Curriculum Vitae

R.V. Ramamoorthi

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Positions and Appointments

1999-	Professor, Michigan State University
1990-99	Associate Professor, Michigan State University
1984-90	Assistant Professor, Michigan State University
1982-84	Visiting Assistant Professor, Michigan State University
1981-82	Visiting Assistant Professor, Florida State University

Visiting Professional appointments

2011-	Adjunct Professor, Chennai Mathematical Institute, India
2010	Senior Visiting Professor, Bocconi University, Milan, Italy
2010	National Board of Higher Mathematics(India) Visiting Professor, Indian Institute of Science
2005	Visiting Professor, La Sapienza, University of Rome, Italy
2002	Senior visiting professor, University of Pavia, Italy
1985-86	Visiting Scientist, Indian Statistical Institute, Calcutta
1993-94	Visiting Scientist, Indian Statistical Institute at Calcutta, New Delhi and Bangalore.

Other Appointments

2011-2013	Member, Editorial Board of Sankhya, The Indian Journal of Statistics
2011	Member, Committee to Select Editorial Board, Sankhya
2007	Member, Committee to Select Editorial Board, Sankhya

2003	Member, Editorial Board of Sankhya, The Indian Journal of Statistics
2010	Member, Editorial Committee for Special Issue of Sankhya in memory of Prof. A. Maitra
	Reviewer for several journals including Annals of Statistics, Journal of American Statistical Association, Journal of Statistical planning and inference, Statistics and Probability letters, TEST, Metron, Biometrika, Current Science, Indian Journal of Mathematics ...

Research

Publications

- Book

Ghosh, J. K and Ramamoorthi, R.V. (2003). *Bayesian Nonparametrics* . New York: Springer.

Reviews — from Amazon.com Editorial Reviews

From the reviews:

"The book will find a place as essential study for researchers in this modern area of statistics. It is well written, the signposts are clearly displayed throughout, and the literature appears to be well documented." ISI Short Book Reviews, Vol. 24/1, Apr. 2004 "

"This is the first book to present an exhaustive and comprehensive treatment of Bayesian nonparametrics. Ghosh and Ramamoorthi present the theoretical underpinnings of nonparametric priors in a rigorous yet extremely lucid style... It is indispensable to any serious Bayesian. It is bound to become a classic in Bayesian nonparametrics." Sankhya, 2004, Vol. 66, Part 1 "

"This new monograph by Ghosh and Ramamoorthi fulfills the need for an advanced and complete textbook at the graduate level, dealing with the theoretical aspects of Bayesian nonparametrics and Bayesian asymptotics. This is a noteworthy book that covers, with mathematical rigor, a broad class of subjects... Bayesian Nonparametrics will give researchers in the area of nonparametric and semiparametric Bayesian inference a well-written introduction to the theoretical aspects of the discipline, and it should be considered a must for anyone interested in Bayesian asymptotics." Journal of the American Statistical Association, September 2004"

"This is the first book to present an exhaustive and comprehensive treatment of Bayesian nonparametrics. Ghosh and Ramamoorthi present the theoretical underpinnings of nonparametric priors in a rigourous yet extremely lucid style ... It is an excellent book for a serious reader ... This book is unique in doing all this in an elegant way– the proofs are all presented in an eminently readable

style. It is indispensable to any serious Bayesian. It is bound to become a classic in Bayesian nonparametrics. (Jayaram Sethuraman, Sankhya: The Indian Journal of Statistics, Vol. 66 (1), 2004) "

"The style of the book is well summarized in the following quotations: 'This monograph provides a systematic, theoretical development of the subject '. ... The book will find a place as essential study for researches in this modern area of statistics. It is well written, the signposts are clearly displayed throughout, and the literature appears to be well documented." (M. J. Crowder, Short Book Reviews, Vol. 24 (1), 2004)

"The present monograph gives a nice overview on the state of the art in Bayesian nonparametrics.... The reader will find a huge amount of references. In conclusion, the present book can be recommended for research and advanced lectures and seminars." (Arnold Janssen, Zentralblatt MATH, Vol. 1029, 2004)"

"Nonparametrics and other infinite-dimensional problems have been difficult for Bayesians to deal with for various reasons.... In view of all these formidable difficulties, the advances achieved in this field in recent years are truly remarkable. The book by Ghosh and Ramamoorthi discusses theoretical aspects of these advances in Bayesian nonparametrics and Bayesian asymptotics.... The book is suggested as an introductory text at the graduate level ... It can also serve as an excellent reference book for researchers." (Mohan Delampady, Mathematical Reviews, 2004g)"

" 5.0 out of 5 stars. a interesting but difficult topic, March 26, 2008 By Michael R. Chernick "statman31147" (Holland PA) - See all my reviews (REAL NAME)
This review is from: Bayesian Nonparametrics (Hardcover) This is the only book I have seen on the topic of Bayesian nonparametric statistics. The theory depends a great deal on the using of Dirichlet prior distributions and is somewhat new and advanced. this is an excellent and well-written text but it will not be suited for you unless you have a solid grounding in probability and statistics and have some knowledge of Bayesian methods. "

- Articles

1. Ramamoorthi R.V, Karthik Sriram and Ryan Martin, Posterior Concentration in misspecified models (under revision for *Bayesian Analysis*
2. Karthik Sriram, R.V. Ramamoorthi and Pulak Ghosh, Posterior Consistency of Bayesian Quantile Regression Based on the Misspecified Asymmetric Laplace Density,*Bayesian Analysis* 08 (2013), Number 02, 479-504
3. Ramamoorthi R.V, Rao B.V, Sethuraman J, A Note On Weak onvergence *Sankhya A*74 (2012) 2, 269 -276

4. Karthik Sriram, R.V. Ramamoorthi and Pulak Ghosh, On the use of a pseudo-Asymmetric Laplace Likelihood for Simultaneous Bayesian Estimation of Quantiles. Submitted

5. Joseph C. Gardiner, Zhehui Luo, Xiaoqin Tang and Ramamoorthi R.V Fitting Heavy-tailed Distributions to Healthcare Data by Parametric and Bayesian Methods *Journal of Statistical Theory and Practice* Published online: 08 Aug 2013

6. Gilliland, Dennis, Ramamoorthi, R. V A conversation with James Hannan *Statistical Science*, 25 (2010), no. 1, 126–144.

7. Ghosh, J.K and Ramamoorthi R.V. Cosistency of Posterior distributions *International Encyclopedia of Statistical Science*, Ed. Lovric, Miodrag (Ed.). Springer 2010

8. Choi, Tayeron and Ramamoorthi, R.V Remarks on Consistency of Posterior Distributions. *Pushing the Limits of Contemporary Statistics*, Ed. B. Clarke and S. Ghosal, Vol. 3 (2008) 170–186, Institute of Mathematical Statistics, 2008

9. Ramamoorthi, R.V, Rossano, M.G, Paneth, N, Gardiner, J.C, Diamond, M.P, Puscheck, E, Daly, D.C, Potter, R.C and Wirth,J.J An application of multivariate ranks to assess effects from combining factors: Metal exposures and semen analysis outcomes in *Statistics in Medicine* (2008) Aug 15, 27(18): 3503 –14.

10. Ramamoorthi,R.V and Sangalli,L On a characterization of Dirichlet distributions. In *Bayesian Statistics and Applications*, Ed. By S.K. Upadhyay, U. Singh and D.K. Dey, 383-396, 2007.

11. Messan,C, Ghosh,J.K, Hjort, N.L and Ramamoorthi,R.V. Non Parametric Bayes estimate of the Bivariate Survival Curve. *Statist. Plann. Inference*, 136 (2006),2297–2308.

12. Dragichi, L and Ramamoorthi, R.V. Posterior consistency of Dykstra-Laud priors. *Sankhya* Series A, 65, 464-481, 2003.

13. Ghosh, J.K , Ghosal, S and Ramamoorthi, R.V. A note on posterior consistency for semiparametric regression problems. *Bernoulli*, 9: 291-312, 2003

14. Dey, J, Erickson, R.V. and Ramamoorthi, R.V. Some Aspects of Neutral to Right Priors. *International Statistical Review*, 71(2), 383-401, 2003.

15. Dragichi, L and Ramamoorthi, R.V. A note on absolute continuity and singularity of Polya tree priors and posteriors. *Scandinavian Journal of Statistics*, 27, 299-304, 2000.

16. Ghosh, J.K , Ghosal, S and Ramamoorthi, R.V. Bayesian density estimation using Dirichlet mixtures. *Annals of Statistics*, 27, 143-158, 1999.

17. Ghosh, J.K, Ghosal, S and Ramamoorthi,R.V. Consistency issues in Bayesian nonparametrics. *Asymptotics, Nonparametrics and Time Series.* Ed. S.Ghosh, 639-668, 1999, Marcel Dekker.

18. Ghosh, J.K , Ghosal, S and Ramamoorthi, R.V. Consistent semi-parametric Bayesian inference about a location parameter. *Journal of Statistical Planning and Inference* , 77:181-193, 1999.

19. Ramamoorthi, R.V. and Srikanth, K.R. Dirichlet process and polya tree priors. The Encyclopedia of Statistical Sciences , Update Volume 3, 166-172, 1999.

18 Ghosh, J.K , Ramamoorthi, R.V. and Srikanth, K.R. Bayesian analysis of censored data. *Statistics and Probability Letters*, 41, 255-265, 1999.

17 Dey,J, Draghici,L and Ramamoorthi, R.V Characterizations of Tail-free and Neutral to the Right Priors. *Advances on Theoretical and Methodological Aspects of Probability and Statistics (IISA 1998)*, Ed.. N. Balakrishnan, 2, 305-315, 2002 New York: Taylor & Francis

20. Ghosh, J.K, Ghosal, S and Ramamoorthi, R.V. Non-informative priors via sieves and packing numbers. *Advances in Statistical Decision Theory and Applications*, Ed. S. Panchapakesan and N. Balakrishnan, 119-132, 1997, Birkhauser.

21. Ramamoorthi, R.V. Discussion of "On the impossibility of causal inference without background knowledge " by J. Robins and L. Wasserman. *Proceedings of the Workshop on Bayesian Model Selection*, Cagliari, Italy, 1997.

22. Ghosh, J.K, and Ramamoorthi, R.V.Consistency of Bayesian inference for survival analysis with or without censoring. In IMS Monograph: Proceedings of Workshop on Reliability, Ed. By H.L. Koul and J.V. Deshpande, 27, 95-103, 1995.

23. Gardiner, J., Wang, Z and Ramamoorthi, R.V. Identifiability in interval censorship models. *Statistics and Probability Letters*, 21, 215-221, 1994.

24. Andhivarothai, N and Ramamoorthi, R.V. On partial sufficiency and least favorable experiments. *Scandinavian Journal of Statistics*, 21, 493-500, 1994.

25. Ramamoorthi, R.V. On Bayes sufficiency and separation of strongly convex sets. *Proc. Amer. Math. Soc.*, 111, 239-245, 1991.

26. Ramamoorthi, R.V. Sufficiency, ancillarity and independence in invariant models. *Journal of Statistical Planning Inference*, 26, 59-63, 1990.

27. Ramamoorthi, R.V. Equivalence of behavioral and randomized equivariant rules. *Statistics and Decisions*, 7, 96-104, 1989.

28. Ramamoorthi, R.V. and Roy, K.K . A note on weakly dominated experiments. *Sankhya* Series A, 49:128-129, 1986.

29. Ramamoorthi, R.V. Book Review: "Theory of Statistical Experiments " by H. Heyer. *Journal of Amer. Stat. Assoc.*, 80, 489, 1985.

30. Feldman, D and Ramamoorthi R.V. A simpler proof of a theorem of Blackwell on equivalent comparison of experiments . Technical Report, Department of Statistics and Probability

31. Blackwell, D and Ramamoorthi, R.V. A Bayes but not classically sufficient statistics. *Annals of Statistics*, 10, 1025-1026, 1983.

32. Ramamoorthi, R.V. and Yamada, S. Neyman factorization theorem for experiments admitting densities. *Sankhya* Series A, 45, 168-180, 1983.

33. Ramamoorthi, R.V. and Yamada, S. On the union of compact statistical structures. *Osaka Journal of Mathematics*, 20, 257-264, 1983.

34. Ramamoorthi, R.V. On sufficiency and pairwise sufficiency in standard Borel spaces II. *Osaka Journal of Mathematics*, 19, 577-586, 1982.

35. Ramamoorthi, R.V. On sufficiency and pairwise sufficiency in standard Borel spaces. *Sankhya* Series A, 42, 139-145, 1980.

36. Ramamoorthi, R.V. and Roy, K.K . Relationship between Bayes, Classical and Decision Theoretic Sufficiency. *Sankhya* Series A, 41, 488-458, 1979.

37. Sufficiency, Pairwise Sufficiency and Bayes Sufficiency in undominated experiments. *Thesis. The Indian Statistical Institute, Calcutta 1981*

- Under Preparation

1. (with Melfi, V) Faithfulness in graphical models

2. (with Rao, B.V. and Sethuraman, J) A smooth verison of the Vitali Hahn Saks Theorem

3. (with Karthik Sriram) Consistent Bayesian quantile regression in Asymmetric Laplace distribution

- Ph.D. STUDENTS – MAJOR PROFESSOR

- Andhivarothai Nupun: Thesis: Sufficiency in the presence of Nuisance Parameters.

- Srikanth, K.R. Thesis: Posterior Consistency in some Bayesian Nonparametric problems

- Dey, Jyotirmoy Thesis: Neutral to right priors

- Dragichi, Liliana Thesis: Some aspects of Polya tree and Dykstra-Laud Priors

- Ph.D. STUDENTS – CO-CHAIR

- Wang, Zhiming

- Polverejan, Elena

- Sirbu, Corina

- Zhang, Yanwei
- Xiaoqin Tang
- Apart from these I have been member of thesis committee of students in Statistics and Probability, Epidemiology, Accounting, Computer Science and other departments.

TEACHING

- Undergraduate

I have taught most of the undergraduate courses offered by the department including large lectures. In the late 1990's I started using the MSU developed technology CAPA in STT 315. Later this was updated to LONCAPA. I started using these technologies systematically and developed a large question bank and other resources . Since then I have followed it up with assisting other faculty in the use of this technology and provided free access to the resources . Use of LONCAPA in large classes was welcomed by students and also has saved many faculty hours.

- Graduate

I have taught a wide variety of graduate courses both in statistics and probability. Especially I have developed special topic courses on emerging topics like Bayesian nonparametrics, Graphical Models and Machine Learning.

I was involved , from 1983 to recent times with the department Prelim examination in statistics, sometimes officially and sometimes not. I have facilitated cooperation with Department of Epidemiology and the Department of Computer Science.

I have also been involved in working with students from other universities across the world. One is Charles Messan from Purdue, Laura Sangalli from University of Pavia. Dario Spano from University of Pavia spent a year with me at MSU at the advice of his professo. More recently, I am working with Karthik Sriram of the Indian Institute of Management, Bangalore India.

OUTREACH

As mentioned earlier I have been involved with students across the world. I have given short special topic courses at University of Pavia, University of Rome La Sapienza, Bocconi University. In 2010 I gave a course on Graphical models at the Indian Institute of Science as a NBHM Visiting professor. I am an Adjunct Professor at the Chennai Math Institute founded by Prof. C.S. Seshadhri who is a well known mathematician and is a Fellow of the Royal Society and a Member of the National Academy of Sciences, USA.

I have been an external examiner for the University of Toronto, University of Pavia and a reviewer for grant applications in U.K. , Netherlands and Italy.

I was instrumental in signing an MOU between MSU and University of Pavia. At the request of the Dean of Sciences from the University of Rome, La Sapienza I also initiated a similar MOU with them but it has got lost in bureaucratic tangles.

Apart from these I have been associated with various journals formally and informally.