352 (1988).
- [56] N. V. Antonov and V. E. Korepin, “Critical properties of completely integrable spin models in quasicrystals,” *Teoret. Mat. Fiz.* **77**, 402–411 (1988), English transl. *Theor. Math. Phys.* **77**, 1282–1288 (1988).
- [57] V. E. Korepin, F. Gähler, and J. Rhyner, “Quasiperiodic tilings: a generalized grid-projection method,” *Acta Cryst. A* **44**, 667–672 (1988).
- [58] V. E. Korepin, “Low-temperature asymptotics of correlators in a one-dimensional Bose gas,” *Zap. Nauchn. Sem. LOMI* **169**, 91–94 (1988), English transl. *J. Math. Sci. (NY)* **54**, 920–922 (1991).
- [59] A. N. Kirillov and V. E. Korepin, “The valence bond solid in quasicrystals,” *Algebra i Analiz* **1**, 47–76 (1989), English transl.: *St. Petersburg Math. J.* **1** 343–377 (1990); Preprint arXiv:0909.2211.
- [60] A. G. Izergin, V. E. Korepin, and N. Yu. Reshetikhin, “Conformal dimensions in Bethe ansatz solvable models,” *J. Phys. A: Math. Gen.* **22**, 2615–2620 (1989).
- [61] V. E. Korepin, “Generating functional of correlation functions for the nonlinear Schrödinger equation,” *Funkts. Anal. Prilozh.* **23**, 15–23 (1989), English transl.: *Funct. Anal. and Appl.* **23** 12–19 (1989).
- [62] N. M. Bogoliubov and V. E. Korepin, “The role of quasi-one structures in high- T_c superconductivity,” *Int. J. Mod. Phys. B* **3**, 427–439 (1989).
- [63] A. R. Its, A. G. Izergin, and V. E. Korepin, “Correlation radius for one-dimensional impenetrable bosons,” *Phys. Lett. A* **141**, 121–124 (1989).
- [64] B. Davies and V. E. Korepin, “Higher conservation laws for the quantum non-linear Schrödinger equation,” (1989), Preprint CMA-R33-89 (Centre for Mathematical Analysis, Australian National University); arXiv:1109.6604.
- [65] N. M. Bogolyubov and V. E. Korepin, “Correlation functions of the one-dimensional Hubbard

- model,” *Teoret. Mat. Fiz.* **82**, 331–348 (1990), English transl.: *Theor. Math. Phys.* **82** 231–243 (1990).
- [66] V. E. Korepin and N. A. Slavnov, “The time dependent correlation function of an impenetrable Bose gas as a Fredholm minor. I,” *Commun. Math. Phys.* **129**, 103–113 (1990).
- [67] A. R. Its, A. G. Izergin, V. E. Korepin, and N. A. Slavnov, “Differential equations for quantum correlation functions,” *Int. J. Mod. Phys. B* **4**, 1003–1037 (1990).
- [68] A. R. Its, A. G. Izergin, and V. E. Korepin, “Temperature correlators of the impenetrable Bose gas as an integrable system,” *Commun. Math. Phys.* **129**, 205–222 (1990).
- [69] A. R. Its, A. G. Izergin, and V. E. Korepin, “Long-distance asymptotics of temperature correlators of the impenetrable Bose gas,” *Communications in Mathematical Physics* **130**, 471–488 (1990).
- [70] A. R. Its, A. G. Izergin, V. E. Korepin, and V. Ju. Novokshenov, “Temperature autocorrelations of the transverse Ising chain at the critical magnetic field,” *Nucl. Phys. B* **340**, 752–758 (1990).
- [71] V. E. Korepin and N. A. Slavnov, “Time dependence of the density-density temperature correlation function of a one-dimensional Bose gas,” *Nucl. Phys. B* **340**, 759–766 (1990).
- [72] H. Frahm and V. E. Korepin, “Critical exponents for the one-dimensional Hubbard model,” *Phys. Rev. B* **42**, 10553–10565 (1990).
- [73] V. E. Korepin and A. C. T. Wu, “Adiabatic transport properties and Berry’s phase in Heisenberg-Ising ring,” *Int. J. Mod. Phys. B* **5**, 497–507 (1991).
- [74] A. R. Its, A. G. Izergin, and V. E. Korepin, “Large time and distance asymptotics of the temperature field correlator in the impenetrable bose gas,” *Nucl. Phys. B* **348**, 757–765 (1991).
- [75] V. E. Korepin and N. A. Slavnov, “Correlation function of fields in one-dimensional Bose-gas,” *Commun. Math. Phys.* **136**, 633–644 (1991).
- [76] H. Frahm and V. E. Korepin, “Correlation functions of the one-dimensional Hubbard model in a magnetic field,” *Phys. Rev. B* **43**, 5653–5662 (1991).
- [77] A. R. Its, A. G. Izergin, and V. E. Korepin, “Space correlations in the one-dimensional impenetrable Bose gas at finite temperature,” *Physica D* **53**, 187–213 (1991).
- [78] F. H. L. Essler, V. E. Korepin, and K. Schoutens, “Complete solution of the one-dimensional Hubbard model,” *Phys. Rev. Lett.* **67**, 3848–3851 (1991).

- [79] A. R. Its, A. G. Izergin, and V. E. Korepin, “Time and temperature dependent correlation function of impenetrable Bose gas field correlator in the impenetrable Bose gas,” in *Inverse Scattering and Applications*, Contemporary Mathematics, Vol. 122 (American Mathematical Society, Providence, Rhode Island, 1991) pp. 61–72.
- [80] H. Itoyama, V. E. Korepin, and H. B. Thacker, “Fredholm determinant representation of quantum correlation function for sine-Gordon model at special value of coupling constant,” *Mod. Phys. Lett. B* **6**, 1405–1411 (1992).
- [81] A. R. Its, A. G. Izergin, V. E. Korepin, and G. G. Varzugin, “Large time and distance asymptotics of field correlation function of impenetrable bosons at finite temperature,” *Physica D* **54**, 351–395 (1992).
- [82] F. H. L. Eßler, V. E. Korepin, and K. Schoutens, “New eigenstates of the 1-dimensional Hubbard model,” *Nucl. Phys. B* **372**, 559–596 (1992).
- [83] F. H. L. Essler, V. E. Korepin, and K. Schoutens, “New exactly solvable model of strongly correlated electrons motivated by high- T_c superconductivity,” *Phys. Rev. Lett.* **68**, 2960–2963 (1992).
- [84] F. H. L. Essler, V. E. Korepin, and K. Schoutens, “Fine structure of the Bethe ansatz for the spin-1/2 Heisenberg XXX model,” *J. Phys. A: Math. Gen.* **25**, 4115–4126 (1992).
- [85] A. G. Izergin, D. A. Coker, and V. E. Korepin, “Determinant formula for the six-vertex model,” *J. Phys. A: Math. Gen.* **25**, 4315–4334 (1992).
- [86] F. Colomo, A. G. Izergin, V. E. Korepin, and V. Tognetti, “Correlators in the Heisenberg XX0 chain as Fredholm determinants,” *Phys. Lett. A* **169**, 243–247 (1992).
- [87] F. H. L. Eßler, V. E. Korepin, and K. Schoutens, “Completeness of the SO(4) extended Bethe ansatz for the one-dimensional Hubbard model,” *Nucl. Phys. B* **384**, 431–458 (1992).
- [88] F. H. L. Essler and V. E. Korepin, “Higher conservation laws and algebraic Bethe Ansätze for the supersymmetric t - J model,” *Phys. Rev. B* **46**, 9147–9162 (1992).
- [89] F. H. L. Essler, V. E. Korepin, and K. Schoutens, “Electronic model for superconductivity,” *Phys. Rev. Lett.* **70**, 73–76 (1993).
- [90] A. G. Izergin, A. R. Its, V. E. Korepin, and N. A. Slavnov, “Integrable differential equations for temperature correlation functions of the XX0 Heisenberg chain,” *Zap. Nauchn. Sem. POMI* **205**, 6–20 (1993), English transl. *J. Math. Sci. (NY)* **80**, 1747–922 (1996).
- [91] F. Colomo, A. G. Izergin, V. E. Korepin, and V. Tognetti, “Temperature correlation functions

- in the XX0 Heisenberg chain. I,” *Teoret. Mat. Fiz.* **94**, 19–51 (1993), English transl.: *Theor. Math. Phys.* **94** 11–38 (1993).
- [92] A. R. Its, A. G. Izergin, V. E. Korepin, and N. A. Slavnov, “Temperature correlations of quantum spins,” *Phys. Rev. Lett.* **70**, 1704–1706 (1993).
- [93] A. R. Its, A. G. Izergin, V. E. Korepin, and N. A. Slavnov, “Quantum correlation function is the τ function of classical differential equation,” in *Important Developments in Soliton Theory* (Springer-Verlag, Berlin, 1993) pp. 407–417.
- [94] V. E. Korepin, N. M. Bogoliubov, and A. G. Izergin, *Quantum Inverse Scattering Method and Correlation Functions* (Cambridge University Press, Cambridge, 1993).
- [95] H. Frahm and V. E. Korepin, “Critical exponents in the one-dimensional Hubbard model,” *Int. J. Mod. Phys. B* **8**, 403–415 (1994).
- [96] F. H. L. Eßler, V. E. Korepin, and K. Schoutens, “Exact solution of an electronic model of superconductivity,” *Int. J. Mod. Phys. B* **8**, 3205–3242 (1994).
- [97] F. H. L. Eßler and V. E. Korepin, “Spectrum of low-lying excitations in a supersymmetric extended Hubbard model,” *Int. J. Mod. Phys. B* **8**, 3243–3279 (1994).
- [98] F. H. L. Eßler and V. E. Korepin, “Scattering matrix and excitation spectrum of the Hubbard model,” *Phys. Rev. Lett.* **72**, 908–911 (1994).
- [99] V. E. Korepin, A. G. Izergin, F. H. L. Essler, and D. B. Uglov, “Correlation function of the spin-1/2 XXX antiferromagnet,” *Phys. Lett. A* **190**, 182–184 (1994).
- [100] D. B. Uglov and V. E. Korepin, “The Yangian symmetry of the Hubbard model,” *Phys. Lett. A* **190**, 238–242 (1994).
- [101] F. H. L. Essler and V. E. Korepin, “ $SU(2) \times SU(2)$ -invariant scattering matrix of the Hubbard model,” *Nucl. Phys. B* **426**, 505–533 (1994).
- [102] H. Frahm, A. R. Its, and V. E. Korepin, “Differential equation for a correlation function of the spin-1/2 Heisenberg chain,” *Nucl. Phys. B* **428**, 694–710 (1994).
- [103] F. H. L. Essler and V. E. Korepin, “The role of symmetries in systems of strongly correlated electrons,” in *Correlation Effects in Low Dimensional Electron Systems*, Springer Series in Solid State Sciences, Vol. 118 (Springer-Verlag, Berlin, 1994) pp. 57–67.
- [104] V.E. Korepin and F.H.L. Eßler, eds., *Exactly Solvable Models of Strongly Correlated Electrons* (World Scientific, Singapore, 1994).
- [105] J. de Boer, V. E. Korepin, and A. Schadschneider, “ η Pairing as a Mechanism of Supercon-

- ductivity in Models of Strongly Correlated Electrons,” Phys. Rev. Lett. **74**, 789–792 (1995).
- [106] F. H. L. Essler, H. Frahm, A. R. Its, and V. E. Korepin, “Integro-difference equation for a correlation function of the spin-1/2 Heisenberg XXZ chain,” Nucl. Phys. B **446**, 448–460 (1995).
- [107] G. Albertini, V. E. Korepin, and A. Schadschneider, “XXZ model as an effective Hamiltonian for generalized Hubbard models with broken η -symmetry,” J. Phys. A: Math. Gen. **28**, L303–L309 (1995).
- [108] F. H. L. Eßler, H. Frahm, A. G. Izergin, and V. E. Korepin, “Determinant representation for correlation functions of spin-1/2 XXX and XXZ Heisenberg magnets,” Commun. Math. Phys. **174**, 191–214 (1995).
- [109] F. H. L. Essler and V. E. Korepin, “Dual field approach to correlation functions in the Heisenberg XXZ spin chain,” in *Recent Progress in Statistical Mechanics and Quantum Field Theory* (World Scientific, Singapore, 1995) pp. 81–99.
- [110] F. H. L. Essler, H. Frahm, A. R. Its, and V. E. Korepin, “Painlevé transcendent describes quantum correlation function of the XXZ antiferromagnet away from the free-fermion point,” J. Phys. A: Math. Gen. **29**, 5619–5626 (1996).
- [111] H. Frahm, A. R. Its, and V. E. Korepin, “An operator-valued Riemann-Hilbert problem associated with the XXX model,” in *Symmetries and Integrability of Difference Equations*, CRM Proceedings and Lecture Notes, Vol. 9 (American Mathematical Society, Providence, Rhode Island, 1996) pp. 133–142.
- [112] V. E. Korepin and T. Oota, “Scattering of plane waves in self-dual Yang-Mills theory,” J. Phys. A: Math. Gen. **29**, L625–L628 (1996).
- [113] T. Kojima, V. E. Korepin, and N. A. Slavnov, “Determinant representation for dynamical correlation functions of the quantum nonlinear Schrödinger equation,” Commun. Math. Phys. **188**, 657–689 (1997).
- [114] T. Kojima, V. E. Korepin, and N. A. Slavnov, “Completely integrable equation for the quantum correlation function of nonlinear Schrödinger equation,” Commun. Math. Phys. **189**, 709–728 (1997).
- [115] F. H. L. Eßler, H. Frahm, A. R. Its, and V. E. Korepin, “Determinant representation for a quantum correlation function of the lattice sine-Gordon model,” J. Phys. A: Math. Gen. **30**, 219–244 (1997).

- [116] V. Korepin and N. Slavnov, “Time and temperature dependent correlation functions of 1D models of quantum statistical mechanics,” *Phys. Lett. A* **236**, 201–205 (1997).
- [117] T. Kojima and V. Korepin, “The Maxwell-Bloch equation and correlation functions for the penetrable Bose gas,” *J. Phys. A: Math. Gen.* **30**, 5105–5121 (1997).
- [118] V. E. Korepin and N. A. Slavnov, “The Riemann-Hilbert problem associated with the quantum nonlinear Schrödinger equation,” *J. Phys. A: Math. Gen.* **30**, 8241–8255 (1997).
- [119] V. Korepin and N. Slavnov, “Normal ordering in the theory of correlation functions of exactly solvable models,” *J. Phys. A: Math. Gen.* **30**, 8623–8633 (1997).
- [120] F. Göhmann, A. G. Izergin, V. E. Korepin, and A. G. Pronko, “Time and temperature dependent correlation functions of the one-dimensional impenetrable electron gas,” *Int. J. Mod. Phys. B* **12**, 2409–2433 (1998).
- [121] V. E. Korepin and T. Oota, “A determinant representation for a correlation function of the scaling Lee-Yang model,” *J. Phys. A: Math. Gen.* **31**, L371–L380 (1998).
- [122] V. Korepin and N. Slavnov, “The new identity for the scattering matrix of exactly solvable models,” *Eur. Phys. J. B* **5**, 555–557 (1998).
- [123] F. H. L. Eßler, V. E. Korepin, and F. T. Latrémoière, “Temperature corrections to conformal field theory,” *Eur. Phys. J. B* **5**, 559–563 (1998).
- [124] V. E. Korepin and N. A. Slavnov, “The determinant representation for quantum correlation functions of the sinh-Gordon model,” *J. Phys. A: Math. Gen.* **31**, 9283–9295 (1998).
- [125] F. Göhmann, A. R. Its, and V. E. Korepin, “Correlations in the impenetrable electron gas,” *Phys. Lett. A* **249**, 117–125 (1998).
- [126] V. E. Korepin and N. A. Slavnov, “Form factors in the finite volume,” *Int. J. Mod. Phys. B* **13**, 2933–2941 (1999).
- [127] F. H. L. Eßler and V. E. Korepin, “Form factors in the half-filled Hubbard model,” *Phys. Rev. B* **59**, 1734–1738 (1999).
- [128] F. Göhmann and V. E. Korepin, “Universal correlations of one-dimensional interacting electrons in the gas phase,” *Phys. Lett. A* **260**, 516–521 (1999).
- [129] F. Göhmann and V. E. Korepin, “The Hubbard chain: Lieb-Wu equations and norm of the eigenfunctions,” *Phys. Lett. A* **263**, 293–298 (1999).
- [130] V. E. Korepin, “Book Review: Thermodynamics of One-Dimensional Solvable Models,” *J. Stat. Phys.* **97**, 827–828 (1999).

- [131] F. Göhmann and V. E. Korepin, “Solution of the quantum inverse problem,” *J. Phys. A: Math. Gen.* **33**, 1199–1220 (2000).
- [132] T. Deguchi, F. H. L. Essler, F. Göhmann, A. Klümper, V. E. Korepin, and K. Kusakabe, “Thermodynamics and excitations of the one-dimensional Hubbard model,” *Phys. Rep.* **331**, 197–281 (2000).
- [133] V. Korepin and P. Zinn-Justin, “Thermodynamic limit of the six-vertex model with domain wall boundary conditions,” *J. Phys. A: Math. Gen.* **33**, 7053–7066 (2000).
- [134] H. E. Boos and V. E. Korepin, “Quantum spin chains and Riemann zeta function with odd arguments,” *J. Phys. A: Math. Gen.* **34**, 5311–5316 (2001).
- [135] A. A. Kapaev and V. E. Korepin, “On the asymptotic expansion of the solutions of the separated nonlinear Schrödinger equation,” *Phys. Lett. A* **285**, 150–156 (2001).
- [136] J. de Gier and V. Korepin, “Six-vertex model with domain wall boundary conditions: Variable inhomogeneities,” *J. Phys. A: Math. Gen.* **34**, 8135–8144 (2001).
- [137] H. E. Boos, V. E. Korepin, Y. Nishiyama, and M. Shiroishi, “Quantum correlations and number theory,” *J. Phys. A: Math. Gen.* **35**, 4443–4451 (2002).
- [138] V. Korepin and P. Zinn-Justin, “Inhomogeneous six-vertex model with domain wall boundary conditions and Bethe ansatz,” *J. Math. Phys.* **43**, 3261–3267 (2002).
- [139] F. Göhmann and V. E. Korepin, “A quantum version of the inverse scattering transformation,” *Phys. Atom. Nucl.* **65**, 968–975 (2002).
- [140] A. G. Abanov and V. E. Korepin, “On the probability of ferromagnetic strings in antiferromagnetic spin chains,” *Nucl. Phys. B* **647**, 565–580 (2002).
- [141] H. E. Boos, V. E. Korepin, and F. A. Smirnov, “Emptiness formation probability and quantum Knizhnik-Zamolodchikov equation,” *Nucl. Phys. B* **658**, 417–439 (2003).
- [142] V. E. Korepin, S. Lukyanov, Y. Nishiyama, and M. Shiroishi, “Asymptotic behavior of the emptiness formation probability in the critical phase of XXZ spin chain,” *Phys. Lett. A* **312**, 21–26 (2003).
- [143] H. E. Boos, V. E. Korepin, and F. A. Smirnov, “Emptiness Formation Probability and Quantum Knizhnik-Zamolodchikov Equation,” *Int. J. Mod. Phys. A* **19**, 57–81 (2004).
- [144] H. Boos, V. Korepin, and F. Smirnov, “New formulae for solutions of quantum Knizhnik-Zamolodchikov equations on level-4,” *J. Phys. A: Math. Gen.* **37**, 323–335 (2004).
- [145] V. E. Korepin, “Universality of entropy scaling in one dimensional gapless models,” *Phys.*

- Rev. Lett. **92**, 096402 (2004).
- [146] B.-Q. Jin and V. E. Korepin, “Localizable entanglement in antiferromagnetic spin chains,” Phys. Rev. A **69**, 062314 (2004).
- [147] B.-Q. Jin and V. E. Korepin, “Quantum spin chain, Toeplitz determinants and the Fisher-Hartwig conjecture,” J. Stat. Phys. **116**, 79–95 (2004).
- [148] H. Fan, V. Korepin, and V. Roychowdhury, “Entanglement in a valence-bond solid state,” Phys. Rev. Lett. **93**, 227203 (2004).
- [149] L. Amico and V. Korepin, “Universality of the one-dimensional Bose gas with delta interaction,” Ann. Phys. **314**, 496–507 (2004).
- [150] F. H. L. Essler, H. Frahm, F. Göhmann, A. Klümper, and V. E. Korepin, *The One-Dimensional Hubbard Model* (Cambridge University Press, Cambridge, 2005).
- [151] A. R. Its, B.-Q. Jin, and V. E. Korepin, “Entanglement in the XY spin chain,” J. Phys. A: Math. Gen. **38**, 2975–2990 (2005).
- [152] S. Bose, B.-Q. Jin, and V. E. Korepin, “Quantum communication through a spin ring with twisted boundary conditions,” Phys. Rev. A **72**, 022345 (2005).
- [153] V. E. Korepin, “Optimization of partial search,” J. Phys. A: Math. Gen. **38**, L731–L738 (2005).
- [154] V. E. Korepin and B. C. Vallilo, “Group theoretical formulation of a quantum partial search algorithm,” Prog. Theor. Phys. **116**, 783–793 (2006).
- [155] V. E. Korepin and Y. Xu, “Hierarchical quantum search,” Int. J. Mod. Phys. B **21**, 5187–5205 (2007).
- [156] F. Franchini, A. R. Its, B.-Q. Jin, and V. E. Korepin, “Ellipses of constant entropy in the XY spin chain,” J. Phys. A: Math. Gen. **40**, 8467–8478 (2007).
- [157] H. Fan, V. Korepin, V. Roychowdhury, C. Hadley, and S. Bose, “Boundary effects on entropy and two-site entanglement of the spin-1 valence-bond solid,” Phys. Rev. B **76**, 014428 (2007).
- [158] Ovidiu I. Pâțu, V. E. Korepin, and D. V. Averin, “Correlation functions of one-dimensional Lieb Liniger anyons,” J. Phys. A: Math. Gen. **40**, 14963–14984 (2007).
- [159] F. Franchini, A. R. Its, and V. E. Korepin, “Renyi entropy of the XY spin chain,” J. Phys. A: Math. Gen. **41**, 025302 (2008).
- [160] H. Katsura, T. Hirano, and V. E. Korepin, “Entanglement in an $SU(n)$ valence-bond-solid state,” J. Phys. A: Math. Gen. **41**, 135304 (2008).

- [161] O. I. Pâțu, V. E. Korepin, and D. V. Averin, “One-dimensional impenetrable anyons in thermal equilibrium: I. Anyonic generalization of Lenard’s formula,” *J. Phys. A: Math. Gen.* **41**, 145006 (2008).
- [162] O. I. Pâțu, V. E. Korepin, and D. V. Averin, “One-dimensional impenetrable anyons in thermal equilibrium: II. Determinant representation for the dynamic correlation functions,” *J. Phys. A: Math. Gen.* **41**, 255205 (2008).
- [163] Y. Xu, H. Katsura, T. Hirano, and V. E. Korepin, “Entanglement and density matrix of a block of spins in AKLT model,” *J. Stat. Phys.* **133**, 347–377 (2008).
- [164] Y. Xu and V. E. Korepin, “Entanglement of the valence-bond-solid state on an arbitrary graph,” *J. Phys. A: Math. Gen.* **41**, 5302 (2008).
- [165] V. E. Korepin and Y. Xu, “Quantum search algorithms,” *Int. J. Mod. Phys. B* **23**, 5727–5758 (2009).
- [166] O. I. Pâțu, V. E. Korepin, and D. V. Averin, “Large-distance asymptotic behavior of the correlation functions of 1D impenetrable anyons at finite temperatures,” *Europhys. Lett.* **86**, 40001 (2009).
- [167] J. Molina, H. Wichterich, V. E. Korepin, and S. Bose, “Extraction of pure entangled states from many-body systems by distant local projections,” *Phys. Rev. A* **79**, 062310 (2009).
- [168] O. I. Pâțu, V. E. Korepin, and D. V. Averin, “One-dimensional impenetrable anyons in thermal equilibrium: III. Large distance asymptotics of the space correlations,” *J. Phys. A: Math. Gen.* **42**, 275207 (2009).
- [169] O. I. Pâțu, V. E. Korepin, and D. V. Averin, “Non-conformal asymptotic behavior of the time-dependent field-field correlators of 1D anyons,” *Europhys. Lett.* **87**, 60006 (2009).
- [170] A. R. Its and V. E. Korepin, “The Fisher-Hartwig formula and entanglement entropy,” *J. Stat. Phys.* **137**, 1014–1039 (2009).
- [171] V. E. Korepin and Y. Xu, “Entanglement in valence-bond states,” *Int. J. Mod. Phys. B* **24**, 1361–1440 (2010).
- [172] O. I. Pâțu, V. E. Korepin, and D. V. Averin, “One-dimensional impenetrable anyons in thermal equilibrium: IV. Large time and distance asymptotic behavior of the correlation functions,” *J. Phys. A: Math. Gen.* **43**, 115204 (2010).
- [173] H. Katsura, N. Kawashima, A. N. Kirillov, V. E. Korepin, and S. Tanaka, “Entanglement in valence-bond-solid states on symmetric graphs,” *J. Phys. A: Math. Gen.* **43**, 255303 (2010).

- [174] A. R. Its and V. E. Korepin, “Generalized entropy of the Heisenberg spin chain,” *Theor. Math. Phys.* **164**, 1136–1139 (2010).
- [175] F. N. C. Paraan and V. E. Korepin, “Perturbative correction to the ground-state properties of one-dimensional strongly interacting bosons in a harmonic trap,” *Phys. Rev. A* **82**, 065603 (2010).
- [176] F. N. C. Paraan, J. Molina-Vilaplana, V. E. Korepin, and S. Bose, “Entanglement in bipartite pure states of an interacting boson gas obtained by local projective measurements,” *Phys. Rev. A* **84**, 032330 (2011).
- [177] R. A. Santos, V. Korepin, and S. Bose, “Negativity for two blocks in the one-dimensional spin-1 Affleck-Kennedy-Lieb-Tasaki model,” *Phys. Rev. A* **84**, 062307 (2011).