

## BIBLIOGRAPHY

---

- [1] Alcrufo, F. and Benkhaldom, F., “Exact Solution to the Riemann problem of the shallow water equations with a bottom step”, *Comput. Fluid.* **30**, 643-671, 2001.
- [2] Anile, A. M. and Greco, A., “Asymptotic waves and critical time in general relativistic magnetohydrodynamics”, *Ann. Inst. Henri Poincaré*, **29**, 257-272, 1978.
- [3] Ardavan-Rhad, H., “The decay of a plane shock wave”, *J. Fluid Mech.*, **43**, 737-751, 1970.
- [4] Bermudez, A. and Vazquez-Cendón, M. E., “Upwind methods for hyperbolic conservation laws with source terms”, *Comput. Fluids* **23**, 1049–1071, 1994.
- [5] Bernetti, R., Titarev, V. A. and Toro, E. F., “Exact solution of the Riemann problem for the shallow water equations with discontinuous bottom geometry”, *J. Comput. Phys.* **227**, 3212–3243, 2008.
- [6] Berthon, C., Desveaux, V., Klingenberg, C. and Zenk, M., “A well balanced scheme for the Euler equation with gravitation potential, in finite volumes for complex applications VII”, *Methods and Theoretical Aspects, Springer Proc. Math. Stat.* **77**, Springer, Cham, Switzerland 217-226, 2014.
- [7] Berthon, C., Desveaux, V., Klingenberg, C. and Zenk, M., “Well balanced schemes to capture non-explicit steady states in the Euler equations with gravity”, *Int. J. Num. Method Fluids*, **81** (2), 104-127, 2016.
- [8] Boillat, G. and Ruggeri, T., “On the evolution law of weak discontinuities for Hyperbolic quasi-linear hyperbolic systems”, *Wave Motion*, **1**, 149-152, 1979.
- [9] Boillat, G. and Ruggeri, T., “On the shock structure problem for hyperbolic system of balance laws and convex entropy”, *Continuum Mech. Thermo.* **10**, 285-292, 1998.
- [10] Boillat, G., “La Propagation des Ondes, Gauthier-Villars”, Paris 1965.
- [11] Bowen, R. M. and Chen, P. J., “Shock waves in ideal fluid mixtures with several temperatures”, *Arch. Rational Mech. Anal.*, **53**, 277-294, 1974.
- [12] Branover, H., “Magnetohydrodynamic flow in ducts”, Wiley, New York, 1978.
- [13] Bressan, A., “Hyperbolic Systems of Conservation Laws”, Oxford University Press, Oxford, 2000.
- [14] Brufau, P., García-Navarro, P. and Vázquez-Cendón, M. E., “A numerical model for the flooding and drying of irregular domains”, *Int. J. Numer. Method Fluids* **39**, 247–275, 2002.
- [15] Butler, D., “Converging spherical and cylindrical shocks”, *Armament Res. Estab. Rep.*, 54/54, 1954.
- [16] Chandrashekar, P. and Klingenberg, C., “a second order well-balanced finite volume scheme for Euler equations with gravity”, *Siam J. Sci. Comput.*, **37** (3), 382-402, 2015
- [17] Chen, G. Q. and Toro, E. F., “Centered difference schemes for nonlinear hyperbolic equations”, *J. Hyp. Diff. Eqn.*, **1** (3), 531–566, 2004.
- [18] Chen, P. J. and Gurtin, M. E., “On the growth of one-dimensional shock waves in materials with memory”, *Arch. Rational Mech. Anal.*, **36**, 33-46, 1970.
- [19] Chen, P. J., “One dimensional shock waves in elastic non-conductors”, *Arch. Rational Mech. Anal.*, **43**, 350-362, 1971.
- [20] Chen, P. J., “Thermodynamic influences on shock waves in inhomogeneous elastic bodies”, *Acta Mech.*, **17**, 247-253, 1973.

- 
- [21] Chinnayya, A., Leroux, A. Y. and Seguin, N., “A well balanced numerical scheme for the approximation of the shallow water equations with topography: the resonance phenomenon”, *Int. J. Finite Vol.* **1**, 1-33, 2004.
- [22] Chisnell, R. F., “An analytical description of converging shock waves”, *J. Fluid Mech.*, **354**, 357-375, 1998.
- [23] Choquet-Bruhat, Y., “Ondes asymptotiques et approches pour des systemes d equations aux derivees partielles non lineaires”, *J. Maths. Pures et. App.*, **48**, 117-158, 1969.
- [24] Chorin, A. J., “Random Choice Solutions of hyperbolic systems”, *J. Comput. Phys.*, **22**, 517-533, 1976.
- [25] Colella, P. and Glaz, H. H., “Efficient solution algorithms for the Riemann problem for real gases”, *J. Comput. Phys.*, **59**, 264-289, 1985.
- [26] Coleman, B. D. and Gurtin, M. E., “Growth and decay of discontinuities in fluids with internal state variables”, *Phys. Fluid*, **10**, 1454-1458, 1967.
- [27] Collela, P., “Glimm's Method For Gas Dynamics”, *Siam J. Sci. Stat. Comput.*, **3**(1), 76-110, 1982.
- [28] Concus, P. and Proskurowski, W., “Numerical Solution of a Nonlinear Hyperbolic Equation by the Random Choice Method “, *J. Comput. Phys.*, **30**, 153-166, 1979.
- [29] Courant, R. and Friedrichs, K. O., “Supersonic flow and shock wave”, Wiley, New York, 1948.
- [30] Courant, R. and Hilbert, D., “Methods of mathematical physics II”, Interscience, New York, 1962.
- [31] Courant, R. and Hilbert, D., “Methods of Mathematical Physics”, Vol **1**, Interscience Publishers, New York, 1953.
- [32] Dafermos, C. M., “Hyperbolic Conservation Laws in Continuum Physics”, Springer, NewYork, 2000.
- [33] Davis, S. F., “Simplified second-order Godunov-type methods”, *Siam J. Sci. Stat. Comput.*, **9**, 445–473, 1988.
- [34] Dutt P., “A Riemann solver based on a global existence proof for the Riemann problem”, Technical report ICASE 86-3, Nasa Langley Research Centre, USA, 1986.
- [35] Einfeldt, B., “On Godunov-type methods for gas dynamics”, *Siam J. Numer. Anal.*, **25**, 294–318, 1988.
- [36] Flack, R. D. and Wittig, S. L. K., “The propagation of shock waves in gases with arbitrary property gradients”, *Z. Angew. Math. Phys.*, **22**, 654-664, 1971.
- [37] Fu, X. and Sharma, V. D., “Cauchy problem for an isentropic magnetogasdynamic system”, *J. Math. Anal. Appl.* **424**, 437-443, 2015.
- [38] Fu, X. and Sharma, V. D., “Cauchy problem for quasilinear hyperbolic systems of shallow water equations”, *Appl. Anal. Int. J.*, **92**, 2309–2319, 2013.
- [39] Fuchs, F. G., McMurry, A. D., Mishra, S., Risebro, N. H., and Waagan, K., High order well- balanced finite volume schemes for simulating wave propagation in stratified magnetic atmospheres, *J. Comput. Phys.*, **229**, 4033–4058, 2010.
- [40] Fusco, D. and Engelbrecht, J., “The asymptotic analysis of nonlinear waves in rate dependent media”, *II Nuovo Cimento*, **80**, 49-61, 1984.
- [41] Fusco, D., “Some comments on wave motions described by non homogeneous quasilinear first order hyperbolic systems”, *Meccanica*, **17**, 128-137, 1982.

- [42] García-Navarro, P. and Vázquez-Cendón, M. E., “On the numerical treatment of the source terms in the shallow water equations”, *Comput. Fluids*, **29**, 951–979, 2000.
- [43] Germain, P., “Progressive waves”, *Jber Dglr*, 11-30, 1972.
- [44] Glass, I. I., (1987) Private communications.
- [45] Glimm, J., “Solutions in the large for nonlinear hyperbolic systems of equations”, *Comm. Pure. Appl. Math.*, **18**, 697-715, 1965.
- [46] Godunov, S. K., “A finite difference method for the computation of discontinuous solutions of the equations of fluid dynamics”, *Mater Sb*, **47**, 357–393, 1959.
- [47] Godunov, S. K., Zabrodin, A. V., Ivanov, M. I., Kraiko, A. N. and Prokopov, G. P., “Numerical solution of multidimensional problems of gas dynamics”, *Moscow Izdatel Nauka*, **1**, 1976.
- [48] Goldman, E. and Sirovich, L., “The structure of shock-waves in gas-mixtures”, *J. Fluid Mech.*, **35**, 575-597, 1969.
- [49] Gottlieb, J. J. and Groth, C. P. T., “Assessment of Riemann solvers for unsteady one dimensional inviscid flows of perfect gas”, *J. Comput. Phys.*, **78**, 437–458, 1988.
- [50] Guderley, G., “Starke Kugelige und Zylindrische, Verdichtungsstöße in der Nähe des Kugelmittelpunktes bzw. der Zylinderachse”, *Luftfahrtforschung*, **19**, 302-312, 1942.
- [51] Guillard, H. and Viozat, C., “On the behavior of upwind schemes in the low mach number limit”, *Comput. Fluids*, **28**, 63-96, 1999.
- [52] Gupta, H. and Singh, L. P., “Simulation of Dam-Break Problem using Random Choice Method”, *Computers & Fluids*, **111**, 187–196, 2015.
- [53] Gupta, R. K., Nath, Triloki and Singh, L. P., “Solution of Riemann problem for dusty gas flow”, *Int. J. Non-Lin. Mech.*, **82**, 83–92, 2016.
- [54] Harten, A., Lax, P. D. and van Leer, B., “On upstream differencing and Godunov type methods for hyperbolic conservation laws”, *Siam Rev.*, **25**, 35–61, 1983.
- [55] Hayes, W. D., “The vorticity jump across a gasdynamic discontinuity”, *J. Fluid Mech.*, **2**, 595-600, 1957.
- [56] Hoffman, F. De and Teller, E., “Magneto-hydrodynamic shocks”, *Phys. Rev.*, **80**, 692-703, 1950.
- [57] Hubbard, M. E. and García-Navarro, P., “Flux difference splitting and the balancing of source terms and flux gradients”, *J. Comput. Phys.*, **165**, 89–125, 2000.
- [58] Hunter, J. K. and Keller, J. B., “Weakly non-linear high frequency wave”, *Comm. Pure Appl. Math*, **36**, 547-569, 1983.
- [59] Ismail, F. and Roe P. L., “Affordable entropy consistent Euler flux functions II: Entropy production at shocks”, *J Comput Phys*, **228**, 5410-5436, 2009.
- [60] Jeffrey, A. and Taniuti, T., “Nonlinear wave propagation”, *Academic Press, New York*, 1964.
- [61] Kantrowitz, A. and Perschek, H. E., “Plasma physics in theory and applications”, *McGraw Hill, New York*, 1966.
- [62] Kanwal, R. P., “Flow behind shock waves on conducting gases”, *Proc. R. Soc. Lond. A*, **257**, 263-268, 1960.
- [63] Kanwal, R. P., “Propagation of curved shocks in pseudo-stationary three-dimensional gas flows”, *Illinois J. Math.*, **2**, 129-136, 1958.
- [64] Kappeli, R. and Mishra, S., “Well-balanced scheme for the Euler equations with gravitation”, *J. Comput. Phys.*, **259**, 199-219, 2014.

- 
- [65] Kawahara, M. and Umetsu, T., “Finite element method for moving boundary problems in river flow”, *Int. J. Numer. Method Fluids*, **6**, 365–86, 1986.
- [66] Korobeinikov, V. P., “Problems in the theory of point explosion in gases”, American Mathematical Society, Rhode Island, 1976.
- [67] Kulikovskii, A. G. and Liubimov, G. A., “On the structure of an inclined magnetohydrodynamic shock wave”, *J. Appl. Math. Mech.*, **25**, 171-191, 1961.
- [68] Kuznetsov, N. M., Popov, V. M. and Khodyko, Lu. V., “Structure of shock waves in a diatomic radiating low-density gas”, *Sov. Phys. Doklady*, **24**, 451-452, 1979.
- [69] Laibe, G. and Price, D. J., “Dusty gas with one fluid”, *Mon. Not. R. Astron. Soc.* **440** (3), 2136-2146, 2014.
- [70] Lamb, F. K., Collen, B. W. and Sullivan, J. D., “An approximate analytical model of shock waves from underground nuclear explosion”, *J. Geophys. Res.*, **97**, 515-535, 1992.
- [71] Landau L. and Lifshitz E., “Fluid Mechanics”, Addison-Wesley, 1959.
- [72] Lax, P. D., “Development of singularities of solutions of nonlinear hyperbolic partial differential equations”, *J. Math. Phys.*, **5** (5), 611-613, 1964.
- [73] Lax, P. D., “Hyperbolic systems of conservation laws I”, *Comm. Pure. Appl. Math.*, **10**, 537–566, 1957.
- [74] Lazarus, R. B., “Self-similar solutions for converging shocks and collapsing cavities”, *Siam J. Numer. Anal.*, **18**, 316-371, 1981.
- [75] Lee, S. H. and Wright, N. G., “Simple and efficient solution of the shallow water equations with source terms”, *Int. J. Numer. Meth. Fluids*, **63**, 313–340, 2010.
- [76] LeFloch P. G. and Thanh M. D., “The Riemann problem for fluid flows in a nozzle with discontinuous cross section”, *Comm. Math. Sci.*, **1** (4), 763-797, 2003.
- [77] LeFloch P. G. and Thanh M. D., “A Godunov type method for the shallow water equations with discontinuous topography in the resonant regime”, *J. Comput. Phys.* **230**, 7631-7660, 2011.
- [78] LeFloch, P. G. and Thanh, M. D., “The Riemann problem for shallow water equations with discontinuous topography”, *Commun. Math. Sci.*, **5**, 865-885, 2007.
- [79] Leveque, R. J. and Bale, D. S., “Wave propagation methods for conservation laws with source terms, in *Hyperbolic problems: Theory, Numerics, Applications*”, R. Jeltsch and M Fey, eds., *Internat Ser Numer Math* 130, Birkhauser, Basel, 609-618, 1999.
- [80] Leveque, R. J., “A well-balanced path integral f-wave method for the hyperbolic problems with source terms”, *J. Sci. Comput.*, **48**, 209-226, 2011.
- [81] LeVeque, R. J., “Finite Volume Methods for Hyperbolic Problems”, Cambridge University Press, Cambridge, UK, 2002.
- [82] Li, T. and Liu, H., “Critical thresholds in hyperbolic relaxation systems”, *J. Differential Equations*, **247**, 33–48, 2009.
- [83] Li, T. T., “Global Classical Solutions for Quasilinear Hyperbolic Systems”, *Research in Applied Mathematics*, Masson-Wiley, Paris, 1994.
- [84] Liang, Q. and Borthwick, A. G. L., “Adaptive quadtree simulation of shallow flows with wet–dry fronts over complex topography”, *Comput. Fluids*, **38**, 221–234, 2009.

- 
- [85] Lions, P. L., Perthame, B. and Souganidis, P. E., “Existence and stability of entropic solutions for the hyperbolic systems of isentropic gas dynamics in Eulerian and Lagrangian coordinates”, *Comm. Pure Appl. Math.*, **49**, 599–638, 1996.
- [86] Lock, R. M. and Mestel, A. J., “Annular self-similar solutions in ideal magnetogasdynamics”, *J. Plasma Phys.*, **74**, 531-554, 2008.
- [87] Luo, J., Xu, K. and Liu, N., “A well balanced symplecticity-preserving gas-kinetic scheme for hydrodynamic equations under gravitational field”, *Siam J. Sci. Comput.*, **33**, 2356-2381, 2011.
- [88] Macpherson, A. K., “The formation of shock wave in a dense gas using a molecular dynamics type technique”, *J. Fluid Mech.*, **45**, 601-621, 1971.
- [89] Marble, F. E., “Dynamics of a gas containing small solid particles”, *Proc. 5<sup>th</sup> AGARD combustion and propulsion colloquium*, Pergamon Pres, New York, USA, 175-215, 1963.
- [90] Marble, F. E., “Dynamics of Dusty Gases”, *Ann. Rev. Fluid Mech.*, **2**, 397-446, 1970.
- [91] Marcati, P. and Rubino, B., “Hyperbolic to parabolic relaxation theory for quasilinear first order systems”, *J. Diff. Eq.*, **162**, 359–399, 2000.
- [92] Menikoff, R. and Plohr, B. J., “The Riemann problem for fluid flow of real materials”, *Rev. Mod. Phys.*, **61**(1), 75 – 129, 1989.
- [93] Menon, V. V. and Sharma, V. D., “Characteristic wave fronts in magnetohydrodynamics”, *J. Math. Anal. Appl.*, **81**, 189-203, 1981.
- [94] Miniati, F., “Glimm-Godunov’s Method for Cosmic Ray Hydrodynamics”, *J. Comput. Phys.*, **227**, 776- 796, 2007.
- [95] Miura, H. and Glass, I. I., “On the Passage of a Shock Wave through a Dusty Layer”, *Proc. Roy. Soc. Lond., Ser. A* **385**, 85-105, 1983.
- [96] Murillo, J. and García-Navarro, P., “Augmented versions of the HLL and HLLC Riemann solvers including source terms in one and two dimensions for shallow flow applications”, *J. Comput. Phys.*, **231**, 6861–6906, 2012.
- [97] Murillo, J., and García-Navarro, P., “Weak solutions for partial differential equations with source terms: application to the shallow water equations”, *J. Comput. Phys.*, **229**, 4327–4368, 2010.
- [98] Pai, S. I., “Magnetogasdynamics and plasma dynamics”, Prentice Hall, New Jersey, 1972.
- [99] Pai, S. I., “Two Phase Flow”, Vieweg Verlag, Braunschweig, 1977.
- [100] Pai, S. I., Menon, S. and Fan, Z. Q., “Similarity solution of a strong shock wave propagating in a mixture of a gas and dusty particles”, *Int. J. Eng. Sci.*, **18**, 1365-1373, 1980.
- [101] Pandey, M. and Sharma, V. D., “Interaction of a characteristic shock with a weak discontinuity in a non-ideal gas”, *Wave Motion*, **44**, 346-354, 2007.
- [102] Pelanti, M. and Leveque, R. J., “High-resolution finite volume methods for dusty gas jets and plumes”, *Siam J. Sci. Comput.*, **28** (4), 1335–1360, 2006.
- [103] Pike, J., “Riemann solvers for perfect and near-perfect gases”, *AIAA Journal*, **31** (10), 1801-1808, 1993.
- [104] Quartapelle, L., Castelletti, L., Guardone, A. and Quaranta, G., “Solution of Riemann problem of classical gasdynamics”, *J. Comput. Phys.*, **190**, 118-140, 2003.

- 
- [105] Ram, R., “Analytical solutions of the problem of violent explosions in a plasma of varying density”, *Acta Mech.*, **40**, 75-83, 1981.
- [106] Ram, R., “Effect of radiative heat transfer on the growth and decay of acceleration waves”, *Appl. Sci. Res.*, **34**, 93-103, 1978.
- [107] Roe, P. L., “Approximate Riemann solvers, parameter vectors, and difference schemes”, *J. Comput. Phys.*, **43**, 357–372, 1981.
- [108] Rosatti, G. and Begnudelli, L., “The Riemann problem for the one dimensional, free-surface shallow water equations with a bed step: theoretical analysis and numerical simulations”, *J. Comput. Phys.*, **229**, 760-787, 2010.
- [109] Rudinger, G., “Fundamentals of Gas Particle Flow”, Elsevier Scientific Publishing Company, Amsterdam, 1980.
- [110] Ruggeri, T. and Boillat, G., “Reflection and transmission of discontinuity waves through a shock wave. General theory including also the case of characteristic shocks”, *Proc. Royal Soc. Edinburgh, Section: A Mathematics* **83A**, 17-24, 1979.
- [111] Saldatov, G. P., “The instant of formation of a shock wave in a two-way traffic flow”, *Prikl. Matem. Mekhan.*, **34**, 135-137, 1970.
- [112] Saurel, R., Larini, M. and Loraud, J. C., Exact and approximate Riemann solvers for real gases, *J. Comput. Phys.*, **112**, 126-137, 1994.
- [113] Schleicher, M., “Ein Einfaches and Effizientes Verfahren zur Loesung des Riemann problems”, *Z. Flugwiss, Weltraumforsch.*, **17**, 265-269, 1993.
- [114] Sedov, L. I., “Similarity and dimensional methods in mechanics”, Academic Press, New York, 1959.
- [115] Sekhar, T. R. and Sharma, V. D., “Riemann problem and elementary wave interactions in isentropic magnetogasdynamics”, *Nonlinear Anal. Real World Appl.*, **11**(2), 619–636, 2010.
- [116] Sekhar, T. R. and Sharma, V. D., “Solution to the Riemann problem in a one-dimensional magnetogasdynamic flow”, *Int. J. Comput. Math.*, **89**, 200–216, 2012.
- [117] Seymour, B. R. and Varley, E., “High frequency periodic disturbances in dissipative systems. I. Small amplitude finite rate theory”, *Proc. R. Soc. Lond. A*, **314**, 387-415, 1970.
- [118] Sharma, V. D. and Menon, V. V., “Further comments on the behaviour of acceleration waves of arbitrary shape”, *J. Math. Phys.*, **22**, 683-684, 1981.
- [119] Sharma, V. D., “Quasilinear Hyperbolic Systems, Compressible Flows, and Waves”, Chapman & Hall/CRC Monographs and Surveys in Pure and Applied Mathematics, vol.142, CRC Press, Florida, 2010.
- [120] Sharma, V. D., Shyam, R. and Singh, L. P., “Shock formation distance in a two dimensional steady flow over a concave corner in radiative magnetogasdynamics”, *ZAMM*, **67**, 87-92, 1987b.
- [121] Sharma, V. D., Singh, L. P. and Ram, R., “The progressive wave approach analyzing the decay of a sawtooth profile in magnetogasdynamics”, *Phys. Fluids*, **30**, 1572-1574, 1987a.
- [122] Shifrin, E. G., “Formation of a ‘hanging’ compression shock in the flow past a body with a discontinuity in its generatrix”, *Prikl. Matem. Mekhan.*, **34**, 1159-1167, 1970.
- [123] Shu, C. W. and Osher, S., “Efficient implementation of essentially non-oscillatory shock capturing schemes”, *J. Comput. Phys.* **77**, 439-471, 1988.

- 
- [124] Singh, L. P., Husain, Akmal and Singh, M., “A self-similar solution of exponential shock waves in non-ideal magnetogasdynamics”, *Meccanica*, **46**, 437-445, 2011.
- [125] Singh, L. P., Husain, Akmal and Singh, M., “An approximate analytical solution of imploding strong shocks in a Non-ideal gas through Lie group analysis”, *Chin. Phys. Lett.*, **27**, 1-4, 2010.
- [126] Singh, L. P., Husain, Akmal and Singh, M., “Evolution of weak discontinuities in a non-ideal radiating gas”, *Commun. Nonlinear Sci. and Numer. Simula.*, **16**, 690-697, 2011.
- [127] Singh, L. P., Ram, S. D. and Singh, D. B., “Exact solution of planar and non-planar weak shock wave problem in gasdynamics”, *Chaos, Solitons & Fractals*, **44**, 964-967, 2011a.
- [128] Singh, L. P., Ram, S. D. and Singh, D. B., “Quasi-Similar solution of strong shock wave problem in non-ideal gasdynamics”, *Astrophysics & Space Sci.*, **337**, 597-604, 2012.
- [129] Singh, L. P., Ram, S. D. and Singh, D. B., “The influence of magnetic field upon the collapse of a cylindrical shock”, *Meccanica*, **48**, 841–850, 2013.
- [130] Singh, L. P., Ram, S. D. and Singh, D. B., “Uniform solution for the flow past a slender body with an attached shock wave in Radiative Magnetogasdynamics”, *Acta Astronaut.*, **68**, 700-706, 2011d.
- [131] Singh, L. P., Ram, S. D. and Singh, D. B., “Uniform solution for the flow past a slender body with an attached shock wave in radiative magnetogasdynamics”, *Acta Astronautica*, **67**, 296-300, 2010.
- [132] Singh, L. P., Ram, S. D. and Singh, D. B., “Propagation of weak shock waves in non-uniform, radiative magnetogasdynamics”, *Acta Astronaut.*, **67**, 296 -300, 2010.
- [133] Singh, L. P., Singh, D. B. and Ram S. D., “Propagation of weak shock waves in a non-ideal gas”, *Cen. Eur. J. Eng.*, **1**, 287-294, 2011b.
- [134] Singh, L. P., Singh, D. B. and Ram, S. D., “Flow pattern induced by the plane piston moving in a non-ideal gas with weak gravitational field”, *Ain Shams Eng. J.*, **2**, 125-131, 2011c.
- [135] Singh, L. P., Singh, R. and Ram, S. D., “Evolution and decay of acceleration waves in perfectly conducting inviscid radiative magnetogasdynamics”, *Astrophys. Space Sci.*, **342**, 371-376, 2012.
- [136] Singh, R. and Singh, L. P., “Solution of the Riemann Problem in magnetogasdynamics”, *Int. J. Non-Linear Mech.*, **67**, 326–330, 2014.
- [137] Smith, R., “The Riemann problem in gasdynamics”, *Trans. Am. Math. Soc.*, 249, 1, 1979.
- [138] Smoller, J., “On the solution of the Riemann problem with general step data for an extended class of hyperbolic systems”, *Michigan Math. J.*, **16**, 201–210, 1969.
- [139] Smoller, J., “Shock Waves and Reaction Diffusion Equations”, *Grundlehren der mathematischen Wissenschaften*, Vol. 258, 2nd ed., Springer Verlag, NewYork, 1994.
- [140] Sod, G. A., “A numerical study of a converging cylindrical shock”, *J. Fluid Mech.*, **83**, 785-794, 1977.
- [141] Sod, G. A., “A survey of several finite difference methods for systems of nonlinear hyperbolic conservation laws”, *J. Comput. Phys.*, **27**, 1–31, 1978.

- 
- [142] Somogyi, Z. and Roberts, P. H., “Stability of an imploding spherical shock wave in a Van der Waals gas II”, *Q. J. Mech. Appl. Math.*, **60**, 289-309, 2007.
- [143] Spitzer, L., “Physics of fully ionized gases”, Wiley, New York, 1967.
- [144] Stanyukovich, K. P., “Unsteady motion of continuous media”, Pergamon Press, New York, 1960.
- [145] Stoker, J. J., “Water Waves: Mathematical Theory with Applications”, Vol. IV. John Wiley & Sons, New York, 1992.
- [146] Taylor, G. I., “The formation of a blast wave by a very intense explosion. I. Theoretical discussion”, *Proc. Roy. Soc. A*, **201**, 159-174, 1950.
- [147] Taylor, M. G. G. T. and Cargill, P. J., “A general theory of self-similar expansion waves in magnetohydrodynamic flows”, *J. Plasma Phys.*, **66**, 239-257, 2001.
- [148] Thacker, W. C., “Some exact solutions to the nonlinear shallow water equations”, *J. Fluid Mech.*, **107**, 499–508, 1981.
- [149] Thomas, T. Y., “On curved shock waves”, *J. Math. Phys.*, **26**, 62-68, 1947.
- [150] Toro, E. F., “Riemann solvers and numerical methods for fluid dynamics”, 2009, Springer, Heidelberg, New York.
- [151] Toro, E. F., Spruce, M. and Spears, W., “Restoration of contact surface in the HLL Riemann solver”, *Shock Waves*, **4**, 25-34, 1994.
- [152] Toro, E. F., “A fast Riemann solver with constant covolume applied to the random choice method”, *Int. J. Numer. Methods Fluids*, **9**(4), 1145–1164, 1989.
- [153] Toro, E. F., “Direct Riemann solvers for the time dependent Euler equations”, *Shock Waves* **5**, 75-80, 1995.
- [154] Toro, E. F., “Riemann Problems and the WAF Method for Solving the Two-Dimensional shallow water equations“, *Philos. Trans. Roy. Soc. Lond. A, Math., Phys. Eng. Sci.*, **338** (1649), 43-68, 1992.
- [155] Toro, E. F., “Shock-Capturing Methods for Free-Surface Shallow Flows”, John Wiley, 2001.
- [156] Touma, R., Koley, U. and Klingenberg, C., “Well balanced unstaggered central scheme for the Euler equation with gravity”, *Siam J. Sci. Comput.*, **38** (5), B773-B807, 2016.
- [157] Van Leer, B., “Towards the ultimate conservative difference scheme V, A second order sequel to Godunov’s method”, *J. Comput. Phys.*, **32**, 101-136, 1979.
- [158] Wanner, et al., “Theoretical and experimental studies of the focus of sonic booms (A)”, *J. Acoust. Soc. Am.*, **52**, 13-32, 1972.
- [159] Welsh, R. L., “Imploding shocks and detonations”, *J. Fluid Mech.*, **29**, 61-79, 1967.
- [160] Weyl H., “Shock waves in arbitrary fluids”, *Commun. Pure Appl. Math. II*, **103**, 1949.
- [161] Whitham, G. B., “Linear and Nonlinear Waves”, New York, John Wiley & Sons, 1974.
- [162] Woodward, P. and Colella, P., “The numerical simulation of two-dimensional fluid flow with strong shocks”, *J. Comput. Phys.*, **54**, 115–173, 1984.
- [163] Wu, C. C. and Roberts, P. H., “Structure and stability of a spherical shock wave in a Van der Waals gas”, *Quart. J. Mech. Appl. Math.*, **49**, 501-543, 1996.
- [164] Xing, Y. and Shu, C. W., “High order well-balanced WENO scheme for the gas dynamics equations under gravitational fields”, *J. Sci. Comput.*, **54**, 645-662, 2013.



- [165] Yang, T. and Zhu, C. J., “Existence and non-existence of global smooth solution for p-system with relaxation”, *J. Differential Equations*, **161**, 321–336, 2000.
- [166] Yulong, X. and Chi-Wang, S., “High order finite difference WENO schemes with the exact conservation property for the shallow water equations”, *J. Comput. Phys.*, **208**, 206–227, 2005.
- [167] Zeldovich, Y. B. and Raizer, Y. P., “Physics of shock waves and high temperature hydrodynamic phenomenon”, Vol. II, Academic Press, New York, 1967.
- [168] Zen’kevich, S. M. and Stepanov, K. L., “Self- similar solution of the problem of a strong explosion in a perfect gas: Lagrangian description”, *J. Eng. Phys. Theomorphys.*, **80**, 89-96, 2007.
- [169] Zhao, N., Mentrelli, A., Ruggeri, T. and Sugiyama, M., “Admissible shock waves and shock- induced phase transition in a vander Waals Fluids”, **23**, 086-101, 2011.
- [170] Zheng, Y. S., “Global smooth solution for systems of gas dynamics with the dissipation”, *Acta Math. Sci.*, **7**, 383–390, 1987.
- [171] Zhou, J. G., Causon, D. M., Ingram, D. M. and Mingham, C. G., “Numerical solutions of shallow water equations with discontinuous bed topography”, *Int. J. Numer. Method Fluid.*, 1-2, 2001.
- [172] Zhou, J. G., Causon, D. M., Mingham, C. G. and Ingram, D. M., “The surface gradient method for the treatment of source terms in the shallow-water equations”, *J. Comput. Phys.*, **168**, 1–25, 2001.
- [173] Zierep, J., “Theoretical gasdynamics”, Springer, Berlin, 1978.