References

[1] Ablowitz, M. J. and Clarkson, P. A., *Solitons, Nonlinear Evolution Equations and Inverse Scattering*. London Mathematical Society **149** (Cambridge: Cambridge University Press, 1991).

[2] Achucarro, A. and Vachaspati, T., Semilocal and electroweak strings. *Phys. Rep.*, **327** (2000), 347. [*Phys. Rep.*, **327** (2000), 427] [arXiv:hep-ph/9904229].

[3] Actor, A., Classical solutions of SU(2) Yang-Mills theories. *Rev. Mod. Phys.*, **51** (1979), 461.

[4] Anninos, P., Oliveira, S. and Matzner, R. A., Fractal structure in the scalar lambda $(\phi^2 - 1)^2$ theory. *Phys. Rev.*, **D44** (1991), 1147.

[5] Antunes, N. D., Bettencourt, L. M. A. and Hindmarsh, M., The thermodynamics of cosmic string densities in U(1) scalar field theory. *Phys. Rev. Lett.*, **80** (1998), 908. [arXiv:hep-ph/9708215].

[6] Antunes, N. D., Pogosian, L. and Vachaspati, T., On formation of domain wall lattices. *Phys. Rev.*, **D69** (2004), 043513. [arXiv:hep-ph/0307349].

[7] Antunes, N. D. and Vachaspati, T., Spontaneous formation of domain wall lattices in two spatial dimensions. *Phys. Rev.*, **D70** (2004), 063516. [arXiv:hep-ph/0404227].

[8] Antunes, N. D., Gandra, P. and Rivers, R. J., Domain formation: decided before, or after the transition? (2005) [hep-ph/0504004].

[9] Arodz, H., Expansion in the width and collective dynamics of a domain wall. *Nucl. Phys.*, **B509** (1997), 273. [arXiv:hep-th/9703168].

[10] Arodz, H., Dziarmaga, J. and Zurek, W. H., *Patterns of Symmetry Breaking* (Dordrecht: Kluwer Academic Publishers, 2003).

[11] Astier, P., Guy, J., Regnault, N., *et al.* The supernova legacy survey: measurement of Ω_M, Ω_Λ and w from the first year data set. (2005) [astro-ph/0510447].

[12] Atiyah, M. F., Hitchin, N. J., Drinfeld, V. G. and Manin, Y. I., Construction of instantons. *Phys. Lett.*, **A65** (1978), 185.

[13] Avelino, P. P., Oliveira, J. C. R. and Martins, C. J. A., Understanding domain wall network evolution. *Phys. Lett.*, **B610** (2005), 1. [arXiv:hep-th/0503226].

[14] Avelino, P. P., Martins, C. J. A. and Oliveira, J. C. R., One-scale model for domain wall network evolution. *Phys. Rev.*, **D72** (2005), 083506. [arXiv:hep-ph/0507272].

[15] Barr, S. M. and Matheson, A. M., Weak resistance in superconducting cosmic strings. *Phys. Rev.*, **D36** (1987), 2905.

[16] Basu, R., Guth, A. H. and Vilenkin, A., Quantum creation of topological defects during inflation. *Phys. Rev.*, **D44** (1991), 340.

165

[17] Basu, R. and Vilenkin, A., Nucleation of thick topological defects during inflation. *Phys. Rev.*, **D46** (1992), 2345.

[18] Basu, R. and Vilenkin, A., Evolution of topological defects during inflation. *Phys. Rev.*, **D50** (1994), 7150. [arXiv:gr-qc/9402040].

[19] Bogolubsky, I. L. and Makhanov, V. G., Lifetime of pulsating solitons in certain classical models. *JETP Lett.*, **24** (1976), 12.

[20] Bogomolnyi, E. B., The stability of classical solutions. *Sov. J. Nucl. Phys.*, **24** (1976), 449.

[21] Bonjour, F., Charmousis, C. and Gregory, R., The dynamics of curved gravitating walls. *Phys. Rev.*, **D62** (2000), 083504. [arXiv:gr-qc/0002063].

[22] Borde, A., Trodden, M. and Vachaspati, T., Creation and structure of baby universes in monopole collisions. *Phys. Rev.*, **D59** (1999), 043513. [arXiv:gr-qc/9808069].

[23] Boys, C. V., *Soap Bubbles: Their Colors and Forces Which Mold Them* (New York: Dover Publications, 1959).

[24] Bray, A., Topological defects and phase ordering dynamics. In *Formation and Interaction of Topological Defects*, ed. A.-C. Davis and R. Brandenberger (New York: NATO ASI Series, Plenum, 1995).

[25] Bucher, M. and Spergel, D. N., Is the dark matter a solid? *Phys. Rev.*, **D60** (1999), 043505. [arXiv:astro-ph/9812022].

[26] Campbell, D. K., Schonfeld, J. F. and Wingate, C. A., Resonance structure in kink-antikink interactions in phi**4 theory. *Physica*, **9D** (1983), 1.

[27] Caroli, C., de Gennes, P. G. and Matricon, J., Bound fermion states on a vortex line in a type II superconductor. *Phys. Lett.*, **9** (1964), 307.

[28] Carter, B. and Gregory, R., Curvature corrections to dynamics of domain walls. *Phys. Rev.*, **D51** (1995), 5839. [arXiv:hep-th/9410095].

[29] Chamblin, A. and Eardley, D. M., Puncture of gravitating domain walls. *Phys. Lett.*, **B475** (2000), 46. [arXiv:hep-th/9912166].

[30] Cheng, T. P. and Li, L. F., *Gauge Theory of Elementary Particle Physics* (New York: Oxford University Press, 1984).

[31] Cho, I. and Vilenkin, A., Spacetime structure of an inflating global monopole. *Phys. Rev.*, **D56** (1997), 7621. [arXiv:gr-qc/9708005].

[32] Ciria, J. C. and Tarancon, A., Renormalization group study of the soliton mass in the $(1 + 1)$-dimensional $\lambda\phi^4$ lattice model. *Phys. Rev.*, **D49** (1994), 1020. [arXiv:hep-lat/9309019].

[33] Coleman, S. R. and Weinberg, E., Radiative corrections as the origin of spontaneous symmetry breaking. *Phys. Rev.*, **D7** (1973), 1888.

[34] Coleman, S. R., Quantum sine-Gordon equation as the massive Thirring model. *Phys. Rev.*, **D11** (1975), 2088.

[35] Coleman, S., *Aspects of Symmetry* (Cambridge: Cambridge University Press, 1985).

[36] Coulson, D., Lalak, Z. and Ovrut, B. A., Biased domain walls. *Phys. Rev.*, **D53** (1996), 4237.

[37] Creutz, M., *Quarks, Gluons and Lattices* (Cambridge: Cambridge University Press, 1985).

[38] Dashen, R. F., Hasslacher, B. and Neveu, A., Nonperturbative methods and extended hadron models in field theory. 1. Semiclassical functional methods. *Phys. Rev.*, **D10** (1974), 4114.

[39] Dashen, R. F., Hasslacher, B. and Neveu, A., Nonperturbative methods and extended hadron models in field theory. 2. Two-dimensional models and extended hadrons. *Phys. Rev.*, **D10** (1974), 4130.

[40] Dashen, R. F., Hasslacher, B. and Neveu, A., Nonperturbative methods and extended hadron models in field theory. 3. Four-dimensional nonabelian models. *Phys. Rev.*, **D10** (1974), 4138.

[41] Dashen, R. F., Hasslacher, B. and Neveu, A., The particle spectrum in model field theories from semiclassical functional integral techniques. *Phys. Rev.*, **D11** (1975), 3424.

[42] Dashen, R. F., Hasslacher, B. and Neveu, A., Semiclassical bound states in an asymptotically free theory. *Phys. Rev.*, **D12** (1975), 2443.

[43] Davidson, A., Toner, B. F., Volkas, R. R. and Wali, K. C., Clash of symmetries on the Brane. *Phys. Rev.*, **D65** (2002), 125013. [arXiv:hep-th/0202042].

[44] von Delft, J. and Schoeller, H., Bosonization for beginners: Refermionization for experts. *Ann. Phys.*, **7** (1998), 225. [arXiv:cond-mat/9805275].

[45] Derrick, G. H., Comments on nonlinear wave equations as models for elementary particles. *J. Math. Phys.*, **5** (1964), 1252.

[46] Deser, S., Plane waves do not polarize the vacuum. *J. Phys. A, Math. Gen.*, **8** (1975), 1972.

[47] Dolan, L. and Jackiw, R., Symmetry behavior at finite temperature. *Phys. Rev.*, **D9** (1974), 3320.

[48] Drazin, P. and Johnson, R., *Solitons: An Introduction* (Cambridge: Cambridge University Press, 1989).

[49] Drell, S. D., Weinstein, M. and Yankielowicz, S., Variational approach to strong coupling field theory. 1. Φ^4 theory. *Phys. Rev.*, **D14** (1976), 487.

[50] Dvali, G. R., Melfo, A. and Senjanovic, G., Is there a monopole problem? *Phys. Rev. Lett.*, **75** (1995), 4559. [arXiv:hep-ph/9507230].

[51] Dvali, G. R. and Shifman, M. A., Domain walls in strongly coupled theories. *Phys. Lett.*, **B396** (1997), 64. [Erratum-*ibid*. **B407** (1997), 452] [arXiv:hep-th/9612128].

[52] Dvali, G. R., Liu, H. and Vachaspati, T., Sweeping away the monopole problem. *Phys. Rev. Lett.*, **80** (1998), 2281. [arXiv:hep-ph/9710301].

[53] Everett, A. E., Observational consequences of a "domain" structure of the universe. *Phys. Rev.*, **D 10** (1974), 3161.

[54] Feynman, R. P., Leighton, R. B. and Sands, M., *The Feynman Lectures on Physics, Volume II* (Reading, MA: Addison-Wesley Publishing Company, 1964).

[55] Feynman, R. P., Leighton, R. B. and Sands, M., *The Feynman Lectures on Physics, Volume III* (Reading, MA: Addison-Wesley Publishing Company, 1965).

[56] Fordy, A. P., ed., *Soliton Theory: A Survey of Results* (Manchester: Manchester University Press, 1990).

[57] Forster, D., Dynamics of relativistic vortex lines and their relation to dual theory. *Nucl. Phys.*, **B81** (1974), 84.

[58] Friedlander, F. G., *The Wave Equation on a Curved Space-time* (Cambridge: Cambridge University Press, 1976).

[59] Garagounis, T. and Hindmarsh, M., Scaling in numerical simulations of domain walls. *Phys. Rev.*, **D68** (2003), 103506. [arXiv:hep-ph/0212359].

[60] Gelmini, G. B., Gleiser, M. and Kolb, E. W., Cosmology of biased discrete symmetry breaking. *Phys. Rev.*, **D39** (1989), 1558.

[61] de Gennes, P. G., *Superconductivity of Metals and Alloys* (Oxford: Perseus Books Publishing, 1999).

[62] Georgi, H., *Lie Algebras in Particle Physics* (Reading, MA: Benjamin/Cummings Publishing Company, 1982).

[63] Georgi, H. and Glashow, S. L., Unity of all elementary particle forces. *Phys. Rev. Lett.*, **32** (1974), 438.

[64] Gleiser, M., Pseudostable bubbles. *Phys. Rev.*, **D49** (1994), 2978. [arXiv:hep-ph/9308279].

[65] Goldenfeld, N., Dynamics of cosmological phase transitions: what can we learn from condensed matter physics? In *Formation and Interaction of Topological Defects*, ed. A.-C. Davis and R. Brandenberger (New York: NATO ASI Series, Plenum, 1995).

[66] Goldhaber, A. S., Rebhan, A., van Nieuwenhuizen, P. and Wimmer, R., Quantum corrections to mass and central charge of supersymmetric solitons. *Phys. Rep.*, **398** (2004), 179. [arXiv:hep-th/0401152].

[67] Goldstone, J. and Jackiw, R., Quantization of nonlinear waves. *Phys. Rev.*, **D11** (1975), 1486.

[68] Goldstone, J. and Wilczek, F., Fractional quantum numbers on solitons. *Phys. Rev. Lett.*, **47** (1981), 986.

[69] Gomez Nicola, A. and Steer, D. A., Thermal bosonisation in the sine-Gordon and massive Thirring models. *Nucl. Phys.*, **B549** (1999), 409. [arXiv:hep-ph/9810519].

[70] Gózdz, W. T. and Holyst, R., Triply periodic surfaces and multiply continuous structures from the Landau model of microemulsions. *Phys. Rev.*, **E54** (1996), 5012.

[71] Gradshteyn, I. S. and Ryzhik, M., *Table of Integrals, Series, and Products* (New York: Academic Press, 1980).

[72] Gregory, R., Effective action for a cosmic string. *Phys. Lett.*, **B206** (1988), 199.

[73] Gregory, R., Haws, D. and Garfinkle, D., The dynamics of domain walls and strings. *Phys. Rev.*, **D42** (1990), 343.

[74] Harvey, J. A., Kolb, E. W., Reiss, D. B. and Wolfram, S., Calculation of cosmological baryon asymmetry in grand unified gauge models. *Nucl. Phys.*, **B201** (1982), 16.

[75] Heeger, A. J., Kivelson, S., Schrieffer, J. R. and Su, W.-P., Solitons in conducting polymers. *Rev. Mod. Phys.*, **60** (1988), 781.

[76] Hill, C. T., Schramm, D. N. and Fry, J. N., Cosmological structure formation from soft topological defects. *Comments Nucl. Part. Phys.*, **19** (1989), 25.

[77] Hindmarsh, M., Analytic scaling solutions for cosmic domain walls. *Phys. Rev. Lett.*, **77** (1996), 4495. [arXiv:hep-ph/9605332].

[78] Hindmarsh, M., Evolution of defect and brane networks. *Phys. Rev.*, **D68** (2003), 043510. [arXiv:hep-ph/0207267].

[79] 't Hooft, G., Magnetic monopoles in unified gauge theories. *Nucl. Phys.*, **B79** (1974), 276.

[80] Ipser, J. and Sikivie, P., The gravitationally repulsive domain wall. *Phys. Rev.*, **D30** (1984), 712.

[81] Israel, W., Singular hypersurfaces and thin shells in general relativity. *Nuovo Cimento B*, **44S10** (1966), 1. [Erratum-*ibid*. **48** (1967), 463.]

[82] Iwazaki, A., Ferromagnetic domain wall and primeval magnetic field. *Phys. Rev.*, **D56** (1997), 2435. [arXiv:hep-ph/9608448].

[83] Jackiw, R. and Rebbi, C., Solitons with fermion number $1/2$. *Phys. Rev.*, **D13** (1976), 3398.

[84] Jackiw, R. and Rossi, P., Zero modes of the vortex-fermion system. *Nucl. Phys.*, **B190** (1981), 681.

[85] Jona, F. and Shirane, G., *Ferroelectric Crystals* (Oxford: Pergamon, 1962).

[86] Karra, G. and Rivers, R. J., Initial vortex densities after a temperature quench. *Phys. Lett.*, **B414** (1997), 28. [arXiv:hep-ph/9705243].

[87] Kibble, T. W. B., Topology of cosmic domains and strings. *J. Phys.*, **A9** (1976), 1387.

[88] Kibble, T. W. B., Lazarides, G. and Shafi, Q., Walls bounded by strings. *Phys. Rev.*, **D26** (1982), 435.

[89] Kirzhnits, D. A. and Linde, A. D., A relativistic phase transition. *Sov. Phys.-JETP*, **40** (1974), 628.

[90] Kirzhnits, D. A. and Linde, A. D., Symmetry behavior in gauge theories. *Ann. Phys.*, **101** (1976), 195.

[91] Kosowsky, A., Turner, M. S. and Watkins, R., Gravitational radiation from colliding vacuum bubbles. *Phys. Rev.*, **D45** (1992), 4514.

[92] Kubotani, H., The domain wall network of explicitly broken O(N) model. *Prog. Theor. Phys.*, **87** (1992), 387.

[93] Laguna, P. and Zurek, W. H., Density of kinks after a quench: When symmetry breaks, how big are the pieces? *Phys. Rev. Lett.*, **78** (1997), 2519. [arXiv:gr-qc/9607041].

[94] de Laix, A. A., Trodden, M. and Vachaspati, T., Topological inflation with multiple winding. *Phys. Rev.*, **D57** (1998), 7186. [arXiv:gr-qc/9801016].

[95] de Laix, A. A. and Vachaspati, T., On random bubble lattices. *Phys. Rev.*, **D59** (1999), 045017. [arXiv:hep-ph/9802423].

[96] Lalak, Z. and Ovrut, B. A., Domain walls, percolation theory and Abell clusters. *Phys. Rev. Lett.*, **71** (1993), 951.

[97] Larsson, S. E., Sarkar, S. and White, P. L., Evading the cosmological domain wall problem. *Phys. Rev.*, **D55** (1997), 5129. [arXiv:hep-ph/9608319].

[98] Lazarides, G. and Shafi, Q., Superconducting membranes. *Phys. Lett.*, **B159** (1985), 261.

[99] Li, L. F., Group theory of the spontaneously broken gauge symmetries. *Phys. Rev.*, **D9** (1974), 1723.

[100] Linde, A. D., Phase transitions in gauge theories and cosmology. *Rep. Prog. Phys.*, **42** (1979), 389.

[101] Linde, A. D., Monopoles as big as a universe. *Phys. Lett.*, **B327** (1994), 208. [arXiv:astro-ph/9402031].

[102] Linde, A. D. and Linde, D. A., Topological defects as seeds for eternal inflation. *Phys. Rev.*, **D50** (1994), 2456. [arXiv:hep-th/9402115].

[103] Liu, H. and Vachaspati, T., SU(5) monopoles and the dual standard model. *Phys. Rev.*, **D56** (1997), 1300. [arXiv:hep-th/9604138].

[104] Lowe, M. J. and Osborn, H., Bound for soliton masses in two dimensional field theories. Unpublished KEK library preprint (1977).

[105] Maeda, K. I. and Turok, N., Finite width corrections to the Nambu action for the Nielsen-Olesen string. *Phys. Lett.*, **B202** (1988), 376.

[106] Malomed, B. A., Emission from, WKB quantization, and stochastic decay of sine-Gordon solitons in external fields. *Phys. Lett.*, **A120** (1987), 28.

[107] Malomed, B. A., Decay of shrinking solitons in multidimensional sine-Gordon equation. *Physica*, **24D** (1987), 155.

[108] Mandelstam, S., Soliton operators for the quantized sine-Gordon equation. *Phys. Rev.*, **D11** (1975), 3026.

[109] Manton, N. S., An effective Lagrangian for solitons. *Nucl. Phys.*, **B150** (1979), 397.

[110] Manton, N. S. and Merabet, H., ϕ^4 kinks - gradient flow and dynamics. *Nonlinearity*, **12** (1996), 851. [arXiv:hep-th/9605038].

[111] Mazenko, G. F., Introduction to growth kinetic problems. In *Formation and Interaction of Topological Defects*, ed. A.-C. Davis and R. Brandenberger (New York: NATO ASI Series, Plenum, 1995).

[112] Montvay, I. and Münster, G., *Quantum Fields on a Lattice* (Cambridge: Cambridge University Press, 1994).

[113] Morse, P. M. and Feshbach, H., *Methods of Theoretical Physics* (New York: McGraw-Hill, 1953).

[114] Nahm, W., A simple formalism for the bps monopole. *Phys. Lett.*, **B90** (1980), 413.

[115] Nitsche, J. C. C., *Lectures on Minimal Surfaces, Vol. I* (Cambridge: Cambridge University Press, 1989).

[116] Ohta, T., Jasnow, D. and Kawasaki, K., Universal scaling in the motion of random interfaces. *Phys. Rev. Lett.*, **49** (1982), 1223.

[117] Oprea, J., *The Mathematics of Soap Films: Explorations with Maple* (Providence, RI: American Mathematical Society, 2000).

[118] Perlmutter, S., Aldering, G., Goldhaber, G., *et al.*, Measurements of omega and lambda from 42 high-redshift supernovae. *Astrophys. J.*, **517** (1999), 565. [arXiv:astro-ph/9812133].

[119] Peskin, M. E. and Schroeder, D. V., *Quantum Field Theory* (Boulder, CO: Westview Press, 1995).

[120] Pogosian, L. and Vachaspati, T., Space of kink solutions in SU(N) x Z(2). *Phys. Rev.*, **D64** (2001), 105023. [arXiv:hep-th/0105128].

[121] Pogosian, L., Kink interactions in SU(N) x Z(2). *Phys. Rev.*, **D65** (2002), 065023. [arXiv:hep-th/0111206].

[122] Pogosian, L., Steer, D. A. and Vachaspati, T., Triplication of SU(5) monopoles. *Phys. Rev. Lett.*, **90** (2003), 061801. [arXiv:hep-th/0204106].

[123] Pogosian, L. and Vachaspati, T., Domain wall lattices. *Phys. Rev.*, **D67** (2003), 065012. [arXiv:hep-th/0210232].

[124] Polyakov, A. M., Particle spectrum in quantum field theory. *JETP Lett.*, **20** (1974), 194.

[125] Press, W. H., Ryden, B. S. and Spergel, D. N., Dynamical evolution of domain walls in an expanding universe. *Astrophys. J.*, **347** (1989), 590.

[126] Rajaraman, R., *Solitons and Instantons* (Amsterdam: North-Holland, 1982).

[127] Riess, A. G., Filippenks, A. V., Challis, P., *et al.*, Observational evidence from supernovae for an accelerating universe and a cosmological constant. *Astron. J.*, **116** (1998), 1009. [arXiv:astro-ph/9805201].

[128] Riess, A. G., Strolger, L.-G., Tonny, J., *et al.*, Type Ia supernova discoveries at z > 1 from the Hubble Space Telescope: Evidence for past deceleration and constraints on dark energy evolution. *Astrophys. J.*, **607** (2004), 665. [arXiv:astro-ph/0402512].

[129] Rivier, N., Order and disorder in packings and froths. In *Disorder and Granular Media*, ed. D. Bideau and A. Hansen (Amsterdam: North-Holland, 1993).

[130] Ryden, B. S., Press, W. H. and Spergel, D. N., The evolution of networks of domain walls and cosmic strings. *Astrophys. J.*, **357** (1990), 293.

[131] Sakai, N., Shinkai, H. A., Tachizawa, T. and Maeda, K. I., Dynamics of topological defects and inflation. *Phys. Rev.*, **D53** (1996), 655. [Erratum-*ibid*. **D54** (1996), 2981.] [arXiv:gr-qc/9506068].

[132] Salle, M., Kinks in the Hartree approximation. *Phys. Rev.*, **D69** (2004), 025005. [arXiv:hep-ph/0307080].

[133] Scalapino, D. J. and Stoeckly, B., Quantum mechanical kink solution. *Phys. Rev.*, **D14** (1976), 3376.

[134] Scott, A. C., A nonlinear Klein-Gordon equation. *Am. J. Phys.*, **37** (1969), 52.

[135] Segur, H. and Kruskal, M. D., Nonexistence of small amplitude breather solutions in Φ^4 theory. *Phys. Rev. Lett.*, **58** (1987), 747.

[136] Shellard, E. P. S., *Quantum Effects in the Early Universe*. Unpublished Ph.D. thesis, University of Cambridge (1986).

[137] Sheng, Q. and Elser, V., Quasicrystalline minimal surfaces. *Phys. Rev.*, **B49** (1994), 9977.

[138] Silveira, V., Dynamics of the lambda Φ^4 kink. *Phys. Rev.*, **D38** (1988), 3823.

[139] Simon, B., The bound state of weakly coupled Schrödinger operators in one and two-dimensions. *Ann. Phys.*, **97** (1976), 279.

[140] Slusarczyk, M., Dynamics of a planar domain wall with oscillating thickness in $\lambda\phi^4$ model. *Acta Phys. Polon.*, **B31** (2000), 617. [arXiv:hep-th/9903185].

[141] Smit, J., *Introduction to Quantum Fields on a Lattice* (Cambridge: Cambridge University Press, 2002).

[142] Son, D. T., Stephanov, M. A. and Zhitnitsky, A. R., Domain walls of high-density QCD. *Phys. Rev. Lett.*, **86** (2001), 3955. [arXiv:hep-ph/0012041].

[143] Stauffer, D., Scaling theory of percolation clusters. *Phys. Rep.*, **54** (1979), 1.

[144] Stebbins, A. and Turner, M. S., Is the great attractor really a great wall? *Astrophys. J.*, **339** (1989), L13.

[145] Steenrod, N., *The Topology of Fiber Bundles* (Princeton: Princeton University Press, 1951).

[146] Steer, D. and Vachaspati, T., Domain walls and fermion scattering in grand unified models. Unpublished (2005).

[147] Stojkovic, D., Fermionic zero modes on domain walls. *Phys. Rev.*, **D63** (2001), 025010. [arXiv:hep-ph/0007343].

[148] Stojkovic, D., Freese, K. and Starkman, G. D., Holes in the walls: Primordial black holes as a solution to the cosmological domain wall problem. *Phys. Rev.*, **D72** (2005), 045012. [arXiv:hep-ph/0505026].

[149] Su, W. P., Schrieffer, J. R. and Heeger, A. J., Solitons in polyacetylene. *Phys. Rev. Lett.*, **42** (1979), 1698.

[150] Su, W. P., Schrieffer, J. R. and Heeger, A. J., Soliton excitations in polyacetylene. *Phys. Rev.*, **B22** (1980), 2099.

[151] Su, W. P. and Schrieffer, J. R., Fractionally charged excitations in charge-density-wave systems with commensurability 3. *Phys. Rev. Lett.*, **46** (1980), 738.

[152] Su, W. P. and Schrieffer, J. R., Soliton dynamics in polyacetylene. *Proc. Natl. Acad. Sci. USA*, **77** (1980), 5626.

[153] Sutcliffe, P. M., Classical and quantum kink scattering. *Nucl. Phys.*, **B393** (1993), 211.

[154] Taub, A. H., Isentropic hydrodynamics in plane symmetric spacetimes. *Phys. Rev.*, **103** (1956), 454.

[155] Toda, M., *Theory of Nonlinear Lattices* (New York: Springer-Verlag, 1989).

[156] Torres-Hernandez, J. L., The soliton mass in the sine-Gordon theory. *Nucl. Phys.*, **B116** (1976), 214.

[157] Turner, M. S. and Wilczek, F., Relic gravitational waves and extended inflation. *Phys. Rev. Lett.*, **65** (1990), 3080.

[158] Turner, M. S., Watkins, R. and Widrow, L. M., Microwave distortions from collapsing domain wall bubbles. *Astrophys. J.*, **367** (1991), L43.

[159] Vachaspati, T. and Vilenkin, A., Formation and evolution of cosmic strings. *Phys. Rev.*, **D30** (1984), 2036.

[160] Vachaspati, T., Everett, A. E. and Vilenkin, A., Radiation from vacuum strings and domain walls. *Phys. Rev.*, **D30** (1984), 2046.

[161] Vachaspati and Vachaspati, T., Traveling waves on domain walls and cosmic strings. *Phys. Lett.*, **B238** (1990), 41.

[162] Vachaspati, T., An attempt to construct the standard model with monopoles. *Phys. Rev. Lett.*, **76** (1996), 188. [arXiv:hep-ph/9509271].

[163] Vachaspati, T., A class of kinks in SU(N) x Z(2). *Phys. Rev.*, **D63** (2001), 105010. [arXiv:hep-th/0102047].

[164] Vachaspati, T., Symmetries within domain walls. *Phys. Rev.*, **D67** (2003), 125002. [arXiv:hep-th/0303137].

[165] Vachaspati, T., Reconstruction of field theory from excitation spectra of defects. *Phys. Rev.*, **D69** (2004), 043510. [arXiv:hep-th/0309086].

[166] Vachaspati, T. and Trodden, M., Causality and cosmic inflation. *Phys. Rev.*, **D61** (2000), 023502. [arXiv:gr-qc/9811037].

[167] Vilenkin, A., Gravitational field of vacuum domain walls and strings. *Phys. Rev.*, **D23** (1981), 852.

[168] Vilenkin, A. and Everett, A. E., Cosmic strings and domain walls in models with Goldstone and pseudogoldstone bosons. *Phys. Rev. Lett.*, **48** (1982), 1867.

[169] Vilenkin, A., Gravitational field of vacuum domain walls. *Phys. Lett.*, **B133** (1983), 177.

[170] Vilenkin, A., Topological inflation. *Phys. Rev. Lett.*, **72** (1994), 3137. [arXiv:hep-th/9402085].

[171] Vilenkin, A. and Shellard, E. P. S., *Cosmic Strings and other Topological Defects* (Cambridge: Cambridge University Press, 1994).

[172] Voloshin, M. B., No primordial magnetic field from domain walls. *Phys. Lett.*, **B491** (2000), 311. [arXiv:hep-ph/0007123].

[173] Voloshin, M. B., Once again on electromagnetic properties of a domain wall interacting with charged fermions. *Phys. Rev.*, **D63** (2001), 125012. [arXiv:hep-ph/0102239].

[174] Volovik, G. E., *The Universe in a Helium Droplet* (Oxford: Oxford University Press, 2003).

[175] Watkins, R. and Widrow, L. M., Aspects of reheating in first order inflation. *Nucl. Phys.*, **B374** (1992), 446.

[176] Weinberg, E. J., Index calculations for the fermion - vortex system. *Phys. Rev.*, **D24** (1981), 2669.

[177] Weinberg, S., *Gravitation and Cosmology* (New York: John Wiley & Sons, 1972).

[178] Weinberg, S., Perturbative calculations of symmetry breaking. *Phys. Rev.*, **D7** (1973), 2887.

[179] Weinberg, S., Gauge and global symmetries at high temperature. *Phys. Rev.*, **D9** (1974), 3357.

[180] Whitham, G. B., *Linear and Nonlinear Waves* (New York: John Wiley & Sons, 1974).

[181] Widrow, L. M., General relativistic domain walls. *Phys. Rev.*, **D39** (1989), 3571.

[182] Widrow, L. M., The collapse of nearly spherical domain walls. *Phys. Rev.*, **D39** (1989), 3576.

[183] Widrow, L. M., Dynamics of thick domain walls. *Phys. Rev.*, **D40** (1989), 1002.

[184] Witten, E., Superconducting strings. *Nucl. Phys.*, **B249** (1984), 557.

[185] Zabusky, N. J. and Kruskal, M. D., Interactions of "solitons" in a collisionless plasma and the recurrence of initial states. *Phys. Rev. Lett.*, **15** (1965), 240.

[186] Zeldovich, Y. B., Kobzarev, I. Y. and Okun, L. B., Cosmological consequences of the spontaneous breakdown of discrete symmetry. *Zh. Eksp. Teor. Fiz.*, **67** (1974), 3.

[187] Zurek, W. H., Cosmic strings in laboratory superfluids and the topological remnants of other phase transitions. *Acta Phys. Polon.*, **B24** (1993), 1301.

[188] Zurek, W. H., Cosmological experiments in condensed matter systems. *Phys. Rep.*, **276** (1996), 177. [arXiv:cond-mat/9607135].