

Essential Uses of Probability in Analysis
Part I. Brownian Couplings and Neumann Eigenfunctions

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REFERENCES

[B*] K. Burdzy (2006) Neumann eigenfunctions and Brownian couplings *Proceedings of the International Workshop on Potential Theory, Matsue 2004* (to appear, review paper)

The following reference list contains all papers cited in [B*] (and more).

- [A1] G. Alessandrini (1994) Nodal lines of eigenfunctions of the fixed membrane problem in general convex domains. *Comment. Math. Helv.* **69**, 142–154.
- [A2] R. Atar (2001) Invariant wedges for a twopoint reflecting Brownian motion and the “hot spots” problem. *Electr. J. of Probab.* **6**, 1-19.
- [AB1] R. Atar and K. Burdzy (2002) On nodal lines of Neumann eigenfunctions *Electron. Comm. Probab.* **7**, 129–139.
- [AB2] R. Atar and K. Burdzy (2004) On Neumann eigenfunctions in lip domains. *J. Amer. Math. Soc.* **17**, 243–265.
- [A3] S. Athreya (2000) Monotonicity property for a class of semilinear partial differential equations. *Séminaire de Probabilités XXXIV*, 388–392, Lecture Notes in Math., 1729, Springer, Berlin.
- [BB1] R. Bañuelos and K. Burdzy (1999) On the “hot spots” conjecture of J. Rauch *J. Func. Anal.* **164**, 1–33.
- [BP] R. Bañuelos and M. Pang (2004) An inequality for potentials and the “hot-spots” conjecture. *Indiana Univ. Math. J.* **53**, 35–47.
- [BPP] R. Bañuelos, M. Pang and M. Pascu (2004) Brownian motion with killing and reflection and the “hot-spots” problem *Probab. Theory Relat. Fields* **130**, 56-68.
- [B1] R. Bass (1995) *Probabilistic Techniques in Analysis*, Springer, New York.
- [BB2] R. Bass and K. Burdzy (2000) Fiber Brownian motion and the “hot spots” problem. *Duke Math. J.* **105**, 25–58.
- [BB3] R. Bass and K. Burdzy (2005) Pathwise uniqueness for two dimensional reflecting Brownian motion in Lipschitz domains (preprint)
- [BBC] R. Bass, K. Burdzy and Z.-Q. Chen (2005) Uniqueness for reflecting Brownian motion in lip domains *Ann. I. H. Poincaré* **41** (2005) 197–235.
- [B2] K. Burdzy (2005) The “hot spots” problem in planar domains with one hole. *Duke Math. J.* **129**, (2005) 481–502.

- [BK] K. Burdzy and W. Kendall (2000) Efficient Markovian couplings: examples and counterexamples. *Ann. Appl. Probab.* **10**, 362–409.
- [BW] K. Burdzy and W. Werner (1999) A counterexample to the “hot spots” conjecture. *Ann. of Math.* **149**, 309–317.
- [C] M.-F. Chen (1992) *From Markov Chains to Nonequilibrium Particle Systems*. World Scientific Publishing Co., Inc., River Edge, NJ.
- [F] P. Freitas (2002) Closed nodal lines and interior hot spots of the second eigenfunction of the Laplacian on surfaces. *Indiana Univ. Math. J.* **51**, 305–316.
- [HSS] R. Hempel, L.A. Seco and B. Simon (1991) The essential spectrum of Neumann Laplacians on some bounded singular domains. *J. Func. Anal.* **102**, 448–483.
- [IM] K. Ishige and N. Mizoguchi (2003) Location of blow-up set for a semilinear parabolic equation with large diffusion. *Math. Ann.* **327**, 487–511.
- [J] D. Jerison (2000) Locating the first nodal line in the Neumann problem. *Trans. Amer. Math. Soc.* **352**, 2301–2317.
- [JN] D. Jerison and N. Nadirashvili (2000) The “hot spots” conjecture for domains with two axes of symmetry. *J. Amer. Math. Soc.* **13**, 741–772.
- [K] B. Kawohl (1985) *Rearrangements and Convexity of Level Sets in PDE*, Lecture Notes in Math., 1150, Springer, Berlin.
- [L] T. Lindvall (1992) *Lectures on the Coupling Method*. John Wiley & Sons, Inc., New York.
- [LS] P.-L. Lions and A.-S. Sznitman (1984) Stochastic differential equations with reflecting boundary conditions. *Comm. Pure Appl. Math.* **37**, 511–537.
- [M] A. Melas (1992) On the nodal line of the second eigenfunction of the Laplacian in R^2 . *J. Differential Geom.* **35**, 255–263.
- [N1] N.S. Nadirashvili, On the multiplicity of the eigenvalues of the Neumann problem, *Soviet Mathematics, Doklady*, **33**, 281–282 (1986).
- [N2] N.S. Nadirashvili, Multiple eigenvalues of the Laplace operator, *Mathematics of the USSR, Sbornik*, **133-134**, 225–238 (1988).
- [NTJ] N. Nadirashvili, J. Toth and D. Jakobson (2001) Geometric properties of eigenfunctions. *Uspekhi Mat. Nauk* **56**, 67–88 (translation in *Russian Math. Surveys* **56** (2001), no. 6, 1085–1105).
- [P] M. Pascu (2002) Scaling coupling of reflecting Brownian motions and the hot spots problem. *Trans. Amer. Math. Soc.* **354**, 4681–4702.
- [W] F.-Y. Wang (1994) Application of coupling methods to the Neumann eigenvalue problem. *Probab. Theory Related Fields* **98**, 299–306.