

## Rohana J. Karunamuni

### Research Interests

My current research interests are mainly in the areas of minimum distance estimation methods, nonparametric functional estimation methods and the application of these techniques to statistical inference problems.

### Selected Publications

1. J. Wu and R.J. Karunamuni (2009). On minimum Hellinger distance estimation. *The Canadian Journal of Statistics*. In press.
2. R.J. Karunamuni, J. Li and J. Wu (2009). Robust empirical Bayes tests for continuous distributions. *Journal of Statistical Planning and Inference*. In press.
3. S. Zhang and R.J. Karunamuni (2009). Boundary performance of the beta-kernel estimator. *Journal of Nonparametric Statistics*. In press.
4. R.J. Karunamuni and J. Wu (2009). Minimum Hellinger distance estimation in a nonparametric mixture model. *Journal of Statistical Planning and Inference*, **139**, 1118-1133.
5. S. Zhang and R.J. Karunamuni (2009). Deconvolution boundary kernel method in nonparametric density estimation. *Journal of Statistical Planning and Inference*, **139**, 2269-2283.
6. J. Kolacek and R.J. Karunamuni (2009). On boundary correction in kernel estimation of ROC curve. *Austrian Journal of Statistics*, 38, 17-32.
7. R.J. Karunamuni and S. Zhang (2008). Some improvements on a boundary corrected kernel density estimator. *Statistics and Probability Letters*, **78**, 499-507.
8. R.J. Karunamuni, J. Wu and T. Liang (2008). Robust empirical Bayes tests for discrete distributions. *J. Nonparametric Statistics*, **20**, 101-113.
9. L.-C. Hwang and R.J. Karunamuni (2008). Asymptotically pointwise optimal allocation rules in Bayes sequential estimation. *Statistics and Probability Letters*, **78**, 2490-2495.

- 10.** J. T. Ding and R. J. Karunamuni (2008). Modeling information sharing to improve just-in-time purchasing vendor evaluation. *International Journal of Manufacturing Technology and Management*, **13**, 30-54.
- 11.** R.J. Karunamuni and L. Wei (2006). On empirical Bayes estimation of multivariate regression coefficient. *International Journal of Mathematics and Mathematical Sciences*, Vol. 2006, Article ID 51695, 18 pages.
- 12.** R.J. Karunamuni, T.N. Sriram and J. Wu (2006). Rates of Convergence of an adaptive kernel density estimator for finite mixture models. *Statistics and Probability Letters*, **76**, 221-230.
- 13.** R.J. Karunamuni, T.N. Sriram and J. Wu (2006). Asymptotic normality of an adaptive kernel density estimator for finite mixture models. *Statistics and Probability Letters*, **76**, 211-220.
- 14.** R.J. Karunamuni and T. Alberts (2006). A locally adaptive transformation method of boundary correction in kernel density estimation. *Journal of Statistical Planning and Inference*, **136**, 2936-2960.
- 15.** R.J. Karunamuni and T. Alberts (2005). A generalized reflection method of boundary correction in kernel density estimation. *The Canadian Journal of Statistics*, **33**, 497-509.
- 16.** R.J. Karunamuni and T. Alberts (2005). On boundary correction in kernel density estimation. *Statistical Methodology*, **2**, 191-212.
- 17.** R.J. Karunamuni and T. Alberts (2004). A locally adaptive method of boundary correction in kernel density estimation. In *Proceedings of International Conference on Cybernetics and Information Technologies, Systems and Applications* (eds.: H.-W. Chu, J. Aguilar, J. Ferrer, Y.-R. Syan and C.-B. Cheng), Volume I, 71-77.
- 18.** K. Ding and R.J. Karunamuni (2004). A linear empirical Bayes solution for the calibration problem. *Journal of Statistical Planning and Inference*, **119**, 421-447.
- 19.** J. Ding and R.J. Karunamuni (2003). Dynamic systems design for the scrap-processing problem under JIT. In

*Proceedings of International Conference on Computational Science and Its Applications* (eds.: V. Kumar, M.L. Gavrilova, C.J.K. Tan and P.L'Ecuyer), Part 1, 621-632.

- 20.** R.J. Karunamuni and S. Zhang (2003). Empirical Bayes two-action problem for the continuous one-parameter exponential family with errors in variables. *Journal of Statistical Planning and Inference*, **113**, 437-449.
- 21.** R.J. Karunamuni and S. Zhang (2003). Optimal linear Bayes and empirical Bayes estimation and prediction of the finite population mean. *Journal of Statistical Planning and Inference*, **113**, 505-525.
- 22.** T. Alberts and R.J. Karunamuni (2003). A semiparametric method of boundary correction for kernel density estimation. *Statistics and Probability Letters*, **61**, 287-298.
- 23.** R.J. Karunamuni and N.G.N. Prasad (2003). An improved Bayes empirical Bayes estimator. *International Journal of Mathematics and Mathematical Sciences*, 97-107.
- 24.** R.J. Karunamuni and N.G.N. Prasad (2003). Empirical Bayes sequential estimation of binomial probabilities. *Communication in Statistics - Computation and Simulation*, **32**, 61-72.
- 25.** R.J. Karunamuni (2002). An empirical Bayes derivation of best linear unbiased predictors. *International Journal of Mathematics and Mathematical Sciences*, 703-714.
- 26.** R.J. Karunamuni, R.S. Singh and S. Zhang (2002). On empirical Bayes estimation in the location parameter. *Journal of Nonparametric Statistics*, **14**, 435-448.
- 27.** S. Zhang and R.J. Karunamuni (2000). Boundary bias correction for nonparametric deconvolution. *Annals of the Institute of Statistical Mathematics*, **52**, 612-629.
- 28.** S. Zhang and R.J. Karunamuni (2000). On nonparametric density estimation at the boundary. *Journal of Nonparametric Statistics*, **12**, 197-221.

- 29.** S. Zhang, R.J. Karunamuni and M.C. Jones (1999). An improved estimator of the density function at the boundary. *Journal of the American Statistical Association*, **94**, 1231-1241.
- 30.** R.J. Karunamuni (1999). An empirical Bayes adaptive price search. *Sequential Analysis*, **18**, 233-248.
- 31.** R.J. Karunamuni (1999). Optimal rates of convergence of monotone empirical Bayes tests for the uniform distributions. *Statistics and Decisions*, **17**, 63-85.
- 32.** S. Zhang and R.J. Karunamuni (1998). On kernel density estimation near endpoints. *Journal of Statistical Planning and Inference*, **70**, 301-316.
- 33.** S. Zhang and R. J. Karunamuni (1997). Bayes and empirical Bayes estimators with errors in variables. *Statistics and Probability Letters*, **33**, 23-34.
- 34.** S. Zhang and R.J. Karunamuni (1997). Empirical Bayes estimation for the continuous one-parameter exponential family with errors in variables. *Statistics and Decisions*, **15**, 261-279.
- 35.** M.C. Jones and R.J. Karunamuni (1997). Fourier series estimation for length biased data. *Australian Journal of Statistics*, **39**, 57-68.
- 36.** R.J. Karunamuni (1996). Optimal rates of convergence of empirical Bayes tests for the continuous one-parameter exponential family. *The Annals of Statistics*, **24**, 212-231.
- 37.** R.J. Karunamuni (1996). Empirical Bayes sequential estimation for exponential families: The untruncated component. *Annals of the Institute of Statistical Mathematics*, **48**, 711-730.
- 38.** R.J. Karunamuni and S. Zhang (1996). Empirical Bayes detection of a change in distribution. *Annals of the Institute of Statistical Mathematics*, **48**, 229-246.
- 39.** R.J. Karunamuni and B. Schmuland (1995). A robust generalized estimator of a multivariate normal mean. *Mathematical Methods of Statistics*, **4**, 472-482.

- 40.** R.J. Karunamuni and T.J. Quinn II (1995). Bayesian estimation of animal abundance for the line transects sampling. *Biometrics*, **51**, 1325-1337.
- 41.** R.J. Karunamuni and H. Yang (1995). On convergence rates of monotone empirical Bayes tests for the continuous one-parameter exponential family. *Statistics and Decisions*, **13**, 181-192.
- 42.** R.J. Karunamuni (1994). An empirical Bayes solution to the best-choice problem. *Sequential Analysis*, **13**, 164-176.
- 43.** R.J. Karunamuni (1993). The asymptotically optimal testing rule and its competitors - An empirical Bayes approach. *Sequential Analysis*, **12**, 219-234.
- 44.** R.J. Karunamuni (1992). Empirical Bayes sequential estimation of the mean. *Sequential Analysis*, **11**, 37-53.
- 45.** R.J. Karunamuni and S. Yang (1991). Weak and strong uniform consistency rates of kernel density estimates for randomly censored data. *The Canadian Journal of Statistics*, **19**, 349-359.
- 46.** R.J. Karunamuni and K.L. Mehra (1991). Optimal convergence properties of kernel density estimators without differentiability conditions. *Annals of the Institute of Statistical Mathematics*, **43**, 327-346.
- 47.** R.J. Karunamuni (1990). On the empirical Bayes approach to multiple decision problems with sequential components. *Annals of the Institute of Statistical Mathematics*, **42**, 637-655.
- 48.** R.J. Karunamuni (1990). A new smoothness quantification in kernel density estimation. *Journal of Statistical Planning and Inference*, **27**, 361-373.
- 49.** R.J. Karunamuni and K.L. Mehra (1990). Improvements on strong uniform consistency of some known kernel estimates of a density and its derivatives. *Statistics and Probability Letters*, **9**, 133-140.

- 50.** R.J. Karunamuni (1989). Some improvements on empirical Bayes testing in Lebesgue-exponential families. *Communications in Statistics - Theory and Methods*, **18**, 3157-3176.
- 51.** R.J. Karunamuni (1989). On empirical Bayes sequential estimation. *Communications in Statistics - Theory and Methods*, **18**, 2533-2552.
- 52.** R.J. Karunamuni (1989). On empirical Bayes stopping times. *Australian Journal of Statistics*, **31**, 315-326.
- 53.** D.C. Gilliland and R.J. Karunamuni (1988). On empirical Bayes with sequential component. *Annals of the Institute of Statistical Mathematics*, **40**, 187-193.
- 54.** R.J. Karunamuni (1988). On empirical Bayes testing with sequential components. *The Annals of Statistics*, **16**, 1270-1282.