

Bibliography

- [Al] S. Alinhac, *Blowup for Nonlinear Hyperbolic Equations*, Progress in Non-linear Differential Equations and Their Applications **17**, Birkhäuser, 1995.
- [Am] W.F. Ames, *Nonlinear Partial Differential Equations in Engineering, Vol. I, II*, Academic Press, New York, 1965, 1972.
- [ALZ] W.F. Ames, S.Y. Lee and J.N. Zaiser, *Non-linear vibration of a traveling threadline*, Internat. J. Non-Linear Mech. **3**, 449 (1968).
- [An] S.S. Antman, *Nonlinear Problems of Elasticity*, Applied Mathematical Sciences **107**, Springer-Verlag, 1995.
- [AH] D. Aregba-Driollet and B. Hanouzet, *Cauchy problem for one-dimensional semilinear hyperbolic systems: global existence, blow up*, J. Diff. Equs. **125**, 1-26 (1996).
- [BFJ] A. Bamberger, C. Flytzanis et D. Jennevé, *Étude mathématique et numérique d'un modèle de propagation d'ondes lumineuses dans une fibre optique non centrosymétrique*, École Polytechnique, Mathématiques appliquées **149**, (juin 1986).
- [Be] J.T. Beale, *Large-time behavior of discrete velocity Boltzmann equations*, Comm. Math. Phys. **106**, 659-678 (1986).

- [Bo] G. Boillat, *Chocs caractéristiques*, C. R. Acad. Sci., Paris, Sér. A **274**, 1018-1021 (1972).
- [Br] A. Bressan, *Lecture Notes on Systems of Conservation Laws*, S.I.S.S.A., Trieste, 1995.
- [CM] A.J. Chorin and J. Marsden, *A Mathematical Introduction to Fluid Mechanics*, Springer-Verlag, New York, 1979.
- [Ci] P.G. Ciarlet, *Mathematical Elasticity, Vol. I: Three-Dimensional Elasticity*, North-Holland, Amsterdam, 1988.
- [Co] E. Conway, *The formation and decay of shocks for a conservation law in several dimensions*, Arch. Rat. Mech. Anal. **64**, 135-151 (1977).
- [CF] R. Courant and K.O. Friedrichs, *Supersonic flow and shock waves*, Springer, Berlin, 1976.
- [Da] G. Darboux, *Leçons sur la théorie générale des surfaces*, tome **3**, Gauthier-Villars, Paris, 1894.
- [Fr] H. Freistühler, *Rotational degeneracy of hyperbolic systems of conservation laws*, Arch. Rat. Mech. Anal. **113**, 39-64 (1991).
- [Gl] J. Glimm, *Solutions in the large for nonlinear systems of conservation laws*, Comm. Pure Appl. Math. **18**, 685-715 (1965).
- [Go] E. Goursat, *Leçons sur l'intégration des équations aux dérivées partielles du second ordre*, tome **1**, Hermann, Paris, 1896.
- [Hf] D. Hoff, *Global smooth solutions to quasilinear hyperbolic systems in diagonal form*, J. Math. Anal. Appl. **86**, 221-236 (1982).
- [Ho1] L. Hörmander, *The lifespan of classical solutions of nonlinear hyperbolic equations*, Lecture Notes in Math. **1256**, Springer, 214-280 (1987).
- [Ho2] L. Hörmander, *Lectures on Nonlinear Hyperbolic Differential Equations*, Mathématiques & Applications **26**, Springer, 1997.

- [H] A. Hoshiga, *The lifespan of solutions to quasilinear hyperbolic systems in the critical case*, Funkcialaj Ekvacioj **41**, 167-188 (1998).
- [HL] Hsiao Ling and Li Ta-tsien, *Global smooth solution of Cauchy problems for a class of quasilinear hyperbolic systems*, Chin. Ann. of Math. **4B**, 109-115 (1983).
- [Je] A. Jeffrey, *Quasilinear Hyperbolic Systems and Waves*, Research Notes in Mathematics **5**, Pitman, London, 1976.
- [Jo] F. John, *Formation of singularities in one-dimensional nonlinear wave propagation*, Comm. Pure Appl. Math. **27**, 377-405 (1974).
- [KRB] D.J. Kaup, A. Reiman et A. Bers, *Space-time evolution of non-linear three-wave interaction I: Interaction in a homogeneous medium*, Reviews of Modern Physics **51**, (avril 1979).
- [KM] S. Klainerman and A. Majda, *Formation of singularities for wave equation including the nonlinear vibrating string*, Comm. Pure Appl. Math. **33**, 241-264 (1980).
- [K1] Kong De-xing, *Maximum principle in nonlinear hyperbolic systems and its applications*, Nonlinear Analysis, Theory, Method & Applications **32**, 871-880 (1998).
- [K2] Kong De-xing, *Cauchy problem for quasilinear hyperbolic systems with higher order dissipative terms*, Nonlinear Differential Equations and Applications **4**, 477-489 (1997).
- [K3] Kong De-xing, *Life-span of classical solutions of nonlinear hyperbolic systems*, J. Partial Differential Equatins **9**, 221-236 (1996).
- [K4] Kong De-xing, *Analysis of singularities in the nonlinear waves for quasi-linear hyperbolic systems*, ICTP preprint IC/97/15, 1997.

- [K5] Kong De-xing, *Breakdown of classical solutions to quasilinear hyperbolic systems with slow decay initial data*, Chin. Ann. of Math. **21B**, 1-28 (2000).
- [Ko] W. Kosiński, *Gradient catastrophe in the solution of nonconservative hyperbolic systems*, J. Math. Anal. Appl. **61**, 672-688 (1977).
- [LL] L.D. Landau and E.M. Lifschitz, *Fluid Mechanics*, Addison Wesley, Reading MA, 1971.
- [La] P.D. Lax, *Hyperbolic systems of conservation laws and the mathematical theory of shock waves*, Regional Conference Series in Applied Mathematics, SIAM, 1973.
- [Le] M.P. Lebaud, *Description de le formation d'un choc dans le p-système*, J. Math. pures Appl. **73**, 523-565 (1994).
- [Li] Li Ta-tsien, *Global classical solutions for quasilinear hyperbolic systems*, Research in Applied Mathematics **32**, Wiley-Masson (1994).
- [LK] Li Ta-tsien and Kong De-xing, *Initial value problem for general quasilinear hyperbolic systems with characteristics with constant multiplicity*, J. Partial Differential Equations **10**, 299-322 (1997).
- [LKZ] Li Ta-tsien, Kong De-xing and Zhou Yi, *Global classical solutions for general quasilinear non-strictly hyperbolic systems with decay initial data*, Nonlinear Studies **3**, 203-229 (1996).
- [LQ] Li Ta-tsien and Qin Tie-hu, *Global smooth solutions for a class of quasilinear hyperbolic systems with dissipative terms*, Chin. Ann. of Math. **6B**, 199-210 (1985).
- [LSZ] Li Ta-tsien, D.Serre and Zhang Hao, *The generalized Riemann problem for the motion of elastic strings*, SIAM J. Math. Anal. **23**, 1189-1203 (1992).

- [LY] Li Ta-tsien and Yu Wen-ci, *Boundary Value Problems for Quasilinear Hyperbolic Systems*, Duke University Mathematics Series V, 1985.
- [LZK1] Li Ta-tsien, Zhou Yi and Kong De-xing, *Weak linear degeneracy and the global classical solutions for quasilinear hyperbolic systems*, Comm. in Partial Differential Equations **19**, 1263-1317 (1994).
- [LZK2] Li Ta-tsien, Zhou Yi and Kong De-xing, *Global classical solutions for general quasilinear hyperbolic systems with decay initial data*, Nonlinear Analysis, Theory, Method & Applications **28**, 1299-1332 (1997).
- [Lu] Liu Tai-ping, *Development of singularities in the nonlinear waves for quasilinear hyperbolic partial differential equations*, J. Diff. Eqs. **33**, 92-111 (1979).
- [Ma] A. Majda, *Compressible Fluid Flow and System of Conservation laws in Several Space Variables*, Applied Mathematical Sciences **53**, Springer-Verlag, 1984.
- [Na] S. Nakane, *Formation of shocks for a single conservation law*, SIAM J. Math. Anal. **19**, 1391-1408 (1988).
- [Ni] T. Nishida, *Nonlinear hyperbolic equations and related topics in fluid dynamics*, Publications Mathématiques D'osay 78-02, Paris-Sud, 1978.
- [NM] T. Nishida and M. Mimura, *On the Broadwell's model for a simple discrete velocity gas*, Proc. Japan Acad. **50**, 812-817 (1974).
- [RS] B.L. Rozdesstvenskii and A.P. Sidorenko, *Systems of quasilinear hyperbolic equations*, Zhur. Vychisl. Mat. I Mat. Fiz. **7**, 1176-1179 (1967).
- [Sc] M. Schatzman, *Continuous Glimm functionals and uniqueness of solutions of the Riemann problem*, Indiana University Mathematics Journal **34**, 533-589 (1985).
- [Se] J. Serrin, *Mathematical Principles of Classical Fluid Mechanics*, in Handbuch der Physik **8**, Springer-Verlag, 1959.

- [SK] Y. Shizuta and S. Kawashima, *System of equations of hyperbolic-parabolic type with applications to the discrete Boltzmann equation*, Hokkaido Math. J. **14**, 249-275 (1985).
- [TC] L. Tartar and M.G. Crandall, *Existence globale pour un système hyperbolique de la théorie des cinétiques des gaz*, Séminaire Goulaouic-Schwartz, Ecole Polytechnique, No. 1, 1975.
- [Ta] A.H. Taub, *Relativistic fluid mechanics*, Annu. Rev. Fluid Mech. **10**, 301-332 (1978).
- [Ts] M. Tsuji, *Formation of singularities for Monge-Ampère equations*, Bulletin des Sciences Mathématiques **119**, 433-457 (1995).
- [WW] J.C. Weiland et H. Wilhelmsson, *Coherent Non Linear Interaction of Waves in Plasmas*, Pergamon Press, 1977.
- [ZK] Zhang Wei-guo and Kong De-xing, *Global classical solutions and explicit exact solutions to a kind of quasilinear partial differential equations*, Systems Science and Mathematical Sciences **11**, 89-96 (1998).