

BIBLIOGRAPHY

- Balbus, S. A. and J. F. Hawley: 1991, ‘A powerful local shear instability in weakly magnetized disks. I - Linear analysis. II - Nonlinear evolution’. *ApJ* **376**, 214–233.
- Balbus, S. A. and J. F. Hawley: 1998, ‘Instability, turbulence, and enhanced transport in accretion disks’. *Reviews of Modern Physics* **70**, 1–53.
- Bally, J., S. Heathcote, B. Reipurth, J. Morse, P. Hartigan, and R. Schwartz: 2002, ‘Hubble Space Telescope Observations of Proper Motions in Herbig-Haro Objects 1 and 2’. *AJ* **123**, 2627–2657.
- Bally, J., D. Johnstone, G. Joncas, B. Reipurth, and G. Mallén-Ornelas: 2001, ‘Kinematics of Optical Outflows in the Orion Nebula. I. The Giant Outflow HH 400 and the Irradiated Jet HH 502’. *AJ* **122**, 1508–1524.
- Balsara, D. S.: 1998, ‘Total Variation Diminishing Scheme for Adiabatic and Isothermal Magnetohydrodynamics’. *ApJS* **116**, 133.
- Balsara, D. S. and D. Spicer: 1999, ‘Maintaining Pressure Positivity in Magnetohydrodynamic Simulations’. *J. Comp. Phys.* **148**, 133–148.
- Banyuls, F., J. A. Font, J. M. A. Ibanez, J. M. A. Martí, and J. A. Miralles: 1997, ‘Numerical {3+1} General Relativistic Hydrodynamics: A Local Characteristic Approach’. *ApJ* **476**, 221.
- Barmin, A. A., A. G. Kulikovskiy, and N. V. Pogorelov: 1996, ‘Shock-Capturing Approach and Nonevolutionary Solutions in Magnetohydrodynamics’. *J. Comp. Phys.* **126**, 77–90.
- Bate, M. R., I. A. Bonnell, and V. Bromm: 2003, ‘The formation of a star cluster: predicting the properties of stars and brown dwarfs’. *MNRAS* **339**, 577–599.
- Bate, M. R., I. A. Bonnell, and N. M. Price: 1995, ‘Modelling accretion in protobinary systems’. *MNRAS* **277**, 362–376.
- Bate, M., R. B.: 1995, ‘The role of accretion in binary star formation’. Ph.D. thesis, University of Cambridge, Cambridge, UK.
- Begelman, M. C.: 1998, ‘Instability of Toroidal Magnetic Field in Jets and Plerions’. *ApJ* **493**, 291–.
- Bekenstein, J. D. and A. Oron: 2000, ‘Conservation of circulation in magnetohydrodynamics’. *Phys. Rev. E* **62**, 5594–5602.
- Benz, W.: 1984, ‘3D models of rotating magnetic gas clouds. I - Time evolution, mass spectrum and angular momentum’. *A&A* **139**, 378–388.
- Benz, W.: 1990, ‘Smoothed Particle Hydrodynamics - A review’. In: J. R. Buchler (ed.): *The numerical modelling of nonlinear stellar pulsations*. pp. 269–288, Kluwer.
- Benz, W., A. G. W. Cameron, W. H. Press, and R. L. Bowers: 1990, ‘Dynamic mass exchange in doubly degenerate binaries. I - 0.9 and 1.2 solar mass stars’. *ApJ* **348**, 647–667.
- Biretta, J. A., W. B. Sparks, and F. Macchetto: 1999, ‘Hubble Space Telescope Observations of Superluminal Motion in the M87 Jet’. *ApJ* **520**, 621–626.
- Blandford, R. D. and D. G. Payne: 1982, ‘Hydromagnetic flows from accretion discs and the production of radio jets’. *MNRAS* **199**, 883–903.
- Blandford, R. D. and M. J. Rees: 1974, ‘A ’twin-exhaust’ model for double radio sources’. *MNRAS* **169**, 395–415.
- Blandford, R. D. and R. L. Znajek: 1977, ‘Electromagnetic extraction of energy from Kerr black holes’. *MNRAS* **179**, 433–456.

- Bondi, H.: 1952, ‘On spherically symmetrical accretion’. *MNRAS* **112**, 195.
- Bonet, J. and S. Kulasegaram: 2000, ‘Correction and stabilization of smooth particle hydrodynamics methods with applications in metal forming simulations’. *Int. J. Numer. Meth. Engng.* **47**, 1189–1214.
- Bonet, J. and S. Kulasegaram: 2001, ‘Remarks on tension instability of Eulerian and Lagrangian corrected smooth particle hydrodynamics (CSPH) methods’. *Int. J. Numer. Meth. Engng.* **52**, 1203–1220.
- Bonet, J. and L. Lok, T-S.: 1999, ‘Variational and momentum preservation aspects of Smooth Particle Hydrodynamic formulations’. *Computer methods in applied mechanics and engineering* **180**, 97–115.
- Børve, S.: 2001, ‘A numerical study of ionospheric and magnetospheric phenomena using particle simulation techniques’. Ph.D. thesis, University of Oslo, Norway.
- Børve, S., M. Omang, and J. Trulsen: 2001, ‘Regularized Smoothed Particle Hydrodynamics: A New Approach to Simulating Magnetohydrodynamic Shocks’. *ApJ* **561**, 82–93.
- Boss, A. P.: 2000, ‘Protostellar Fragmentation Enhanced by Magnetic Fields’. *ApJL* **545**, L61–L64.
- Boss, A. P.: 2002, ‘Collapse and Fragmentation of Molecular Cloud Cores. VII. Magnetic Fields and Multiple Protostar Formation’. *ApJ* **568**, 743–753.
- Brackbill, J. U. and D. C. Barnes: 1980, ‘The effect of nonzero product of magnetic gradient and B on the numerical solution of the magnetohydrodynamic equations’. *J. Comp. Phys.* **35**, 426–430.
- Brandenburg, A.: 2001, ‘Computational aspects of astrophysical MHD and turbulence’. *astro-ph/0109497*.
- Brio, M. and C. C. Wu: 1988, ‘An upwind differencing scheme for the equations of ideal magnetohydrodynamics’. *J. Comp. Phys.* **75**, 400–422.
- Brookshaw, L.: 1985, ‘A method of calculating radiative heat diffusion in particle simulations’. *Proceedings of the Astronomical Society of Australia* **6**, 207–210.
- Burrows, C. J., K. R. Stapelfeldt, A. M. Watson, J. E. Krist, G. E. Ballester, J. T. Clarke, D. Crisp, J. S. Gallagher, R. E. Griffiths, J. J. Hester, J. G. Hoessel, J. A. Holtzman, J. R. Mould, P. A. Scowen, J. T. Trauger, and J. A. Westphal: 1996, ‘Hubble Space Telescope Observations of the Disk and Jet of HH 30’. *ApJ* **473**, 437.
- Byleveld, S. E. and H. Pongracic: 1996, ‘The influence of magnetic fields on star formation’. *Publications of the Astronomical Society of Australia* **13**, 71–74.
- Caramana, E. J., M. J. Shashkov, and P. P. Whalen: 1998, ‘Formulations of Artificial Viscosity for Multi-dimensional Shock Wave Computations’. *J. Comp. Phys.* **144**, 70–97.
- Caunt, S. E. and M. J. Korpi: 2001, ‘A 3D MHD model of astrophysical flows: Algorithms, tests and parallelisation’. *A&A* **369**, 706–728.
- Cerdeira, A. H. and E. M. de Gouveia Dal Pino: 2001, ‘Three-dimensional Magnetohydrodynamic Simulations of Radiatively Cooling, Pulsed Jets’. *ApJ* **560**, 779–791.
- Cha, S.-H. and A. P. Whitworth: 2003, ‘Implementations and tests of Godunov-type particle hydrodynamics’. *MNRAS* **340**, 73–90.
- Chandrasekhar, S.: 1961, *Hydrodynamic and hydromagnetic stability*, International Series of Monographs on Physics. Oxford: Clarendon Press.
- Chow, E. and J. J. Monaghan: 1997, ‘Ultrarelativistic SPH’. *J. Comp. Phys.* **134**, 296–305.
- Cleary, P. W. and J. J. Monaghan: 1999, ‘Conduction Modelling Using Smoothed Particle Hydrodynamics’. *J. Comp. Phys.* **148**, 227–264.
- Cummins, S. J. and M. Rudman: 1999, ‘An SPH Projection Method’. *J. Comp. Phys.* **152**, 584–607.

- Curtis, H. D.: 1918, 'Descriptions of 762 Nebulae and Clusters Photographed with the Crossley Reflector'. *Publications of the Lick Observatory* **13**, 9–42.
- Dahlburg, R. B. and J. M. Picone: 1989, 'Evolution of the Orszag-Tang vortex system in a compressible medium. I - Initial average subsonic flow'. *Physics of Fluids B* **1**, 2153–2171.
- Dai, W. and P. R. Woodward: 1994, 'Extension of the Piecewise Parabolic Method to Multidimensional Ideal Magnetohydrodynamics'. *J. Comp. Phys.* **115**, 485–514.
- Dai, W. and P. R. Woodward: 1998, 'On the Divergence-free Condition and Conservation Laws in Numerical Simulations for Supersonic Magnetohydrodynamic Flows'. *ApJ* **494**, 317.
- Dedner, A., F. Kemm, D. Kröner, C.-D. Munz, T. Schnitzer, and M. Wesenberg: 2002, 'Hyperbolic Divergence Cleaning for the MHD Equations'. *J. Comp. Phys.* **175**, 645–673.
- Dellar, P. J.: 2001, 'A Note on Magnetic Monopoles and the One-Dimensional MHD Riemann Problem'. *J. Comp. Phys.* **172**, 392–398.
- Dolag, K., M. Bartelmann, and H. Lesch: 1999, 'SPH simulations of magnetic fields in galaxy clusters'. *A&A* **348**, 351–363.
- Drazin, P. G. and W. H. Reid: 1981, *Hydrodynamic stability*. Cambridge, Cambridge University Press.
- Dyka, C. T., P. W. Randles, and R. P. Ingel: 1997, 'Stress points for tension instability in SPH'. *Int. J. Numer. Meth. Engng.* **40**, 2325–2341.
- Eckart, C.: 1960. *Physics of Fluids* **3**, 421.
- Eislöffel, J. and R. Mundt: 1998, 'Imaging and Kinematic Studies of Young Stellar Object Jets in Taurus'. *AJ* **115**, 1554–1575.
- Español, P. and M. Revenga: 2003, 'Smoothed dissipative particle dynamics'. *Phys. Rev. E* **67**(2), 026705.
- Evans, C. R. and J. F. Hawley: 1988, 'Simulation of magnetohydrodynamic flows - A constrained transport method'. *ApJ* **332**, 659–677.
- Ferrari, A.: 1998, 'Modeling Extragalactic Jets'. *Ann. Rev. Astron. Astroph.* **36**, 539–598.
- Field, G.: 1986, 'Magnetic helicity in astrophysics'. In: R. Epstein and W. Feldman (eds.): *AIP Conf. Proc. 144: Magnetospheric Phenomena in Astrophysics*. pp. 324–341.
- Flammang, R. A.: 1982, 'Stationary spherical accretion into black holes. II - Theory of optically thick accretion'. *MNRAS* **199**, 833–867.
- Frank, J., A. King, and D. J. Raine: 2002, *Accretion Power in Astrophysics*. Cambridge: Cambridge University Press, 3rd edition.
- Fulk, D. A. and D. W. Quinn: 1996, 'An Analysis of 1-D Smoothed Particle Hydrodynamics Kernels'. *J. Comp. Phys.* **126**, 165–180.
- Ghisellini, G. and A. Celotti: 2001, 'Relativistic large-scale jets and minimum power requirements'. *MNRAS* **327**, 739–743.
- Gingold, R. A. and J. J. Monaghan: 1977, 'Smoothed particle hydrodynamics - Theory and application to non-spherical stars'. *MNRAS* **181**, 375–389.
- Gray, J., J. J. Monaghan, and R. P. Swift: 2001, 'SPH elastic dynamics'. *Computer methods in applied mechanics and engineering* **190**, 6641–6662.
- Habe, A., Y. Uchida, S. Ikeuchi, and R. E. Pudritz: 1991, 'Triggering the collapse of self-gravitating clouds by torsional Alfvén waves'. *Publ. Astron. Soc. Japan* **43**, 703–718.
- Hairer, E., C. Lubich, and G. Wanner: 2002, *Geometric Numerical Integration. Structure-Preserving Algorithms for Ordinary Differential Equations*. Berlin: Springer-Verlag.

- gorithms for Ordinary Differential Equations.*, Vol. 31 of *Springer Series in Comput. Math.* Springer-Verlag.
- Hartigan, P., J. A. Morse, B. Reipurth, S. Heathcote, and J. Bally: 2001, ‘Proper Motions of the HH 111 Jet Observed with the Hubble Space Telescope’. *ApJL* **559**, L157–L161.
- Hawley, J. F., C. F. Gammie, and S. A. Balbus: 1995, ‘Local Three-dimensional Magnetohydrodynamic Simulations of Accretion Disks’. *ApJ* **440**, 742.
- Heinz, S. and M. C. Begelman: 2000, ‘Jet Acceleration by Tangled Magnetic Fields’. *ApJ* **535**, 104–117.
- Heney, F. S.: 1982, ‘Canonical construction of a Hamiltonian for dissipation-free magnetohydrodynamics’. *Phys. Rev. A* **26**, 480–483.
- Hernquist, L. and N. Katz: 1989, ‘TREESPH - A unification of SPH with the hierarchical tree method’. *ApJS* **70**, 419–446.
- Holder, T., B. Leimkuhler, and S. Reich: 2001, ‘Explicit variable step-size and time-reversible integration’. *Applied Numerical Mathematics: Transactions of IMACS* **39**(3–4), 367–377.
- Holzer, T. E. and W. I. Axford: 1970, ‘The Theory of Stellar Winds and Related Flows’. *Ann. Rev. Astron. Astroph.* **8**, 31.
- Hosking, J. G.: 2002, ‘The Role of Magnetic Fields in Star Formation’. Ph.D. thesis, Cardiff University, UK.
- Hosking, J. G. and A. P. Whitworth: 2004, ‘Fragmentation of magnetized cloud cores’. *MNRAS* **347**, 1001–1010.
- Huang, W. and B. Leimkuhler: 1997, ‘The adaptive Verlet method’. *SIAM Journal on Scientific Computing* **18**(1), 239–256.
- Hut, P., J. Makino, and S. McMillan: 1995, ‘Building a better leapfrog’. *ApJL* **443**, L93–L96.
- Imaeda, Y. and S. Inutsuka: 2002, ‘Shear Flows in Smoothed Particle Hydrodynamics’. *ApJ* **569**, 501–518.
- Inutsuka, S.: 2002, ‘Reformulation of Smoothed Particle Hydrodynamics with Riemann Solver’. *J. Comp. Phys.* **179**, 238–267.
- Janhunen, P.: 2000, ‘A Positive Conservative Method for Magnetohydrodynamics Based on HLL and Roe Methods’. *J. Comp. Phys.* **160**, 649–661.
- Jubelgas, M., V. Springel, and K. Dolag: 2004, ‘Thermal conduction in cosmological SPH simulations’. *MNRAS preprint* p. 000.
- Klessen, R. S., F. Heitsch, and M. Mac Low: 2000, ‘Gravitational Collapse in Turbulent Molecular Clouds. I. Gasdynamical Turbulence’. *ApJ* **535**, 887–906.
- Koide, S., D. L. Meier, K. Shibata, and T. Kudoh: 2000, ‘General Relativistic Simulations of Early Jet Formation in a Rapidly Rotating Black Hole Magnetosphere’. *ApJ* **536**, 668–674.
- Konigl, A.: 1982, ‘On the nature of bipolar sources in dense molecular clouds’. *ApJ* **261**, 115–134.
- Kudoh, T., R. Matsumoto, and K. Shibata: 1998, ‘Magnetically Driven Jets from Accretion Disks. III. 2.5-dimensional Nonsteady Simulations for Thick Disk Case’. *ApJ* **508**, 186–199.
- Kuznetsov, E. A. and V. P. Ruban: 2000, ‘Hamiltonian dynamics of vortex and magnetic lines in hydrodynamic type systems’. *Phys. Rev. E* **61**, 831–841.
- Lamers, H. J. G. L. M. and J. P. Cassinelli: 1999, *Introduction to stellar winds*. New York : Cambridge University Press.
- Landshoff, R.: 1955, ‘A numerical method for treating fluid flow in the presence of shocks’. Technical

- Report LA-1930, Los Alamos National Laboratory.
- Li, L.: 2002, ‘Jet Collimation by Small-Scale Magnetic Fields’. *ApJ* **564**, 108–112.
- Livio, M.: 1999, ‘Astrophysical jets : a phenomenological examination of acceleration and collimation.’. *Phys. Rep.* **311**, 225–245.
- Lodato, G. and W. K. M. Rice: 2004, ‘Testing the locality of transport in self-gravitating accretion discs’. *MNRAS* **351**, 630–642.
- Londrillo, P. and L. Del Zanna: 2000, ‘High-Order Upwind Schemes for Multidimensional Magnetohydrodynamics’. *ApJ* **530**, 508–524.
- Lubow, S. H., J. C. B. Papaloizou, and J. E. Pringle: 1994, ‘Magnetic field dragging in accretion discs’. *MNRAS* **267**, 235–240.
- Lucek, S. G. and A. R. Bell: 1996, ‘The stability, during formation, of magnetohydrodynamic jets collimated by an azimuthal magnetic field’. *MNRAS* **281**, 245–256.
- Lucek, S. G. and A. R. Bell: 1997, ‘The stability, during formation, of magnetohydrodynamically collimated jets’. *MNRAS* **290**, 327–333.
- Lucy, L. B.: 1977, ‘A numerical approach to the testing of the fission hypothesis’. *Astron. J.* **82**, 1013–1024.
- Mészáros, P.: 2002, ‘Theories of Gamma-Ray Bursts’. *Ann. Rev. Astron. Astrophys.* **40**, 137–169.
- Mac Low, M., R. Klessen, A. Burkert, and M. Smith: 1999, ‘Decay Timescales of MHD Turbulence in Molecular Clouds’. In: J. Franco and A. Carraminana (eds.): *Interstellar Turbulence*. p. 256, Cambridge University Press.
- Mac Low, M. and R. S. Klessen: 2004, ‘Control of star formation by supersonic turbulence’. *Rev. Mod. Phys.* **76**, 125–194.
- Marinho, E. P., C. M. Andreazza, and J. R. D. Lépine: 2001, ‘SPH simulations of clumps formation by dissipative collisions of molecular clouds. II. Magnetic case’. *A&A* **379**, 1123–1137.
- Maron, J. L. and G. G. Howes: 2003, ‘Gradient Particle Magnetohydrodynamics: A Lagrangian Particle Code for Astrophysical Magnetohydrodynamics’. *ApJ* **595**, 564–572.
- Marri, S. and S. D. M. White: 2003, ‘Smoothed particle hydrodynamics for galaxy-formation simulations: improved treatments of multiphase gas, of star formation and of supernovae feedback’. *MNRAS* **345**, 561–574.
- Marscher, A. P., S. G. Jorstad, J. Gómez, M. F. Aller, H. Teräsranta, M. L. Lister, and A. M. Stirling: 2002, ‘Observational evidence for the accretion-disk origin for a radio jet in an active galaxy’. *Nature* **417**, 625–627.
- Meglicki, Z.: 1994, ‘Verification and accuracy of smoothed particle magnetohydrodynamics’. *Comput. Phys. Commun.* **81**, 91.
- Meglicki, Z.: 1995, ‘Analysis and applications of Smoothed Particle Magnetohydrodynamics’. Ph.D. thesis, Australian National University.
- Meglicki, Z., D. Wickramasinghe, and R. L. Dewar: 1995, ‘Gravitational collapse of a magnetized vortex: application to the Galactic Centre’. *MNRAS* **272**, 717–729.
- Michel, F. C.: 1972, ‘Accretion of Matter by Condensed Objects’. *Ap&SS* **15**, 153.
- Micono, M., C. J. Davis, T. P. Ray, J. Eisloeffel, and M. D. Shetrone: 1998, ‘Proper Motions and Variability of the H 2 Emission in the HH 46/47 System’. *ApJL* **494**, L227+.
- Mirabel, I. F., V. Dhawan, S. Chaty, L. F. Rodriguez, J. Martí, C. R. Robinson, J. Swank, and T. Geballe:

- 1998, ‘Accretion instabilities and jet formation in GRS 1915+105’. *A&A* **330**, L9–L12.
- Mirabel, I. F. and L. F. Rodríguez: 1999, ‘Sources of Relativistic Jets in the Galaxy’. *Ann. Rev. Astron. Astrophys.* **37**, 409–443.
- Molteni, D., G. Lanzafame, and S. K. Chakrabarti: 1994, ‘Simulation of thick accretion disks with standing shocks by smoothed particle hydrodynamics’. *ApJ* **425**, 161–170.
- Monaghan, J. J.: 1989, ‘On the problem of penetration in particle methods’. *J. Comp. Phys.* **82**, 1–9991.
- Monaghan, J. J.: 1992, ‘Smoothed particle hydrodynamics’. *Ann. Rev. Astron. Astrophys.* **30**, 543–574.
- Monaghan, J. J.: 1997a, ‘Implicit SPH Drag and Dusty Gas Dynamics’. *J. Comp. Phys.* **138**, 801–820.
- Monaghan, J. J.: 1997b, ‘SPH and Riemann Solvers’. *J. Comp. Phys.* **136**, 298–307.
- Monaghan, J. J.: 2000, ‘SPH without a Tensile Instability’. *J. Comp. Phys.* **159**, 290–311.
- Monaghan, J. J.: 2002, ‘SPH compressible turbulence’. *MNRAS* **335**, 843–852.
- Monaghan, J. J. and J. C. Lattanzio: 1985, ‘A refined particle method for astrophysical problems’. *A&A* **149**, 135–143.
- Monaghan, J. J. and D. J. Price: 2001, ‘Variational principles for relativistic smoothed particle hydrodynamics’. *MNRAS* **328**, 381–392.
- Monaghan, J. J. and D. J. Price: 2004, ‘Toy stars in one dimension’. *MNRAS* **350**, 1449–1456.
- Morris, J. P.: 1996, ‘Analysis of smoothed particle hydrodynamics with applications’. Ph.D. thesis, Monash University, Melbourne, Australia.
- Morris, J. P. and J. J. Monaghan: 1997, ‘A switch to reduce SPH viscosity’. *J. Comp. Phys.* **136**, 41–50.
- Morrison, P. J.: 1998, ‘Hamiltonian description of the ideal fluid’. *Rev. Mod. Phys.* **70**, 467–521.
- Morrison, P. J. and R. D. Hazeltine: 1984, ‘Hamiltonian formulation of reduced magnetohydrodynamics’. *Physics of Fluids* **27**, 886–897.
- Munz, C.-D., P. Omnes, R. Schneider, E. Sonnendrücker, and U. Voß: 2000, ‘Divergence Correction Techniques for Maxwell Solvers Based on a Hyperbolic Model’. *J. Comp. Phys.* **161**, 484–511.
- Murray, J., J. Wadsley, and J. R. Bond: 1996, ‘MHD with SPH: Application to the High Redshift IGM’. *Bulletin of the American Astronomical Society* **28**, 1413.
- Murray, J. R.: 1996, ‘SPH simulations of tidally unstable accretion discs in cataclysmic variables’. *MNRAS* **279**, 402–414.
- Nelson, R.: 1994, ‘A Conservative Formulation of SPH with Variable Smoothing Lengths’. *Memorie della Societa Astronomica Italiana* **65**, 1161.
- Nelson, R. P. and J. C. B. Papaloizou: 1994, ‘Variable Smoothing Lengths and Energy Conservation in Smoothed Particle Hydrodynamics’. *MNRAS* **270**, 1.
- Newcomb, W. A.: 1962, ‘Lagrangian and Hamiltonian methods in magnetohydrodynamics’. *Nucl. Fusion Suppl.* **2**, 451–463.
- Nordlund, A. and K. Galsgaard: 1995, ‘A 3D MHD code for Parallel Computers’. Technical report, Astronomical Observatory, University of Copenhagen (available from <http://www-solar.mcs.st-andrews.ac.uk/~klaus/publications/lop.html>).
- Oppeneer, P. M.: 1984, ‘Variational principle for ideal MHD’. *Physics Letters A* **104**, 207–211.
- Orszag, S. A. and C.-M. Tang: 1979, ‘Small-scale structure of two-dimensional magnetohydrodynamic turbulence’. *J. Fluid Mech.* **90**, 129–143.
- Oswald, L. H.: 1963, ‘Why I shot JFK’. *J. Consp. Theor.* **666**, 1–17.
- Ott, F. and E. Schnetter: 2003, ‘A modified SPH approach for fluids with large density differences’.

- physics/0303112.*
- Ouyed, R. and R. E. Pudritz: 1997, 'Numerical Simulations of Astrophysical Jets from Keplerian Disks. I. Stationary Models'. *ApJ* **482**, 712.
- Ouyed, R. and R. E. Pudritz: 1999, 'Numerical simulations of astrophysical jets from Keplerian discs - III. The effects of mass loading'. *MNRAS* **309**, 233–244.
- Ouyed, R., R. E. Pudritz, and J. M. Stone: 1997, 'Episodic jets from black holes and protostars'. *Nature* **385**, 409–414.
- Parker, E. N.: 1958, 'Dynamics of the Interplanetary Gas and Magnetic Fields.'. *ApJ* **128**, 664.
- Parshikov, A. N. and S. A. Medin: 2002, 'Smoothed Particle Hydrodynamics Using Interparticle Contact Algorithms'. *J. Comp. Phys.* **180**, 358–382.
- Pelupessy, F. I., W. E. Schaap, and R. van de Weygaert: 2003, 'Density estimators in particle hydrodynamics. DTFE versus regular SPH'. *A&A* **403**, 389–398.
- Phillips, G. J.: 1982, 'Numerical simulations of collapsing, isothermal, magnetic clouds'. *Proceedings of the Astronomical Society of Australia* **4**, 371–373.
- Phillips, G. J.: 1983a, 'An investigation of fragmentation in collapsing magnetic gas clouds'. *Proceedings of the Astronomical Society of Australia* **5**, 180–182.
- Phillips, G. J.: 1983b, 'Three dimensional numerical simulations of collapsing, isothermal, magnetic gas clouds'. Ph.D. thesis, Monash University, Melbourne, Australia.
- Phillips, G. J.: 1985, 'Fragmentation in collapsing magnetic gas clouds - Non-uniform initial fields'. *Proceedings of the Astronomical Society of Australia* **6**, 205–207.
- Phillips, G. J.: 1986a, 'Three-dimensional numerical simulations of collapsing, isothermal magnetic gas clouds'. *MNRAS* **221**, 571–587.
- Phillips, G. J.: 1986b, 'Three-dimensional numerical simulations of collapsing isothermal magnetic gas clouds - Non-uniform initial fields'. *MNRAS* **222**, 111–119.
- Phillips, G. J. and J. J. Monaghan: 1985, 'A numerical method for three-dimensional simulations of collapsing, isothermal, magnetic gas clouds'. *MNRAS* **216**, 883–895.
- Picone, J. M. and R. B. Dahlburg: 1991, 'Evolution of the Orszag-Tang vortex system in a compressible medium. II - Supersonic flow'. *Physics of Fluids B* **3**, 29–44.
- Powell, K. G.: 1994, 'An approximate Riemann solver for magnetohydrodynamics (that works in more than one dimension)'. Technical Report ICASE 94-24, NASA Langley Research center (available from <http://techreports.larc.nasa.gov/ltrs/dublincore/1994/icase-1994-24.html>).
- Powell, K. G., P. L. Roe, T. J. Linde, T. I. Gombosi, and D. L. de Zeeuw: 1999, 'A Solution-Adaptive Upwind Scheme for Ideal Magnetohydrodynamics'. *J. Comp. Phys.* **154**, 284–309.
- Press, W. H., S. A. Teukolsky, W. T. Vetterling, and B. P. Flannery: 1992, *Numerical recipes in FORTRAN. The art of scientific computing*. Cambridge: University Press, —c1992, 2nd ed.
- Pringle, J. E.: 1981, 'Accretion discs in astrophysics'. *Ann. Rev. Astron. Astrophys.* **19**, 137–162.
- Pringle, J. E.: 1989, 'A boundary layer origin for bipolar flows'. *MNRAS* **236**, 107–115.
- Pruet, J., G. M. Fuller, and C. Y. Cardall: 2001, 'On Steady State Neutrino-heated Ultrarelativistic Winds from Compact Objects'. *ApJ* **561**, 957–963.
- Pudritz, R. E. and C. A. Norman: 1986, 'Bipolar hydromagnetic winds from disks around protostellar objects'. *ApJ* **301**, 571–586.
- Pyo, T., M. Hayashi, N. Kobayashi, H. Terada, M. Goto, T. Yamashita, A. T. Tokunaga, and Y. Itoh:

- 2002, ‘Velocity-resolved [Fe II] Line Spectroscopy of L1551 IRS 5: A Partially Ionized Wind under Collimation around an Ionized Fast Jet’. *ApJ* **570**, 724–733.
- Rees, M. J.: 1984, ‘Black Hole Models for Active Galactic Nuclei’. *Ann. Rev. Astron. Astroph.* **22**, 471–506.
- Reipurth, B. and J. Bally: 2001, ‘Herbig-Haro Flows: Probes of Early Stellar Evolution’. *Ann. Rev. Astron. Astroph.* **39**, 403–455.
- Reipurth, B., S. Heathcote, J. Morse, P. Hartigan, and J. Bally: 2002, ‘Hubble Space Telescope Images of the HH 34 Jet and Bow Shock: Structure and Proper Motions’. *AJ* **123**, 362–381.
- Richtmyer, R. D. and K. W. Morton: 1967, *Difference methods for initial-value problems*. Wiley, New York.
- Ritchie, B. W. and P. A. Thomas: 2001, ‘Multiphase smoothed-particle hydrodynamics’. *MNRAS* **323**, 743–756.
- Rosswog, S. and M. B. Davies: 2002, ‘High-resolution calculations of merging neutron stars - I. Model description and hydrodynamic evolution’. *MNRAS* **334**, 481–497.
- Rosswog, S., M. B. Davies, F.-K. Thielemann, and T. Piran: 2000, ‘Merging neutron stars: asymmetric systems’. *A&A* **360**, 171–184.
- Rosswog, S., E. Ramirez-Ruiz, and M. B. Davies: 2003, ‘High-resolution calculations of merging neutron stars - III. Gamma-ray bursts’. *MNRAS* **345**, 1077–1090.
- Ruffert, M. and H.-T. Janka: 2001, ‘Coalescing neutron stars - A step towards physical models. III. Improved numerics and different neutron star masses and spins’. *A&A* **380**, 544–577.
- Ryu, D. and T. W. Jones: 1995, ‘Numerical magnetohydrodynamics in astrophysics: Algorithm and tests for one-dimensional flow’. *ApJ* **442**, 228–258.
- Ryu, D., T. W. Jones, and A. Frank: 1995, ‘Numerical Magnetohydrodynamics in Astrophysics: Algorithm and Tests for Multidimensional Flow’. *ApJ* **452**, 785.
- Salmon, R.: 1988, ‘Hamiltonian fluid mechanics’. *Annual Review of Fluid Mechanics* **20**, 225–256.
- Schäfer, C., R. Speith, M. Hipp, and W. Kley: 2004, ‘Simulations of planet-disc interactions using Smoothed Particle Hydrodynamics’. *A&A* **418**, 325–335.
- Schutz, B. F.: 1985, *A first course in general relativity*. Cambridge: University Press, 1985.
- Serna, A., J.-M. Alimi, and J.-P. Chieze: 1996, ‘Adaptive Smooth Particle Hydrodynamics and Particle-Particle Coupled Codes: Energy and Entropy Conservation’. *ApJ* **461**, 884.
- Shakura, N. I. and R. A. Sunyaev: 1973, ‘Black holes in binary systems. Observational appearance.’. *A&A* **24**, 337–355.
- Shapiro, S. L. and S. A. Teukolsky: 1983, *Black holes, white dwarfs, and neutron stars: The physics of compact objects*. New York, Wiley-Interscience.
- Shibata, M. and K. ū. Uryū: 2000, ‘Simulation of merging binary neutron stars in full general relativity: $\Gamma=2$ case’. *Phys. Rev. D* **61**(6), 064001.
- Shu, F. H., F. C. Adams, and S. Lizano: 1987, ‘Star formation in molecular clouds - Observation and theory’. *Ann. Rev. Astron. Astroph.* **25**, 23–81.
- Shu, F. H., S. Lizano, S. P. Ruden, and J. Najita: 1988, ‘Mass loss from rapidly rotating magnetic protostars’. *ApJL* **328**, L19–L23.
- Sod, G. A.: 1978, ‘A Survey of Several Finite Difference Methods for Systems of Nonlinear Hyperbolic Conservation Laws’. *J. Comp. Phys.* **27**, 1–31.

- Springel, V. and L. Hernquist: 2002, ‘Cosmological smoothed particle hydrodynamics simulations: the entropy equation’. *MNRAS* **333**, 649–664.
- Spruit, H. C., T. Foglizzo, and R. Stehle: 1997, ‘Collimation of magnetically driven jets from accretion discs’. *MNRAS* **288**, 333–342.
- Stellingwerf, R. F. and R. E. Peterkin: 1990, ‘Smooth Particle Magnetohydrodynamics’. Technical Report MRC/ABQ-R-1248, Mission Research Corporation, Albuquerque, NM.
- Stellingwerf, R. F. and R. E. Peterkin: 1994, ‘Smooth Particle Magnetohydrodynamics (Invited review)’. *Memorie della Societa Astronomica Italiana* **65**, 991.
- Stoffer, D.: 1995, ‘Variable steps for reversible integration methods’. *Computing* **55**(1), 1–22.
- Stone, J. M., J. F. Hawley, C. R. Evans, and M. L. Norman: 1992, ‘A test suite for magnetohydrodynamical simulations’. *ApJ* **388**, 415–437.
- Stone, J. M. and M. L. Norman: 1992, ‘ZEUS-2D: A Radiation Magnetohydrodynamics Code for Astrophysical Flows in Two Space Dimensions. II. The Magnetohydrodynamic Algorithms and Tests’. *ApJS* **80**, 791.
- Stone, J. M., E. C. Ostriker, and C. F. Gammie: 1998, ‘Dissipation in Compressible Magnetohydrodynamic Turbulence’. *ApJL* **508**, L99–L102.
- Tóth, G.: 2000, ‘The $\nabla \cdot \mathbf{B} = 0$ Constraint in Shock-Capturing Magnetohydrodynamics Codes’. *J. Comp. Phys.* **161**, 605–652.
- Tóth, G.: 2002, ‘Conservative and Orthogonal Discretization for the Lorentz Force’. *J. Comp. Phys.* **182**, 346–354.
- Thompson, T. A., A. Burrows, and B. S. Meyer: 2001, ‘The Physics of Proto-Neutron Star Winds: Implications for r-Process Nucleosynthesis’. *ApJ* **562**, 887–908.
- Toro, E. F.: 1992, ‘The Weighted Average Flux Method Applied to the Euler Equations’. *Philosophical Transactions: Physical Sciences and Engineering* **341**, 499–530.
- Tout, C. A., M. Livio, and I. A. Bonnell: 1999, ‘The ages of pre-main-sequence stars’. *MNRAS* **310**, 360–376.
- Tout, C. A. and J. E. Pringle: 1992, ‘Accretion disc viscosity - A simple model for a magnetic dynamo’. *MNRAS* **259**, 604–612.
- Tout, C. A. and J. E. Pringle: 1996, ‘Can a disc dynamo generate large-scale magnetic fields?’. *MNRAS* **281**, 219–225.
- Urry, C. M. and P. Padovani: 1995, ‘Unified Schemes for Radio-Loud Active Galactic Nuclei’. *PASP* **107**, 803.
- von Neumann, J. and R. D. Richtmyer: 1950, ‘A method for the numerical calculation of hydrodynamic shocks’. *J. Appl. Phys.* **21**, 232.
- Whitehouse, S. C. and M. R. Bate: 2004, ‘Smoothed particle hydrodynamics with radiative transfer in the flux-limited diffusion approximation’. *astro-ph/0406392*.