

Curriculum Vitae

James Wright Wadsley

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Business Address

Department of Physics and Astronomy
McMaster University
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Other Personal Data

Born on March 26, 1970 in Launceston, Tasmania
Canadian Landed Immigrant (Permanent Resident)
Married with 4 children

Educational Background

Ph.D. in Astronomy, February 1998
“Cosmological Gasdynamics: Simulations of the Lyman Alpha Forest”
Supervisor: J.R. Bond, CITA, University of Toronto, Canada

M.Sc. in Astronomy, September 1993
“Smoothed Particle Hydrodynamics in Astrophysics”
Supervisor: J.R. Bond, CITA, University of Toronto, Canada

B.Sc. Hons. in Applied Mathematics, 1991
Monash University, Melbourne, Australia

Current Status at McMaster

Associate Professor, Department of Physics and Astronomy, hired July 2003.

Professional Organizations

Canadian Astronomical Society

Employment History

<i>July 2008 - present</i>	Associate Prof. Physics and Astronomy Dept. Physics & Astronomy, McMaster University
<i>July 2003 - June 2008</i>	Asst. Prof. Physics and Astronomy Dept. Physics & Astronomy, McMaster University
<i>Feb 2002 - June 2003</i>	Senior Research Associate, SHARCNET High Performance Computing (HPC) Consultant Dept. Physics & Astronomy, McMaster University
<i>Aug 2000 - Jan 2002</i>	Postdoctoral Research Associate Dept. Physics & Astronomy, McMaster University
<i>Mar 1998 - Jul 2000</i>	Postdoctoral Research Associate Department of Astronomy, University of Washington, Seattle, USA

Areas of Interest

Theoretical Astrophysics, Hydrodynamics/MHD, Galaxy Formation/Cosmology, Planet Formation, Radiative Transfer/Absorption Spectra, Star Formation, ISM/IGM Physical Processes, Computational Physics/Astrophysics, Parallel Computing, Teaching Computational Techniques

Honours

- *Early Researcher Award* 2008-2012
Province of Ontario, Canada
- *SHARCNET Chair in Computational Tools (Astrophysics)* 2003
Department of Physics and Astronomy, McMaster University
- *CITA National Fellow*, 2000-2002
Canadian Institute for Theoretical Astrophysics
- *Full International Commonwealth Scholarship*, 1992-1996
Canadian Commonwealth Scholarship and Fellowship Plan
- *Walter Helm Fellowship in Astronomy*, 1992
Department of Astronomy, University of Toronto
- *Faculty of Science Scholar*, 1988-1991
Monash University, Australia

Lifetime Publications

- Peer Reviewed – Journal Articles

1. "On the treatment of entropy mixing in numerical cosmology", Wadsley, J, Veeravalli, G., Couchman, H., 2008, *Mon. Not. Roy. Astr. Soc.*, 387, 427
2. "Stellar Feedback in Dwarf Galaxy Formation", Mashchenko, S., Wadsley, J., Couchman, H., 2008, *Science*, 319, 174
3. "The Role of Cold Flows in the Assembly of Galaxy Disks", Brooks, A. M.; Governato, F.; Quinn, T.; Brook, C. B.; Wadsley, J., *Astrophysical J.*, 2009, 694, 396
4. "The Formation of Polar Disk Galaxies", Brook, C., Governato, F.; Quinn, T. ; Wadsley, J., Brooks, A., Willman, B., Stilp, A., Jonsson, P., 2008, *Astrophysical J.*, 689, 678
5. "Damped Lyman- α systems in galaxy formation simulations", Pontzen, A., Governato, F., Pettini, M., *Stinson, G.*, Wadsley, J., Brooks, A., Quinn, T., Haehnelt, M., 2008, *Mon. Not. Roy. Astr. Soc.*, 390, 1349
6. "Riding the Spiral Waves: Implications of Stellar Migration for the Properties of Galactic Disks", Roskar, R., Debattista, V., Quinn, T., *Stinson, G.*, Wadsley, J., 2008, *Astrophysical J. Letters*, 684, 79
7. "Beyond Inside-Out Growth: Formation and Evolution of Disk Outskirts", Roskar, R., Debattista, V., *Stinson, G.*, Quinn, T., Kauffmann, T., Wadsley, J., 2008, *Astrophysical J. Letters*, 675, 65
8. "Angular momentum transport and disc morphology in smoothed particle hydrodynamics simulations of galaxy formation", Kaufmann, T., Mayer, L., Wadsley, J., Stadel, J., Moore, B., 2007, *Mon. Not. Roy. Astr. Soc.*, 375, 53
9. "Forming Disk Galaxies in Lambda CDM Simulations", Governato, F., Willman B., Mayer, L., Brooks, A., Stinson, G., Valenzuela, O., Wadsley, J., Quinn, T., 2007, *Mon. Not. Roy. Astr. Soc.*, 374, 1479
10. "Fundamental differences between SPH and grid methods", Agertz, O., Moore, B., Stadel, J., Potter, D., Miniati, F., Read, J., Mayer, L., Gawryszczak, A., Kravtsov, A., Monaghan, J., Nordlund, A., Pearce, F., Quilis, V., Rudd, D., Springel, V., Stone, J., Tasker, E., Teyssier, R., Wadsley, J., Walder, R., 2007, *Mon. Not. Roy. Astr. Soc.*, 380, 963
11. "Fragmentation of gravitationally unstable gaseous protoplanetary disks with radiative transfer", Mayer, L., Lufkin, G., Quinn, T., Wadsley, J., 2007, *Astrophysical J. Lett.*, 661L, 77
12. "Is there Evidence for Flat Cores in the Halos of Dwarf Galaxies?: The Case of NGC 3109 and NGC 6822?", Valenzuela, O., Rhee, G., Klypin, A., Governato, F., Stinson, G., Quinn, T., Wadsley, J., *Astrophysical J.*, 2007, 657, 773
13. "Rapid Formation of Supermassive Black Hole Binaries in Galaxy Mergers with Gas", Mayer, L., Kazantzidis, S., Madau, P., Colpi, M., Quinn, T., Wadsley, J., 2007, *Science*, 316, 1874
14. "Early gas stripping as the origin of the darkest galaxies in the Universe", Mayer, L., Kazantzidis, S., Matropietro, C, Wadsley, J., 2007, *Nature*, 445, 738
15. "Breathing in Low Mass Galaxies: A Study of Episodic Star Formation", Stinson, G., Dalcanton, J., Quinn, T., Kaufmann, T., Wadsley, J., 2007, *Astrophysical J.*, 667, 170

16. "Fragmentation of gravitationally unstable gaseous protoplanetary disks with radiative transfer", Mayer, L., Lufkin, G., Quinn, T., Wadsley, J., 2007, *ApJ Letters*, 661, 77
17. "Forming Disk Galaxies in Lambda CDM Simulations", Governato, F., Willman B., Mayer, L., Brooks, A., Stinson, G., Valenzuela, O., Wadsley, J., Quinn, T., 2007, *MNRAS*, 374, 1479
18. "The Origin and Evolution of the Mass-Metallicity Relationship for Galaxies: Results from Cosmological N-Body Simulations", Brooks, A., Governato, F., Booth, C., Willman, B., Gardner, J., Wadsley, J., Stinson, G., Quinn, T., 2007, *ApJ*, 655L
19. "Angular momentum transport and disc morphology in smoothed particle hydrodynamics simulations of galaxy formation", Kaufmann, T., Mayer, L., Wadsley, J., Stadel, J., Moore, B., 2007, *MNRAS*, 375, 53
20. "Is there Evidence for Flat Cores in the Halos of Dwarf Galaxies?: The Case of NGC 3109 and NGC 6822?", Valenzuela, O., Rhee, G., Klypin, A., Governato, F., Stinson, G., Quinn, T., Wadsley, J., 2007, *ApJ*, 657, 773
21. "The removal of cusps from galaxy centres by stellar feedback in the early Universe", Mashchenko, S., Couchman, H.,M.,P. and Wadsley, J., 2006, *Nature*, 442, 539
22. "Proto-Brown Dwarf Disks as Products of Protostellar Disk Encounters", Shen, S., Wadsley, J., 2006, *ApJ*, 651L
23. "Star Formation and Feedback in Smoothed Particle Hydrodynamics Simuations - I. Isolated Galaxies", Stinson, G., Seth, A., Katz, N., Wadsley, J., Governato, F., Quinn, T., 2006, *MNRAS*, 373, 1074
24. "Cooling flows within galactic haloes: the kinematics and properties of infalling multiphase gas", Kaufmann, T., Mayer, L., Wadsley, J., Stadel, J. and Moore, B., 2006, *MNRAS*, 370, 1612
25. "The impact of mergers on relaxed X-ray clusters I. Dynamical evolution and emergent transient structures", Poole, G., Fardal, M., Babul, A., McCarthy, I., Quinn, T., Wadsley, J., 2006, *MNRAS*, 373, 881
26. "Simultaneous ram pressure and tidal stripping; how dwarf spheroidals lost their gas", Mayer, L., Mastropietro, C., Wadsley, J., Stadel, J. and Moore, B., 2006, *MNRAS*, 369, 1021
27. "The Secular Evolution of Disk Structural Parameters", Debattista, V.,P., Mayer, L., Carollo, C.,M., Moore, B., Wadsley, J. and Quinn, T., 2006, *ApJ*, 645, 209
28. "Gravitational instability in binary protoplanetary discs: new constraints on giant planet formation", Mayer, L., Wadsley, J., Quinn, T., Stadel, J., 2005, *MNRAS*, 363, 641
29. "The gravitational and hydrodynamical interaction between the Large Magellanic Cloud and the Galaxy", Mastropietro, C., Moore, B., Mayer, L., Wadsley, J., Stadel, J., 2005, *MNRAS*, 363, 509
30. "Suppression of three-dimensional flow instabilities in tube bundles", Kevlahan, N.K.-R., Wadsley, J. 2005, *J. Fluids Strucs.* 20(4), 611-620

31. “The Sunyaev-Zeldovich effect in CMB-calibrated theories applied to the Cosmic Background Imager anisotropy power at $l > 2000$ ”, Bond, J., Contaldi, C., Pen, U-L., Pogosyan, D., Prunet, S., Ruetalo, M., Wadsley, J., Zhang, P., Mason, B., Myers, S., Pearson, T., Readhead, A., Sievers, J., Udomprasert, P., 2005, *Astrophysical Journal*, 626, 12
32. “The Fate of Supermassive Black Holes and the Evolution of the MBH- σ Relation in Merging Galaxies: The Effect of Gaseous Dissipation”, Kazantzidis, S., Mayer, L., Colpi, M., Madau, P., Debattista, V., Wadsley, J., Stadel, J., Quinn, T., Moore, B., 2005, *Astrophysical Journal*, 623, 67
33. “Gasoline: A flexible, parallel implementation of TreeSPH”, Wadsley, J., Stadel, J., Quinn, T. 2004, *New Astronomy*, 9, 137
34. “The origin and properties of intracluster stars in a rich cluster”, Willman, B., Governato, F., Wadsley, J., Quinn, T., 2004, *Mon. Not. Roy. Astronomical Soc.*, 355, 159
35. “Simulations of Gaseous Disc-Embedded Planet Interaction”, Luftkin, G., Quinn, T., Wadsley, J., Stadel, J., Governato, F., 2004, *Mon. Not. Roy. Astronomical Soc.*, 347, 421
36. “The formation and evolution of bars in low surface brightness galaxies with cold dark matter halos”, Mayer, L., Wadsley, J. 2004, *Mon. Not. Roy. Astronomical Soc.*, 347, 421
37. “The Evolution of Gravitationally Unstable Protoplanetary Disks: Fragmentation and Possible Giant Planet Formation”, Mayer, L., Quinn, T., Wadsley, J., Stadel, J., 2004, *Astrophysical Journal*, 609, 1045
38. “The Formation of a Realistic Disk Galaxy in Λ -dominated Cosmologies”, Governato, F., Mayer, L., Wadsley, J., Gardner, J., Willman, B., Hayashi, E., Quinn, T., Stadel, J., Lake, G. 2004, *Astrophysical Journal*, 607, 688
39. “Formation of Giant Planets by Fragmentation of Protoplanetary Disks”, Mayer, L., Quinn, T., Wadsley, J., Stadel, J. 2002, *Science*, 298, 1756
40. “The effect of non-gravitational gas heating in groups and clusters of galaxies”, Borgani, S., Governato, F., Wadsley, J., Menci, N., Tozzi, P., Quinn, T., Stadel, J., Lake, G. 2002, *Mon. Not. Roy. Astronomical Soc.*, 336, 409
41. “Three-dimensional Simulations of the Gravitational Collapse of Logatropic Molecular Cloud Cores”, Reid, M., Pudritz, R., Wadsley, J. 2002, *Astrophysical Journal*, 570, 231
42. “Pre-heating the ICM in high resolution simulations: the effect on the gas entropy”, S. Borgani, F. Governato, J. Wadsley, N. Menci, P. Tozzi, G. Lake, T. Quinn, J. Stadel, 2001, *Astrophysical Journal*, 559, 71
43. “The Metamorphosis of Tidally Stirred Dwarf Galaxies” L. Mayer, F. Governato, M. Colpi, B. Moore, T. Quinn, J. Wadsley, J. Stadel, G. Lake, 2001, *Astrophysical Journal*, 559, 754
44. “Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group”, L. Mayer, F. Governato, M. Colpi, B. Moore, T. Quinn, J. Wadsley, J. Stadel, G. Lake, 2001, *Astrophysical Journal*, 547, 123

45. “The Santa Barbara cluster comparison project: a test of cosmological hydrodynamics codes”, C.S. Frenk, S.D.M. White, P. Bode, J.R. Bond, G.L. Bryan, R. Cen, H.M.P. Couchman, A.E. Evrard, N. Gnedin, G. Hu, A. Jenkins, A.M. Khokhlov, A. Klypin, M.L. Norman, J.F. Navarro, J.P. Ostriker, J.M. Owen, F.R. Pearce, U-L. Pen, M. Steinmetz, P.A. Thomas, J.V. Villumsen, J.W. Wadsley, M.S. Warren, G. Yepes, 1999, *Astrophysical Journal*, 525, p. 554
46. “Implementation of the JMA Typhoon Bogus in the BMRC Tropical Prediction System”, N.E. Davidson, J.W. Wadsley, K. Puri, K. Kurihara and M. Ueno, 1993, *Journal of the Meteorological Society of Japan*, Vol. 71, No. 4, pp. 437-467

- Submitted for Publication

1. “Encounter-induced brown dwarf formation: A Numerical Study of Brown Dwarf Formation via Encounters of Protostellar Disks”, Shen, S., Wadsley, J., Hayfield, T., Ellens, N., 2009, *submitted to MNRAS*
2. “Feedback and the Formation of Dwarf Galaxy Stellar Halos”, Stinson, G., Dalcanton, J., Quinn, T., Gogarten, S., Kaufmann, T., Wadsley, J., 2009, *accepted to MNRAS*.
3. “Redistributing hot gas around galaxies: do cool clouds signal a solution to the over-cooling problem?”, Kaufmann, T., Bullock, J., Maller, A., Fang, T., Wadsley, J., 2008 *Submitted to MNRAS*
4. “Forming a Large Disk Galaxy from a z1 Major Merger”, Governato, F., Brook, C. B., Brooks, A. M., Mayer, L., Willman, B., Jonsson, P., Stilp, A. M., Pope, L., Christensen, C., Wadsley, J., Quinn, T., 2008 *Submitted to MNRAS*
5. “Pairing of Supermassive Black Holes in unequal-mass galaxy mergers”, Callegari, S., Mayer, L., Kazantzidis, S., Colpi, M., Governato, F., Quinn, T., Wadsley, J., 2008, *submitted to ApJ Letters*
6. “In situ formation of the massive stars around SgrA*”, Mapelli, M., Hayfield, T., Mayer, L., Wadsley, J. 2008, *Submitted to MNRAS letters*

- Peer Reviewed – Proceedings of Meetings

1. “Timesteps and Parallel Domain Decomposition with Application to Astrophysical Simulations”, Wadsley, J., Quinn, T., *High Performance Computing Systems and Applications*, May 2006, p. 120-126
2. “High Performance Computing in Astrophysics: Parallel Gasdynamics and Gasoline”, Wadsley, J., *High Performance Computing Systems and Applications 2003*, vol 17, pp. 31-38, NRC Research Press
3. “Numerical Mixing and Entropy Transport for Compressible CFD Applications”, Wadsley, J., Veeravalli, G., Couchman, H., *High Performance Computing Systems and Applications 2004*, vol 18, pp. 63-72, Pub.: Univ. of Manitoba
4. “High Performance Computational Astrophysics with Pkdgrav/Gasoline” J. Stadel, J. Wadsley, D. C. Richardson, in *High Performance Computing Systems and Applications 2000*. Kluwer Academic Publishers

- Not Peer Reviewed – Proceedings of Meetings

1. “Multi-Scale Simulations of Merging Galaxies with Supermassive Black Holes”, Mayer, L.; Kazantzidis, S.; Madau, P.; Colpi, M.; Quinn, T.; Wadsley, J., *Relativistic Astrophysics Legacy and Cosmology - Einstein’s*, ESO Astrophysics Symposia, Volume . ISBN 978-3-540-74712-3. Springer-Verlag Berlin Heidelberg, 2008, p. 152
2. “SDSS Observations of the Milky Way vs. N-body Models: A Comparison of Stellar Distributions in the Position-Velocity-Metallicity Space”, Loebman, S.; Roskar, R.; Ivezić, Z.; Juric, M.; Sesar, B.; Debattista, V. P.; Quinn, T. R.; Stinson, G. S.; Wadsley, J., 2008, in “Classification and Discovery in Large Astronomical Surveys”. AIP Conference Proceedings, Volume 1082, pp. 238-242 (2008)
3. “Learning about Disk Formation from Their Outskirts”, Roskar, R., Debattista, V., Stinson, G., Quinn, T., Kaufmann, T., Wadsley, J. *Formation and Evolution of Galaxy Disks ASP Conference Series*, Vol. 396, Proceedings of the conference held 1-5 October, 2007 at the Centro Convegni Matteo Ricci, Rome, Italy. Edited by Jos G. Funes, S.J., and Enrico Maria Corsini. 2008., p.217
4. “Cold cloud and hot gas infall as galaxy formation probe”, Kaufmann, T., Wadsley, J., Bullock, J., Fang, T., Maller, A., 2008, 37th COSPAR Scientific Assembly. Held 13-20 July 2008, in Montreal, Canada., p.1468
5. “Supernova Feedback in Smoothed Particle Hydrodynamics Simulations of Dwarf Galaxy Formation”, *Stinson, G.*, Quinn, T., Dalcanton, J., Wadsley, J., Gogarten, S., 2007, BAAS, 211.1601
6. “The Formation and Evolution of Disk Outskirts: N-body Simulations”, Debattista, V., Roskar, R., Quinn, T., Stinson, G., Kaufmann, T., Wadsley, J., 2007, BAAS, 211.1315D
7. “Proto-Brown Dwarf Disks as Products of Protostellar Disk Encounters”, Shen, S., Wadsley, J., 2006, BAAS, 208, 09.01
8. “Characterizing Disk Truncations with N-Body Simulations”, Roskar, R., Debattista, V. P., Stinson, G. S., Quinn, T. R., Kaufmann, T. and Wadsley, J., 2006, BAAS, 209, 211.06
9. “Star Formation and Supernova Feedback in Smoothed Particle Hydrodynamic Simulations of Galaxy Formation”, Stinson, G. S., Kaufmann, T., Quinn, T., Christensen, C., Wadsley, J. and Kazantzidis, S., 2006, BAAS, 209, 38.02
10. “The Origin and Evolution of the Mass-Metallicity Relationship for Galaxies: Results from Cosmological N-Body Simulations”, Brooks, A., Governato, F., Booth, C. M., Willman, B., Gardner, J. P., Wadsley, J., Stinson, G. and Quinn, T. , 2006, BAAS, 209, 19.07
11. “The Evolution of Disk Galaxies over Cosmic Ages”, Brooks, A., Governato, F., Willman, B., Mayer, L., Stinson, G., Valenzuela, O., Wadsley, J. and Quinn, T. , 2006, BAAS, 208, 53.03
12. “Star Formation and Feedback in Cosmological SPH Simulations”, Stinson, G. S., Kaufmann, T., Quinn, T. R., Christensen, C., Wadsley, J., 2006, *in Galaxy Evolution Across the Hubble Time*, IAU, Symp. 235, 14-17 August 2006, 376

13. “Cosmological Simulations of Galaxy Formation I: Star Formation, Feedback, Resolution and Matching the Tully–Fisher Relation (among other things)”, Governato, F., Stinson, G., Wadsley, J., Quinn, T., 2006, Proceedings for the Vth Marseille International Cosmology Conference: The Fabulous Destiny of Galaxies
14. “The Effect of Gaseous Dissipation on the Fate of Supermassive Black Holes in Merging Galaxies”, Kazantzidis, S., Mayer, L., Colpi, M., Madau, P., Debattista, V. P., Quinn, T., Wadsley, J., Stadel, J., Moore, B., 2005, Growing black holes: accretion in a cosmological context. Proceedings of the MPA/ESO/MPE/USM Joint Astronomy Conference held at Garching, Germany, 21-25 June 2004.
15. “High resolution SPH simulations of disk formation in CDM halos; resolution tests”, Kaufmann, T., Mayer, L., Moore, B., Stadel, J., Wadsley, J., to appear in the Proceedings of Science (published by SISSA), Conference “Baryons in Dark Matter Haloes”, Novigrad, Croatia, 5-9 October 2004, astro-ph/0412348
16. “Suppression of 3D flow instabilities in tightly packed tube bundles”, Kevlahan, N.K.-R., Simon, J., Tonnet, N., Wadsley, J. 2004, Conference “Flow Induced Vibrations”, ed. de Langre & Axisa, Ecole Polytechnique, Paris 6-9th July 2004
17. “Dynamics and fueling of supermassive black holes in gas-rich galaxy binary mergers”, Kazantzidis, S., Mayer, L., Colpi, M., Madau, P., Debattista, V., Moore, B., Governato, F., Wadsley, J., Stadel, J. 2004, *Memorie della Societa Astronomica Italiana Supplement*, v.5, p.261
18. “Giant Planet Formation from Disk Instability; Cooling and Heating”, Mayer, L., Wadsley, J., Quinn, T. & Stadel, J., 2004, p. 290, Proceedings of XIXth IAP Colloquium, “Extrasolar Planets: Today and Tomorrow”, June 30-July 4, Paris, 2003, astro-ph/0311048
19. “On the Formation of the Magellanic Stream”, Mastropietro, C., Moore, B., Mayer, L., Stadel, J., Wadsley, J., 2003, Proceedings of “Satellite and Tidal Streams”, 26-30 May, 2003, La Palma, Spain, astro-ph/0309244
20. “Sweeping and Shaking Dwarf Satellites”, Mayer, L., Wadsley, J., 2003, Proceedings of “Satellite and Tidal Streams”, 26-30 May, 2003, La Palma, Spain, astro-ph/0309073
21. “Simulations of unstable gaseous disks and the origin of giant planets”, Mayer, L., Quinn, T., Wadsley, J., Stadel, J. 2003, Proceedings of the International Conference “Scientific Frontiers in Research on Extrasolar Planets”, pp. 281-286, San Francisco: ASP Conference Series, astro-ph/0301591
22. “CMB observations with the Cosmic Background Imager (CBI) Interferometer”, Contaldi, C., Bond, J., Pogosyan, D., Mason, B., Myers, S., Pearson, T., Pen, U-L., Prunet, S., Readhead, A., Ruetalo, M., Sievers, J., Wadsley, J., Zhang, P. 2002, Proceedings of the XVIII IAP Colloquium ‘On the nature of dark energy’, Paris, 1-5 July 2002, astro-ph/0210303
23. “Fragmentation and Collapse of Turbulent Molecular Clouds”, Tilley, D., Pudritz, R., Wadsley, J. 2002, proceedings: Chemistry as a Diagnostic of Star Formation (NRC Press), astro-ph/0212359
24. “Star Formation: 3D Collapse of Turbulent Cloud Cores”, Reid, M., Pudritz, R., Wadsley, J. 2002, Chemistry as a diagnostic of star formation, eds. C.L. Curry & M. Fich (NRC Press), astro-ph/0212385

25. "Probing SZ Source Detection with Gasdynamical Simulations", Bond, J., Ruetalo, M., Wadsley, J., Gladders, M. 2002, "AMiBA 2001: High-z Clusters, Missing Baryons, and CMB Polarization", Proc. TAW8. May02: Figs. changed to 4 sq deg cf. 1 sq deg maps; improved (less) k-space filtering in SZ power spectrum, astro-ph/0112499
26. "Measuring Ω_b from the Helium Lyman- α Forest", J. W. Wadsley, C. J. Hogan, S. F. Anderson, 2000, Clustering at High Redshift, ASP Conference Series, Vol. 200. Edited by A. Mazure, O. Le Fvre, and V. Le Brun. ISBN: 1-58381-027-7 (2000), p.291, astro-ph/9911394
27. "The Full Re-Ionization of Helium", J. W. Wadsley, C. J. Hogan, S. F. Anderson, 1998, After the Dark Ages: When Galaxies were Young (the Universe at $2 < z < 5$). 9th Annual October Astrophysics Conference in Maryland held 12-14 October, 1998. College Park, Maryland. Edited by S. Holt and E. Smith. American Institute of Physics Press, 1999, p. 273, astro-ph/9812239
28. "Theoretical Tools for Large Scale Structure", J. R. Bond, L. Kofman, D. Pogosyan, J. Wadsley, 1998, Wide Field Surveys in Cosmology, 14th IAP meeting held May 26-30, 1998, Paris. Publisher: Editions Frontieres. ISBN: 2-8 6332-241-9, p. 17, astro-ph/9810093
29. "Cosmic Web: Origin and Observables" D. Pogosyan, J. R. Bond, L. Kofman, J. Wadsley, 1998, Wide Field Surveys in Cosmology, 14th IAP meeting held May 26-30, 1998, Paris. Publisher: Editions Frontieres. ISBN: 2-8 6332-241-9, p. 61, astro-ph/9810072
30. "Lyman Alpha Absorption in The Cosmic Web", J.R. Bond and J.W. Wadsley, 1997, Structure et Evolution du Milieu Inter-Galactique Revele par Raies D'Absorption dans le Spectre des Quasars, 13th Colloque d'Astrophysique de l'Institut d'Astrophysique de Paris, 1-5 Juillet 1997, Paris. Ed. Patrick Petitjean and Stephane Charlot, 1998., p.143, astro-ph/9710102
31. "Probing the High Redshift IGM: SPH+P{(3)} MG Simulations of the Lyman-alpha Forest", Wadsley, J. and Bond, J. R., 1996, 28, BAAS, 1414
32. "MHD with SPH: Application to the High Redshift IGM", Murray, J., Wadsley, J. and Bond, J. R., 1996, BAAS, 28, 1413
33. "The Cosmic Web and Filaments in Cluster Patches", Pogosyan, D., Bond, J. R., Kofman, L. and Wadsley, J., 1996, BAAS, 28, 1289
34. "SPH P³MG Simulations of the Lyman- α Forest", J.W. Wadsley and J.R. Bond, 1996, Computational Astrophysics; 12th Kingston Meeting on Theoretical Astrophysics; proceedings of meeting held in Halifax; Nova Scotia; Canada, October 17-19; 1996, ASP Conference Series 123, edited by D. A. Clarke and M. J. West., p. 332, astro-ph/9612148
35. "The Cosmic Web, Large Scale Structure and Lyman Alpha Clouds", J.R. Bond and J.W. Wadsley, 1996, Computational Astrophysics; 12th Kingston Meeting on Theoretical Astrophysics; proceedings of meeting held in Halifax; Nova Scotia; Canada, October 17-19; 1996, ASP Conference Series 123, edited by D. A. Clarke and M. J. West., p. 323, astro-ph/9703125
36. "BMRC real time analyses of the tropospheric circulation during TCM-90" , N.E. Davidson, K. Puri, R. Bowen, J. Fraser, J.W. Wadsley and Hei-Meng Wong, 1991, BMRC Research Report No. 26, pp. 146

- Software

1. GASOLINE: Lead author of “Gasoline” Hydrodynamics Software.
Gasoline is a computer program for particle based hydrodynamic simulations with gravitational forces and optional atomic chemistry and cooling, optimized for both serial and parallel computing (original ref. Wadsley, Stadel & Quinn, *New Astronomy*, 2004, 9, 137).

Presentations and Talks

Invited Conference Talks

1. “Stellar Feedback in Dwarf Galaxy Formation”, Colloquium, Monash University, Melbourne Australia, Dec 2008
2. “Stellar Feedback and the Structure of Dark Matter Halos”, Colloquium, McGill University, April 2008
3. “Entropy Production and Mixing in Numerical Astrophysics”, *Frontiers in Computational Astrophysics: The Origin of Stars, Planets and Galaxies*, Ascona, Switzerland, 13-18 July 2008
4. “Making Dwarf Galaxies with SPH”, *Next Generation of Comp. Models of Baryonic Physics in Galaxy Formation: From ProtoStellar Cores to Disk Galaxies*, Conference, Zurich 17-21 September 2007
5. “Giant Planet Formation via Fragmentation of Gaseous Proto-Planetary Disks”, *Western Disk Workshop*, University of Western Ontario, May 18-19, 2006
6. “SPH and AMR: Gasoline, FLASH and Galaxy Clusters”, *Frontiers in Computational Astrophysics: The Origins of Stars, Planets and Galaxies*, 27-29 Sept 2004, Wengen, Switzerland
7. “Mixing in Numerical Models of Astrophysical Flows”, *Galaxy Formation: A Herculean Challenge*, BIRS Workshop, Banff, 1-6 Nov 2003

Contributed Conference Talks – Peer Reviewed

1. “Timesteps and Parallel Domain Decomposition for Astrophysical Applications”, *HPCS 2006*, Memorial University, May 14-17, 2006
2. “Numerical Mixing and Entropy Transport for Compressible CFD Applications”, *HPCS 2004*, 16-19 May 2004, Winnipeg, Manitoba
3. “High Performance Computing in Astrophysics: Parallel Gasdynamics and Gasoline”, Sherbrooke, Que, May 11-14, 2003
4. “Issues for High Performance Gasdynamics”, *High Performance Computing Systems and Applications 2000*, Victoria, BC, June 2000

Contributed Conference Talks – Not Peer Reviewed

1. “Stellar Feedback in Dwarf Galaxy Formation”, Great Lakes Cosmology, 2008, Carnegie-Mellon University, Pittsburgh,
2. “SPH simulations of Star Formation”, Multiplicity in Star Formation, Conference, Toronto, May 16-18, 2007
3. “Particles, Meshes and Entropy in Galaxy Clusters”, SOCM, Meeting/Workshop, McMaster, Jan 31, 2007
4. “Smoothed Particle Hydrodynamics Simulations of Protostellar Collisions”, AIMS, Seminar Series, McMaster, 2006
5. “Simulating the Fragmentation of Proto-planetary Disks”, 16th Kingston Meeting, Queens University, July 17-20, 2006
6. “The Formation of Gas Giant Planets”, CASCA, may 30-June 3, 2003, Waterloo
7. “Pouring Gasoline on Galaxy Clusters”, Great Lakes Cosmology Meeting, Univ. of Michigan, Ann Arbor, 15-18 May, 2003
8. “Hydrodynamical Simulations of the Sunyaev-Zel’dovich Effect”, CASCA, May 11-14, 2002, Penticton, B.C.
9. “Shock Tracking with SPH and WDM Galaxy Formation”, Kingston 2000 Meeting, August 26-30, 2000, Toronto
10. “Galaxy Formation in the Cosmological Context with GASOLINE”, Victoria Computational Cosmology Conference, Victoria, BC, August 21-25, 2000
11. “Implications of HST/STIS observations of the Helium Lyman- α forest for reionization and Ω_b ”, IGRAP International Conference, Marseilles, June 29-July 2, 1999
12. “Implications of the Lyman- α Forest for Cosmological Parameters”, Colloquium, University of Washington, 1998
13. “The Hydrogen and Helium Lyman- α Forests”, 13th Kingston Meeting on Theoretical Astrophysics, Hamilton, Ontario, 1998

Colloquia and Seminars

1. “Stellar Feedback in Dwarf Galaxy Formation and the Structure of Dark Matter Halos”, Astrophysics Seminar, University of Washington, February, 2009
2. “Stellar Feedback in Dwarf Galaxy Formation and the Structure of Dark Matter Halos”, Astrophysics Colloquium, McGill University, 1st April, 2008
3. “Rapid Giant Planet Formation”, Colloquium, August 2, 2004, Swinburne Univ., Melbourne, Australia
4. “Baryons, Helium and Warm Dark Matter”, Seminar, University of California San Diego, 2000

5. “Importance Sampling applied to the Lyman- α Forest”, Colloquium, University of Milan, 2000
6. “Hydrodynamics in Cosmology”, Colloquium, University of British Columbia, November, 1998