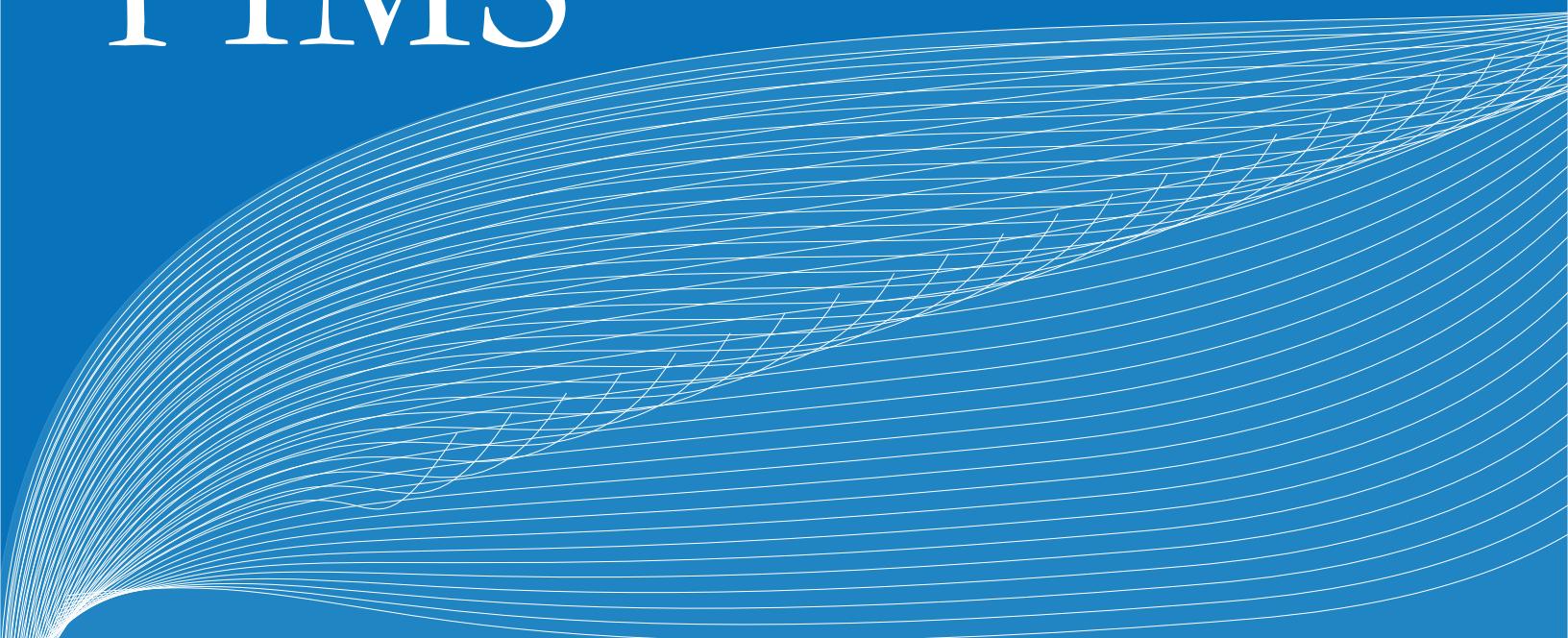# PIMS

2010 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 2010 are listed.

1. Adcock, B., "Gibbs phenomenon and its removal for a class of orthogonal expansions," to appear in BIT (2010).

2. Andronescu, M., Condon, A., Hoos, H., Murphy, K. and Mathews, D., "Computational approaches for RNA energy parameter estimation", to appear in RNA Journal (2010).

3. Argerami, M., Farenick, D. and Massey, P., "Injective envelopes and local multiplier algebras of some spatial continuous trace C*-algebras," to appear in Quarterly J. of Math. (Oxford) (2010).

4. Bailey, R. and Cameron, P., "Base size, metric dimension and other invariants of groups and graphs," to appear in Bull. London Math. Soc. (2010).

5. Balazard, M. and de Roton, A., "Sur un critère de Báez-Duarte pour l'hypothèse de Riemann," Int. J. Number Theory 6 (2010), 883-903 (2010).

6. Baudry, J.P., Raftery, A.E., Celeux, G., Lo, K. and Gottardo, R., "Combining Mixture Components for Clustering", J. of Graphical and Computational Statistics, 19, 332-353 (2010).

7. Berenbrink, P., Cooper, C., Friedetzky, T., Friedrich T. and Sauerwald, T., "Randomized Diffusion for Indivisible Loads," to appear in Proc. of the 22nd ACM-SIAM Symposium on Discrete Algorithms (2010).

8. Berenbrink, P., Elsässer, R., and Sauerwald, T., "Randomised Broadcasting: Memory vs. Randomness," Proc. of the 9th Latin American Theoretical Informatics Symp. (2010).

9. Berenbrink, P., Elsaesser, R. and Sauerwald, T., "Communication complexity of quasirandom rumor spreading," European Symposium on Algorithms, 134-145 (2010).

10. Berenbrink, P., Hoefer, M. and Sauerwald, T., "Distributed Selfish Load Balancing," to appear in Proc. of the 22nd ACM-SIAM Symposium on Discrete Algorithms (2010).

11. Binding P., Browne P. and Karabash I., "Sturm-Liouville problems for the p-Laplacian on a half-line," Proc. Roy. Soc. (Edinburgh) 53, 271-291 (2010).

12. Binding P. and Karabash I., "Absence of existence and uniqueness for forward-backward parabolic equations on a half-line," Operator Theory: Advances and Applications, 203, 89-98 (2010).

13. Braverman E. and Karabash I., "Bohl-Perron type stability theorems for linear difference equations with infinite delay," to appear in Difference Equations and Applications, arxiv.org/abs/1009.6163 (2010).

14. Brownlowe, N., an Huef, A., Laca, M. and Raeburn, I., "Boundary quotients of the Toeplitz algebra of the affine semigroup over the natural numbers," to appear in Ergodic Theory Dynam. Systems, preprint (2010).

15. Chang, S.-Y. A. and Yuan, Y., "A Liouville problem for the Sigma-2 equations," Discrete Contin. Dyn. Syst., 28, 659-664 (2010).

16. Chapuy, G., Fusy, É., Giménez, O. and Noy M., "On the diameter of random planar graphs," accepted to Analysis of Algorithms (2010).

17. Chau, A., Chen, J. and Yuan, Y., "Rigidity of entire self-shrinking solutions to curvature flows," to appear in J. Reine Angew. Math. (2010).

18. Chen, J. and Fraser, A., "On stable minimal disks in manifolds with nonnegative isotropic curvature," J. Reine Angew. Math. 643, 21–37 (2010).

19. Chen, J. and Fraser, A., "Holomorphic Variations of Minimal Disks with Boundary on a Lagrangian Surface," Canadian J. Math. 62, 1264-1275 (2010).

20. Chen, J. and He, W., "A note on singular time of mean curvature flow," Math. Z. (2010).

21. Choksi, R. and van Gennip, Y., "Deblurring of one dimensional bar codes via total variation energy minimisation," to be published in SIAM J. Imaging Sci. (2010).

22. Crutwell, G. and Shulman, M., "A unified framework for generalized multicategories," to be published in Theory and Applications of Categories (2010).

23. Dales, H.G., Lau, A.T.-M. and Strauss, D., "Banach algebras on semigroups and compactifications," Memoirs of Amer. Math. Soc. 205, 165 pp. (2010).

24. Dobra, A., Briollais, L., Jarjanazi, H., Ozcelik, H. and Massam, H., "Applications of the mode oriented stochastic search (MOSS) algorithm for discrete multi-way data to genomewide studies," to appear Bayesian Modelling in Bioinformatics, (D. Dey, S. Ghosh and B. Mallick, eds.), Taylor and Francis (2010).

25. Dobra, A., Eicher, T.S. and Lenkoski, A., "Modelling uncertainty in macroeconomic growth determinants using Gaussian graphical models," Statistical Methodology, 7, 292-306 (2010).

26. Dobra, A. and Fienberg, S.E., "The generalized shuttle algorithm," in Algebraic and Geometric Methods in Statistics (P. Gibilisco, E. Riccomagno, M.P. Rogantin and H.P. Wynn eds.), Cambridge University Press, 135-156 (2010).

27. Dobra, A. and Lenkoski, A., Copula Gaussian graphical models and their application to modelling functional disability data. Annals of Applied Statistics, accepted for publication (2010).

28. Dobra, A. and Massam, H., "The mode oriented stochastic search (MOSS) algorithm for log-linear models with conjugate priors," Statistical Methodology, 7, 240-253 (2010).

29. Dou, Y., Le, N.D. and Zidek, J.V., "Modelling hourly ozone concentration fields," Annals of Applied Statistics, 4, 1183-1213 (2010).

30. Dou, Y., Le, N.D. and Zidek, J.V., "Temporal forecasting with a Bayesian spatial predictor: Application to ozone," invited revision to Applied Statistics (2010).

31. Dou, Y., Le, N.D. and Zidek, J.V., "Temporal forecasting with a Bayesian spatial predictor: Application to ozone," invited revision to Applied Statistics (2010).

32. Droit, A., Cheung, C. and Gottardo, R., "rMAT an R/Bioconductor package for analyzing ChIP-chip experiments" Bioinformatics, 26, 678-679 (2010).

33. El Smaily, M., "Homogenization of pulsating traveling fronts," accepted to SIAM J. for Mathematical Analysis (2010).

34. El Smaily, M., "Min-Max formulas for the speeds of propagation in heterogeneous media," Annali di Mathematica Pura ed Applicata, 189, 47-66 (2010).

35. El Smaily, M. and Kirsch, S., "Asymptotics of the KPP minimal speed within large drift," Comptes Rendus Mathematique, 348, 857-861 (2010).

36. El Smaily, M. and Kirsch, S., "The speed of propagation for KPP reaction-diffusion equations within large drift," Advances in Differential Equations, 16, 361-400 (2011).

37. Elsässer, R. and Sauerwald, T., "Discrete Load Balancing is (Almost) as Easy as Continuous Load Balancing," Proc. of the 29th ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (2010).

38. Emerson, H., "Duality, correspondences and the Lefschetz map in equivariant KK theory: a survey," accepted by Fields Institute Conference Proceedings (2010).

39. Emerson, H. and Meyer, R., "Bivariant K-theory via correspondences," Adv. Math. 225, 2883-2919 (2010).

40. Emerson, H. and Meyer, R., "Dualities in equivariant Kasparov theory," accepted by New York J. Math. (2010).

41. Emerson, H. and Meyer, R., "Equivariant embedding theorems and topological index maps," Adv. Math. 225, 2840-2882 (2010).

42. Finak, G., Manuel-Perez, J. and Gottardo, R., "Automated transformations for flow cytometry", BMC Bioinformatics, 11, 546 (2010).

43. Fontein, F., "The infrastructure of a global field of arbitrary unit rank, accepted to Mathematics of Computation (2010).

44. Fraser, A. and Schoen, R., "The first Steklov eigenvalue, conformal geometry and minimal surfaces," to appear in Adv. Math. (2010).

45. Friedrich, T. and Sauerwald, T., "The cover time of deterministic random walks," to appear in the 17th Annual International Computing and Combinatorics Conf. (2010).

46. Garmaroudi, F., Marchant, D., Si, X., Khalili, A., Basha-shati, A., Wong, B., Tabet, A., Ng, R., Murphy, K., Luo, H., Janes, K. and McManus, B., "Pairwise network mechanisms in the host signaling response to coxsackievirus B3 infection," Proc. Natl. Acad. Sciences, 2010, 107, 17053-17058 (2010).

47. Ghosh, P., Muthukumarana, S., Gill, P.S. and Swartz, T.B., "A semiparametric Bayesian approach to network modelling using Dirichlet process priors," Australian and New Zealand J. Statistics, 52, 289-302 (2010).

48. Giordano, T., Matui, H., Putnam, I.F. and Skau, C.F., "Orbit equivalence for Cantor minimal Zd-systems," Inventiones Mathematicae, 179, 119-158 (2010).

49. Goya, R., Sun, M., Morin, R., Leung, G., Ha, G., Wieg, K., Senz, J., Crisan, A., Marra, M., Hirt, M., Huntsman, D., Murphy, K., Aparicio, S. and Shah, S., "SNVMix: predicting single nucleotide variants from next generation sequencing of tumors", to appear in Bioinformatics (2010).

50. Helfgott, H. and de Roton, A., "Improving Roth's theorem in the primes," to appear in Int. Math. Res. Not. (2010).

51. Hoisseini, R., Le, N.D. & Zidek, J.V., "A characterization of categorical Markov chains,"
J. Statistical Theory & Practice, to appear (2010).

52. Kaniuth, E., Lau, A.T.-M. and Ulger, A., "Multipliers of commutative Banach algebras, power boundedness and Fourier-Stieltjes algebras,"
J. London Math. Soc. 81, 233-275 (2010).

53. Kaniuth, E., Lau, A.T. –M. and Ulger, A., "Power bounded in the Fourier algebra and Fourier Stieltjes algebras and other commutative Banach algebras," to appear in J. Functional Analysis (2010).

54. Karabash I., "A functional model, eigenvalues, and finite singular critical points for indefinite Sturm-Liouville operators," Operator Theory: Advances and Applications, 203, 247-287 (2010).

55. Keet, A., Fortescue, B., Markham, D. and Sanders, B.C.. "Quantum secret sharing with qudit graph states," arXiv:1004.4619, in press Phys. Rev. A (2010).

56. Kenig, C., Lamm, T., Pollack, D., Staffilani, G. and Toro, T., "The Cauchy problem for Schodinger flows into Kahler manifolds," Discrete Contin. Dyn. Syst., 27, 389-439 (2010).

57. Khan, M.E., Marlin, B., Bouchard, G. and Murphy, K., "Variational bounds for mixed-data factor analysis," to appear in NIPS (2010).

58. Kunduri, H.K. and Lucietti, J., "An infinite class of extremal horizons in higher dimensions," arXiv:1002.4656 [hep-th], accepted in Comm. Math. Phys. (2010).

59. Laca, M. and Raeburn, I., "Phase transition on the Toeplitz algebra of the affine semigroup over the natural numbers," Adv. Math. 225, 643-688 (2010).

60. Lamm, T., "Energy identity for approximations of harmonic maps," Trans. Amer. Math. Soc. 362, 4077-4097 (2010).

61. Lamm, T. and Metzger, J., Small surfaces of Willmore type in Riemannian manifolds, Int. Math. Res. Not. 19, 3786-

3813 (2010).

62. Lamm, T. Metzger, J. and Schulze, F., "Foliations of asymptotically flat manifolds by surfaces of Willmore type," to appear in Math. Ann. (2010).

63. Lau, A. T.-M. and Mah, P.F., "Fixed point property for Banach algebras associated to locally compact groups," J. of Functional Analysis 258, 357-372 (2010).

64. Lenkoski, A. and Dobra, A., "Computational aspects related to inference in Gaussian graphical models with the G-Wishart prior," J. of Computational and Graphical Statistics, accepted (2010).

65. Luke, B., Doucet, A. and Gottardo, R., "An Efficient Computational Approach for Prior Sensitivity Analysis and Cross-Validation," Can. J. of Statistics, 38, 47-64 (2010).

66. Milakis, E. and Toro, T., "Divergence form operators in Reifenberg flat domains," Math. Z. 264, 1541 (2010).

67. Monahan, A., Khouider, B., McFarlane, N., Scinocca, J. and von Salzen, K., "Stochastic and probabilistic methods for ocean, atmosphere, and climate dynamics," in press for B. Amer. Meteorological Soc. (2010).

68. Murphy, K., "Book Review of 'Probabilistic graphical models' by Koller and Friedman", Artificial Intelligence J., 174, 145-146 (2010).

69. Nguyen, T. and Yuan, Y., "A priori estimates for the Lagrangian mean curvature flows," to appear in Int. Math. Res. Not. (2010).

70. Nica, B., "The unreasonable slightness of E_2 over imaginary quadratic rings," to appear in American Mathematical Monthly (2010).

71. Putnam, I.F., "Orbit equivalence of Cantor minimal systems: a survey and a new proof," Expositiones Mathematicae, 28, 101-131 (2010).

72. Putnam, I.F., "Non-commutative methods for the K-theory of C*-algebras of aperiodic patterns from cut-and-project systems," Comm. Math. Phys., 294, 703-729 (2010).

73. Rahimi-Keshari, S., Scherer, A., Mann, A., Rezakhani, A.T., Lvovsky, A.I. and Sanders, B.C., "Quantum process tomography with coherent states" arXiv.org:1009.3307, accepted by New Journal of Physics (2010).

74. Sadeghi, F., Murphy, K., et. al., "Pairwise network mechanisms in the host signaling response to coxsackievirus B3 infection," to appear in Proc. Natl. Acad. Sci. (2010).

75. Sauerwald, T., "Expansion and the Cover Time of Parallel Random Walks," ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing, 315-324 (2010).

76. Sauerwald, T. and Stauffer, A., "Rumor spreading and vertex expansion," ACM Symposium on Discrete Algorithms, to appear (2011).

77. Sinha, K. and Murty, M. R., "Factoring new parts of Jacobians of certain modular curves," to appear in Proc. American Mathematical Society (2010).

78. Taghavi, S.M., Séon, T., Martinez, D.M. and Frigaard, I.A., "Influence of an imposed flow on a gravity current in a nearly horizontal duct," Phys. Fluids 22, 031702 (2010).

79. Waite, M. and Khouider, B., "The deepening of tropical convection due to congestus preconditioning," J. Atmospheric Sciences, 67, 2601-2615 (2010).

80. Warren, M. and Yuan, Y., "Hessian and gradient estimates for three dimensional special Lagrangian equations with large phase," Amer. J. Math., 132, 751-770 (2010).

81. Zhang, X., Robertson, G., Krzywinski, M., Ning, K., Droit, A., Jones, S. and Gottardo, R., "PICS: Probabilistic Inference for ChIP-seq.", Biometrics 66 (2010).

82. Zhong, L., Le, N.D., and Zidek, J.V., "An empirical assessment of Bayesian melding for mapping ozone pollution," Environmetrics, 21, 1-14 (2010).