

Moving Mesh Methods and Multi-Fluid Hyperbolic Problems Bibliography List

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Abstract

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References

Berger:1988:RAN

- [1] M. Berger and R. V. Kohn. A rescaling algorithm for the numerical calculation of blowing-up solutions. *Comm. Pure Appl. Math.*, XLI: 841–863, 1988.

Berger:1991:CMA

- [2] M. Berger and R. LeVeque. Cartesian meshes and adaptive mesh refinement for hyperbolic partial differential equations. In B. Engquist and B. Gustfsson, editors, *Third International Conference on Hyperbolic Problems. Theory, numerical methods and applications*, volume 1, pages 67–73, Lund, 1991. Studentlitteratur. Proc. Conf., Uppsala, Sweden, 1990.

Bertozzi:1996:SSF

- [3] A. L. Bertozzi. Symmetric singularity formation in lubrication-type equations for interface motion. *SIAM J. Appl. Math.*, 56:681–714, 1996.

Budd:1997:SBN

- [4] C. J. Budd and G. J. Collins. Symmetry based numerical methods for partial differential equations. In D. F. Griffiths, D. J. Higham, and G. A. Watson, editors, *Numerical Analysis 1997*, pages 16–36, Harlow, 1998. Longman. Pitman Research Notes in Mathematics 380.

Budd:1998:IMM

- [5] C. J. Budd and G. J. Collins. An invariant moving mesh scheme for the nonlinear diffusion equation. *Appl. Numer. Math.*, 26:23–39, 1998.

Budd:1996:MMM

- [6] C. J. Budd, W. Huang, and R. D. Russell. Moving mesh methods for problems with blow-up. *SIAM J. Sci. Comp.*, 17:305–327, 1996.

Chorin:1981:EIS

- [7] A. Chorin. Estimates of intermittency, spectra, and blow-up in developed turbulence. *Comm. Pure Appl. Math.*, XXXIV:853–866, 1981.

Dupont:1982:MMS

- [8] T. Dupont. Mesh modification schemes for hyperbolic conservation laws. *Math. Comput.*, 39:85–107, 1982.

Harten:1983:SAG

- [9] A. Harten and J. M. Hyman. Self-adjusting grid methods for one-dimensional hyperbolic conservation laws. *J. Comput. Phys.*, 50:235–269, 1983.

harten-eoc:eno

- [10] A. Harten, B. Engquist, S. Osher, and S. Chakravarthy. Uniformly high order accurate essentially non-oscillatory schemes iii. *J. Comput. Phys.*, 71:231–303, 1987.

Hyman:1988:MMM

- [11] J. M. Hyman. Moving mesh methods for partial differential equations. In *Mathematics applied to science*, pages 129–153, 1988. Proc. Conf., Tulane Univ., New Orleans/La., 1986.

Larouturou:1991:EMP

- [12] B. Larouturou. How to preserve the mass fraction positive when compressible multi-component flows. *J. Comput. Phys.*, 95:59–84, 1991.

Larouturou:1989:EMP

- [13] B. Larouturou and L. Fezoui. On the equation of multicomponent perfect or real gas inviscid flow. volume 1402 of *Lecture Notes in Mathematics*, pages 67–97, Berlin, 1989. Springer-Verlag.

Fazio:1993:IDS

- [14] R. Fazio and D. J. Evans. An implicit difference scheme for a moving boundary hyperbolic problem. *Appl. Numer. Math.*, 12:485–496, 1993.

Fazio:1998:MMM

- [15] R. Fazio and R. J. LeVeque. Moving-mesh methods for one-dimensional hyperbolic problems. In *Abstracts of the SIMAI98 Conference*, volume 1, pages 314–317. Giardini Naxos, June 1–5 1998.

Fazio:2000:ELS

- [16] R. Fazio and G. Russo. Eulerian and Lagrangian schemes for hyperbolic interface problems. In H. Freistühler and G. Warnecke, editors, *International Series of Numerical Mathematics*, volume Vol. 140, pages 347–356, 2001.

Fazio:2003:CTC

- [17] R. Fazio. Comparison of two conservative schemes for hyperbolic interface problems. In A. Buffa e A. Murli F. Brezzi, editor, *Numerical Mathematics and Advanced Applications*, pages 85–93, Milano, 2003. Springer-Italia.

Fazio:2003:MMM

- [18] R. Fazio and R. J. LeVeque. Moving-mesh methods for one-dimensional hyperbolic problems using CLAWPACK. *Comp. & Math. Appl.*, 45: 273–298, 2003.

Gropp:1980:TMM

- [19] W. D. Gropp. A test of moving mesh refinement for 2-d scalar hyperbolic problems. *SIAM J. Sci. Comput.*, 1:191–197, 1980.

- [20] R. J. LeVeque. Large time step shock-capturing techniques for scalar conservation laws. *SIAM J. Numer. Anal.*, 19:1091–1109, 1982.
LeVeque:1982:LTS
- [21] B. J. Lucier. A stable adaptive numerical scheme for hyperbolic conservation laws. *SIAM J. Numer. Anal.*, 22:180–203, 1985.
Lucier:1985:SAN
- [22] B. J. Lucier. A moving mesh numerical method for hyperbolic conservation laws. *Math. Comput.*, 46:59–69, 1986.
Lucier:1986:MMN
- [23] K. Miller and R. Miller. Moving finite elements. I. *SIAM J. Numer. Anal.*, 18:1019–1032, 1981.
Miller:1981:MFEa
- [24] K. Miller. Moving finite elements. II. *SIAM J. Numer. Anal.*, 18:1033–1057, 1981.
Miller:1981:MFEb
- [25] W. Mulder, S. Osher, and J. Sethian. Computing interface motion: The compressible Rayleigh-Taylor and Kelvin-Helmholtz instabilities. *J. Comput. Phys.*, 100:209–228, 1992.
Mulder:1992:CIM
- [26] S. Osher and R. Sanders. Numerical approximations to nonlinear conservation laws with locally varying time and space grids. *Math. Comp.*, 41:321–336, 1983.
Osher:1983:NAN
- [27] S. Osher and R. P. Fedkiw. *Level set methods and dynamic implicit surfaces*. Springer-Verlag, New York, 2003.
Osher:2003:LSM
- [28] R. Sanders. The moving grid method for nonlinear hyperbolic conservation laws. *SIAM J. Numer. Anal.*, 22:713–728, 1985.
Sanders:1985:MGM

Stockie:2001:MMM

- [29] Stockie J. M., Mackenzie J. A., and Russell R. D. A moving mesh method for one-dimensional hyperbolic conservation laws. *SIAM J. Sci. Comput.*, 22:1791–1813, 2001.

Abgrall:1988:GRS

- [30] R. Abgrall. Generalization of the Roe scheme for the computation of mixture of perfect gases. *Rech. Aérospace*, 6:31–43, 1988.

Abgrall:1996:HPP

- [31] R. Abgrall. How to prevent pressure oscillations in multicomponent flow calculations: a quasi conservative approach. *J. Comput. Phys.*, 125:150–160, 1996.

Abgrall:2001:CCM

- [32] R. Abgrall and S. Karni. Computation of compressible multifluids. *J. Comput. Phys.*, 169:594–623, 2001.

Abgrall:2003:ENA

- [33] R. Abgrall, B. Nkonga, and R. Saurel. Efficient numerical approximation of compressible multi-material flow for unstructured meshes. *Comput. & Fluids*, 32:571–605, 2003. 2D esempi.

Ballhaus:1974:IBO

- [34] W. F. Ballhaus and M. Holt. Interaction between the ocean surface and underwater spherical blast waves. *Phys. Fluids*, 17:1068–1079, 1974.

Benson:1992:CML

- [35] D. J. Benson. Computational methods in Lagrangian and Eulerian hydrocodes. *Comput. Methods Appl. Mech. Engrg.*, 99:235–394, 1992.

Bratvedt:1993:FFT

- [36] F. Bratvedt, K. Bratvedt, C. F. Buchholz, T. Gimse, H. Holden, L. Holden, and N. H. Risebro. Frontline and Frontsim: two full scale, two-phase, black oil reservoir simulators based on front tracking. *Surv. Math. Ind.*, 3:185–215, 1993.

- [37] E. H. van Brummelen and B. Koren. A pressure-invariant conservative Godunov-type method for barotropic two-fluid flows. *J. Comput. Phys.*, 185:289–308, 2003.
Brummelen:2003:PIC
- [38] D. Chary, R. Abgrall, L. Fezoui, and B. Larouturou. Conservative numerical schemes for multicomponent inviscid flows. *Rech. Aérospace*, 2 ?:61–79, 1992.
Chary:1992:CNS
- [39] P. Charrier and B. Tessieras. On front-tracking methods applied to hyperbolic systems of nonlinear conservation laws. *SIAM J. Numer. Anal.*, 23:461–472, 1986.
Charrier:1986:FTM
- [40] J. F. Clarke, S. Karni, J. J. Quirk, L. G. Simmonds, P. L. Roe, and E. F. Toro. Numerical computation of two-dimensional unsteady detonation waves in high energy solids. *J. Comput. Phys.*, 106:215–233, 1993.
Clarke:1993:NCT
- [41] J. Cocchi and R. Saurel. A Riemann problem based method for resolution of compressible multimaterial flows. *J. Comput. Phys.*, 137:265–298, 1997.
Cocchi:1997:RPB
- [42] S. F. Davis. An interface tracking method for hyperbolic systems of conservation laws. *Appl. Numer. Math.*, 10:447–472, 1992.
Davis:1992:ITM
- [43] J. Falcovitz, G. Alfantary, and G. Hanoch. A two-dimensional conservation laws scheme for compressible flows with moving boundaries. *J. Comput. Physcs.*, 138:83–102, 1997.
Falcovitz:1997:TDC
- [44] R. P. Fedkiw and Xu-Dong Liu. The ghost fluid method for viscous flows. CAM Report n. 98-44, Pubblicato ?, October 1998.
Fedkiw:1999:GFM

- Fedkiw:1999:Ghost**
- [45] R. P. Fedkiw, T. Aslam, B. Merriman, and S. Osher. A non-oscillatory eulerian approach to interfaces in multimaterial flows (the ghost fluid method). *J. Comput. Phys.*, 152:457–492, 1999.
- Gastaldi:1989:CHP**
- [46] F. Gastaldi and A. Quarteroni. On the coupling of hyperbolic and parabolic systems: analytical and numerical approach. *Appl. Numer. Math.*, 6:3–31, 1989/90.
- Gastaldi:1990:CTD**
- [47] F. Gastaldi, A. Quarteroni, and G. Sacchi Landriani. On the coupling of two dimensional hyperbolic and elliptic equations: analytical and numerical approach. In T. F. Chan, R. Glowinski, J. Périaux, and O. B. Widlund, editors, *Third International Symposium on Domain Decomposition Methods for Partial Differential Equations*, pages 22–63, Philadelphia, 1990. SIAM.
- Hyman:1984:NMT**
- [48] J. M. Hyman. Numerical methods for tracking interfaces. In A.R. Bishop, L.J. Campbell, and P.J. Channell, editors, *Fronts, Interfaces and Patterns*. Elsevier, New York, 1984.
- Karni:1996:HMA**
- [49] S. Karni. Hybrid multifluid algorithms. *SIAM J. Sci. Comput.*, 17: 1019–1039, 1996.
- Karni:1998:CBS**
- [50] S. Karni. Compressible bubbles with surface tension. In Ch.-H. Bruneaux, editor, *16th International Conference on Numerical Methods in Fluid Dynamics*, pages 506–512, 1998.
- Jenny:1997:CCE**
- [51] P. Jenny, B. Müller, and H. Thomann. Correction of conservative Euler solvers for gas mixture. *J. Comput. Phys.*, 132:91–107, 1997.
- Larouturou:1991:HPM**
- [52] B. Larouturou. How to preserve the mass fraction positive when computing compressible multi-component flows. *J. Comput. Phys.*, 95:59–84, 1997.

- [53] A. Le Duc, J. Sesterhenn, and R. Friedrich. Instabilities in compressible attachment-line boundary layers. *Phys. Fluids*, 18:044102, 2006. 16 pp.
- LeDuc:ICA:2006**
- [54] K. M. Li and M. Holt. Numerical solution of water waves generated by shallow underwater explosions. *Phys. Fluids*, 24:816–824, 1981.
- Li:1981:NSW**
- [55] I. Lie. Interface conditions for heterogeneous domain decomposition: Coupling of different hyperbolic systems. *Contemporary Mathematics*, 157:469–476, 1994.
- Lie:1994:ICH**
- [56] B. Lombard and R. Donat. The explicit simplified interface method for compressible multicomponent flows. *SIAM J. Sci. Comput.*, 27:208–230, 2005.
- Lombard:2005:ESI**
- [57] W. Mulder, S. Osher, and J. Sethian. Computing interface motion: The compressible RayleighTaylor and Kelvin-Helmholtz instabilities. *J. Comput. Phys.*, 100:209–???, 1992.
- Mulder:CIM:1992**
- [58] P. H. Roberts and C. C. Wu. On rectified diffusion and sonoluminescence. *Theor. Comput. Fluid Dyn.*, 10:357–372, 1998.
- Roberts:1998:RDS**
- [59] P. L. Roe. Fluctuations and signals - a framework for numerical evolution problems. In K. W. Morton and M. J. Baines, editors, *Numerical Methods for Fluid Dynamics*, pages 219–257, New York, 1982. Academic Press.
- Roe:1982:FSF**
- [60] R. Saurel and R. Abgrall. A simple method for compressible multifluid flows. *SIAM J. Sci. Comput.*, 21:1115–1145, 1999.
- Saurel:1999:SMC**
- [61] H. S. Tang and F. Sotiropoulos. A second-order Godunov method for wave problems in coupled solid-water-gas systems. *J. Comput. Phys.*, 151:790–815, 1999.
- Tang:1999:SOG**

Udaykumar:1997:MDA

- [62] H. S. Udaykumar, H. Chan, W. Shyy, and R. Tran-Son-Tay. Multiphase dynamics in arbitrary geometries on fixed cartesian grids. *J. Comput. Physcs.*, 137:366–405, 1997.

Wang:1999:CDD

- [63] H. Wang, M. Al-Lawatia, and R. C. Sharpley. A characterictic domain decomposition and space-time local refinement method for first-order linear hyperbolic equations with interfaces. *Numer. Meth. Partial Differential Equations*, 15:1–28, 1999.

Wardlaw:1998:UET

- [64] A. Wardlaw. Underwater explosion test cases. IHTR 2069, 1998.

Whitham:1974:LNW

- [65] G. B. Whitham. *Linear and nonlinear waves*. Wiley, New York, 1974.

Wu:1993:SWS

- [66] C. C. Wu and P. H. Roberts. Shock-waves propagation in a sonoluminescing gas bubble. *Phys. Rev. Lett.*, 70:3424–3427, 1993.