



PIMS

A decorative graphic composed of numerous thin, white, curved lines that flow from the left side of the page towards the right, creating a sense of movement and depth. The lines are more densely packed on the left and become more sparse as they move towards the right.

**2009 Selected Publications**

## SELECTED PUBLICATIONS

Below we list selected publications from PIMS' CRG activities, PDFs and CNRS Researchers. Only publications appearing (or accepted for publication) in 2009 are listed.

1. Agyemang, Ibrahim & Freedman, H. I. A mathematical model of an agricultural industrial-ecospheric system with industrial competition. *Commun. Pure Appl. Anal.* 8 (2009), no. 5, 1689--1707.
2. Agyemang, Ibrahim & Freedman, H. I. An environmental model for the interactions of industry with two competing agricultural resources. *Math. Comput. Modelling* 49 (2009), no. 7-8, 1618--1643.
3. Ainsworth, L.M. & Dean, C.B. (2009). Zero-inflated Spatial models. Under revision for *Environmental and Ecological Statistics*.
4. Akbar, M. M. & E. Woolgar. Ricci Solitons and Einstein-Scalar Field Theory. *Class. Quant. Grav.* 8. 26:055015, 2009.
5. Akbar, M. M. Generalized Second Law of Thermodynamics in Extended Theories of Gravity. *Int. Journal of Theoretical Physics.* 48:2665-2671, 2009.
6. Ancey, N., N. Balmforth & I. Frigard (2009). Viscoplastic fluids: from theory to application. *Journal of Non-Newton. Fluid Mech.*, v. 158, 1-3.
7. Ansong, J. & B. Sutherland (2009). Internal gravity waves generated by convective plumes. *Journal of Fluid Mechanics*, in press.
8. Argerami, Martín; Farenick, Douglas; Massey, Pedro. The gap between local multiplier algebras of  $C^*$ -algebras. *Q. J. Math.* 60 (2009), no. 3, 273--281.
9. B. Allison, S. Berman, J. Faulkner. & A. Pianzola. Multiloop realization of extended affine Lie algebras and Lie tori. *Trans. Amer. Math. Soc.* 4807--4842 (2009).
10. Baghbanzadeh & S. Reza khani, A. T. Temperature effects on quantum cloning of states and entanglement. *Phys. Lett. A* 373, 821 (2009).
11. Bahturin, Yu; Tvalavadze, M.; Tvalavadze, T. Group gradings on superinvolutions simple superalgebras. *Linear Algebra Appl.* 431 (2009), no. 5-7, 1054--1069.
12. Bailey, Robert. Error-correcting codes from permutation groups, *Discrete Mathematics*, 2009.
13. Bailey, Robert. Hamiltonian decompositions of complete k-uniform hypergraphs, to appear in *Discrete Mathematics*, 2009.
14. Balmforth, N. & C. Cawthorn (2009). First Contact in a viscous fluid I: a descending wedge. *Journal of Fluid Mechanics*, in press.
15. Balmforth, N., C. Cawthorn & R. Craster (2009). First Contact in a viscous fluid II: a compressible fluid and an elastic solid. *Journal of Fluid Mechanics*, in press.
16. Balmforth, N. & T. Peacock. Tidal conversion by super-critical topography. *Journal of Physical Oceanography*, v. 39, 2009.
17. Bates, L., Cushman, R., Hamilton, M. & Snitaycki, J. Quantization of singular reduction. *Rev. Math. Phys.* 21 (2009), no. 3, 315--371.
18. Baumgartner, Udo; Laca, Marcelo; Ramagge, Jacqui; Willis, George. Hecke algebras from groups acting on trees and HNN extensions. *J. Algebra* 321 (2009), no.11, 3065--3088.
19. Bezdek, K. & A.E Litavak. Covering convex bodies by cylinders and lattice points by flats", *J. of Geometric Analysis*, 19 (2009). 233--243.
20. Bonner, Simon. Continuous, time-varying covariates in mark-recapture-recovery analyses: A comparison of methods. *Biometrics*, 2009.
21. Bonner, Simon. A hierarchical Bayesian approach to multi-state mark-recapture: Simulations and applications. *Journal of Applied Ecology*, 2009.
22. Cawthorn, C. & R. Craster (2009). First Contact in a viscous fluid I: a descending wedge. *Journal of Fluid Mechanics*, in press.
23. Chen, J.Y. and C. Pang, Uniqueness of unbounded solutions of the Lagrangian mean curvature flow for graphs, *C. R. Math. Acad. Sci. Paris, Ser. I* 347 (2009), 1031-1034.

24. Chen, J.Y., M. Warren and Y. Yuan, A priori estimate for convex solutions of special Lagrangian equations and its applications, *Comm. Pure Appl. Math.* 62 (2009), 583-595.
25. Chenu O., Vuillerme N., Demongeot J. and Payan Y. (2009). A wireless lingual feedback device to reduce overpressures in seated posture: A feasibility study, *PLoS ONE*, Vol. 4(10):e7550.
26. Clark, H. & B. Sutherland (2009). Schlieren measurements of internal waves in non-Boussinesq fluids. *Expt. Fluids*, 47, 183-190.
27. Cunningham, Clifton; Dembele, Lassina Computing genus 2 Hilbert-Siegel modular forms over  $\mathbb{Q}(\sqrt{5})$  via the Jacquet-Langlands correspondence, *Experimental Mathematics*, 18 (2009) no.3, pp. 337.
28. David Kubiznak, Hari K. Kunduri, Yukinori Yasui. Generalized Killing-Yano equations in D=5 gauged supergravity. *Phys. Lett.* B678:240-245, 2009.
29. Daws, Matthew; Pham, Hung Le; White, Stuart Conditions implying the uniqueness of the weak  $\ast$ -topology on certain group algebras. *Houston J. Math.* 35 (2009), 253--276.
30. Dou, Y.; Le, N.D.; Zidek, J.V. (2009). Modeling hourly ozone concentration fields. Tentatively accepted *Annals of Applied Statistics*.
31. Dubash, N., N. Balmforth, S. Cochard & A. Slim (2009). What is the final shape of a viscoplastic slump? *Journal of Non-Newton. Fluid Mech.*, v. 158, 91-100.
32. Duvenaud, David., Daniel Eaton, Kevin Murphy, Mark Schmidt. Causal learning without DAGs. *JMLR W&CP* 2009.
33. El Smailly, Mohammad. Homogenization and fragmentation in some heterogeneous environmental models. To appear in *DCDS-A*, 2009.
34. Freedman, H. I.; Agarwal, Manju; Devi, Sapna. Analysis of stability and persistence in a ratio-dependent predator-prey resource model. *Int. J. Biomath.* 2 (2009), no. 1, 107--118.
35. Freedman, H. I.; Pinho, S. T. R. Stability criteria for the cure state in a cancer model with radiation treatment. *Nonlinear Anal. Real World Appl.* 10 (2009), no. 5, 2709—2715.
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37. Gille, P. and A. Pianzola. Remarks on the isotriviality of multiloop algebras. To appear in "Trends in Infinite Dimensional Lie Theory", Birkhauser (2009) 8pp.
38. Godsil, Chris; Roy, Aidan Equiangular lines, mutually unbiased bases, and spin models. *European J. Combin.* 30 (2009), no. 1, 246--262.
39. Hung Le Pham. A theorem of Gel'fand-Mazur type. *Studia Math.* 191 (2009), 81--88.
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41. Kac V., M. Lau and A. Pianzola. Differential conformal superalgebras and their forms. *Advances in Mathematics* 809--861 (2009).
42. Kallel, Sadok.. Remarks on Finite Subset Spaces, (Joint with Denis Sjerve). *Homology, Homotopy and Applications* Vol. 11 (2009).
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44. Karabash, Illia. The similarity problem for J-nonnegative Sturm-Liouville operators, *Proc. Roy. Soc. Edinburgh* (2009).
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47. Koenig, H. and N. Tomczak-Jaegermann. Projecting  $\ell_\infty$  onto classical spaces. *Constructive Approximation*, 29 (2009), 277--292.
48. Kunduri, Hari K. Generalized Killing-Yano equations in D=5 gauged supergravity. Published in *Phys. Lett.*, 2009.

49. Kunduri, Hari K. Uniqueness of near-horizon geometries of rotating extremal AdS(4) black holes. *Class. Quant. Grav.*, 2009.
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94. Waite, Michael and Boualem Khouider, 2009: The deepening of tropical convection due to congestus preconditioning. *Journal of the Atmospheric Sciences* (Accepted).
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