March 2024

HANI DOSS

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EDUCATION

B.S. in Mathematics, SUNY at Stony Brook (Highest Honors), June 1976.

M.S. in Mathematics, Stanford University, June 1978.

Ph.D. in Statistics, Stanford University, June 1982.

PROFESSIONAL EXPERIENCE AND APPOINTMENTS

9/82 – 8/87	Assistant Professor, Department of Statistics, Florida State University.
9/87 – 8/92	Associate Professor, Department of Statistics, Florida State University.
9/92 – 8/94	Professor, Department of Statistics, Florida State University.
9/94 – 8/05	Professor of Statistics and Biostatistics, Department of Statistics, Ohio State University.
Summers 83–87	Research Associate in Office of Naval Research Neural Sciences Learning and Memory Program, Stanford University.
Summers 83–14	Member of National Security Agency Statistical Advisory Group, Department of Statistics, Stanford University. Wrote about three technical reports per year on statistical problems of interest to the NSA.
1996–2005	Associate Director, Center for Biostatistics, Ohio State University.
Fall 2003	Visiting Professor, Department of Statistics, Yale University.
9/05 – present	Professor, Department of Statistics, University of Florida.

CURRENT AREAS OF INTEREST

Markov chain Monte Carlo; Bayesian methods, including non/semi-parametric Bayesian methods, and Bayesian methods in biostatistics and in machine learning; survival analysis

HONORS

Fellow of the Institute of Mathematical Statistics.

SERVICE TO PROFESSION

Editorial Activities

Associate Editor, *Journal of the American Statistical Association*, 1992–1994.

Associate Editor, *Statistica Sinica*, August 2005 – July 2023 (six three-year terms).

Associate Editor, *Journal of the Royal Statistical Society*, Series B, August 2008 – August 2024 (four four-year terms).

Joint Editor, *Journal of the Royal Statistical Society*, Series B, January 2024 – December 2026.

Other Professional Service

Organized Joint Ohio State University, Cleveland Clinic Foundation, Case Western Reserve University Annual Biostatistics Symposium in 1998 and 2003.

Organizer and Program Chair, "Workshop on Bayesian Model Selection and Objective Methods," University of Florida, January 2008.

Member of NSF "Focused Research Group Program in the Mathematical Sciences" panel, November 2009.

Organizer, JSM invited paper session "Recent Advances in Bayesian Model Selection," 2009.

Member, IMS Travel Awards Committee, 2009–2012 (Chair, 2012).

Co-organizer, "Workshop on Causal Inference and Graphical Models," University of Florida, January 2012.

Organizer and Program Chair, "Workshop on New Directions in Monte Carlo Methods," University of Florida, January 2013.

Co-organizer, "Workshop on Dimension Reduction and High Dimensional Inference," University of Florida, January 2014.

Member of NSF Statistics panel (Division of Mathematical Sciences), January 2014.

Member of NSF panel on Big Data in the Health Sciences, July 2015.

Member, Savage Awards Committee, 2018.

Organizer and chair, International Chinese Statistical Association Applied Statistics Symposium invited paper session "Geometric Statistics in Medical Image Analysis," University of Florida, June, 2022.

Panel member of NSF program "Computational and Data-Enabled Science and Engineering in the Mathematical and Statistical Sciences," November 2022.

MAIN COMMITTEE WORK, FLORIDA STATE UNIVERSITY

Chair of Curriculum Committee, 1988.

Chair of Qualifying Exam Committee, 1989, 1990, 1992.

Chair of Faculty Recruiting Committee, 1991, 1994.

Chair of Faculty Evaluation and Merit Increase Committee, 1994.

Member of Committee for Search of Chairman of Statistics Department, 1990.

Chair of Committee for Search of Chairman of Statistics Department, 1993.

MAIN COMMITTEE WORK, OHIO STATE UNIVERSITY

Chair, Qualifying Exam Committee, 1994, 1995.

Organizer for the Statistics/Biostatistics Seminar Series, 1995–6, 1997–8, 1998–9.

I was a member of a core group of four people (the Biostatistics Center Planning Committee) who worked to create a Biostatistics Center at OSU, from 1995 to 1997. Among the results of our work:

- In 1996, funding for three years of operation for the Center was obtained from various sources at OSU.
- In 1996, we wrote an Academic Enrichment proposal to the Ohio Board of Regents to obtain continuing funding ($61,000/year) to pay for part of the salary of the Director of the Center. We also requested a one-time sum ($43,000) for start-up funds for the director. This proposal was funded in full.

Member of Search Committee for Director of Biostatistics Center (1997–8).

Member, Promotion and Tenure Committee of College of Mathematical and Physical Sciences, 1998–9.

Member, Committee for Search of Chair of Statistics Department, 1999.

Committee work for 2000–2005 not listed.

MAIN COMMITTEE WORK, UNIVERSITY OF FLORIDA

Member of Chair Search Committee, 2005.

Chair, Computer Advisory Committee, 2006–2009, 2011–2012.

Member, Computer Advisory Committee, 2006–2012.

Member, Executive Committee, 2007–2014.

Member, Faculty Search Committee, Department of Biostatistics, School of Public Health, 2007.

Co-Chair, Faculty Search Committee, Department of Statistics, 2008, 2009.

Chair, Ph.D. Qualifying Exam Committee, 2009, 2010.

Member, Promotion and Tenure Committee of College of Liberal Arts and Sciences (two-year term—2009–2010).

Member, Salary Plan for Professors Award Committee, College of Liberal Arts and Sciences (two-year term—2010–2011).

Committee work for 2012–present not listed.

REFEREED PAPERS

Doss, H. and Sellke, T. (1982). The tails of probabilities chosen from a Dirichlet prior. *The Annals of Statistics* **10** 1302–1305.

Doss, H. (1984). Bayesian estimation in the symmetric location problem. *Zeitschrift für Wahrscheinlichkeitstheorie und verwandte Gebiete* **68** 127–147.

Doss, H. (1985). Bayesian nonparametric estimation of the median; Part I: Computation of the estimates. *The Annals of Statistics* **13** 1432–1444.

Doss, H. (1985). Bayesian nonparametric estimation of the median; Part II: Asymptotic properties of the estimates. *The Annals of Statistics* **13** 1445–1464.

Doss, H. (1986). Discussion of "On the consistency of Bayes estimates" by P. Diaconis and D. Freedman. *The Annals of Statistics* **14** 45–47.

Doss, H. and Sethuraman, J. (1989). The price of bias reduction when there is no unbiased estimate. *The Annals of Statistics* **17** 440–442.

Doss, H. (1989). On estimating the dependence between two point processes. *The Annals of Statistics* **17** 749–763.

Doss, H., Freitag, S., and Proschan, F. (1989). Estimating jointly system and component reliabilities using a mutual censorship approach. *The Annals of Statistics* **17** 764–782.

Doss, H. and Gill, R.D. (1992). An elementary approach to weak convergence for quantile processes, with applications to censored survival data. *Journal of the American Statistical Association* **87** 869–877.

Li, G. and Doss, H. (1993). Generalized Pearson-Fisher chi-square goodness-of-fit tests, with applications to models with life history data. *The Annals of Statistics* **21** 772–797.

Antoine, R., Doss, H., and Hollander, M. (1993). On identifiability in the autopsy model of reliability theory. *Journal of Applied Probability* **30** 913–930.

Burr, D. and Doss, H. (1993). Confidence bands for the median survival time as a function of the covariates in the Cox model. *Journal of the American Statistical Association* **88** 1330–1340.

Doss, H. (1994). Bayesian estimation for censored data: An experiment in sensitivity analysis. *Proceedings of the Fifth Purdue Symposium on Statistical Decision Theory and Related Topics* 171–181.

Doss, H. and Chiang, Y.C. (1994). Choosing the resampling scheme when bootstrapping: A case study in reliability. *Journal of the American Statistical Association* **89** 298–308.

Doss, H. (1994). Discussion of "Markov chains for exploring posterior distributions" by Luke Tierney. *The Annals of Statistics* **22** 1728–1734.

Doss, H. (1994). Bayesian nonparametric estimation for incomplete data via successive substitution sampling. *The Annals of Statistics* **22** 1763–1786.

Li, G. and Doss, H. (1995). An approach to nonparametric regression for life history data using local linear fitting. *The Annals of Statistics* **23** 787–823.

Athreya, K.B., Doss, H., and Sethuraman, J. (1996). On the convergence of the Markov chain simulation method. *The Annals of Statistics* **24** 69–100.

Doss, H., Huffer, F., and Lawson, K. (1997). Bayesian nonparametric estimation via Gibbs sampling for coherent systems with redundancy. *The Annals of Statistics* **25** 1109–1139.

Doss, H. and Narasimhan, B. (1998). Dynamic display of changing posterior in Bayesian survival analysis. In *Practical Nonparametric and Semiparametric Bayesian Statistics*, D. Dey, P. Mueller, and D. Sinha, eds., 63–87, Springer-Verlag, New York.

Doss, H. and Narasimhan, B. (1999). Dynamic display of changing posterior in Bayesian survival analysis: The software. *Journal of Statistical Software* ***4****(3).*

Li, S., Pearl, D.K., and Doss, H. (2000). Phylogenetic tree construction using Markov chain Monte Carlo. *Journal of the American Statistical Association* **95** 493–508.

Burr, D., Doss, H., Goldschmidt-Clermont, P., and Cooke, G. (2003). A meta-analysis of studies on the association of the platelet PlA polymorphism of Glycoprotein IIIa and risk of coronary heart disease. *Statistics in Medicine* **22** 1741–1760.

Doss, H. and Huffer, F. (2003). Monte Carlo methods for Bayesian analysis of survival data using mixtures of Dirichlet process priors. *Journal of Computational and Graphical Statistics* **12** 282–307.

Doss, H. (2003). Discussion of "A theory of statistical models for Monte Carlo integration" by A. Kong, P. McCullagh, X.-L. Meng, D. Nicolae, and Z. Tan. *Journal of the Royal Statistical Society,* Series B **65** 610–611.

Burr, D. and Doss, H. (2005). A Bayesian semi-parametric model for random effects meta-analysis. *Journal of the American Statistical Association* **100** 242–251.

Liu, Y., Shen, X. and Doss, H. (2005). Multicategory ψ-learning and support vector machines: computational tools. *Journal of Computational and Graphical Statistics* **14** 219–236.

Harris, R., Beebe-Donk, J., Doss, H., and Burr, D. (2005). Aspirin, Ibuprofen and other non-steroidal anti-inflammatory drugs in cancer prevention: A critical review of non-selective COX-2 blockade. *Oncology Reports* **13** 559–584.

Schwartzbaum, J., Ahlbom, A., Malmer, B., Lonn, S., Brookes, A., Doss, H., Debinski, W., Henriksson, R., and Feychting, M. (2005). Polymorphisms associated with asthma are inversely related to risk of glioblastoma multiforme. *Cancer Research* **65** 6459–6465. For an exchange of letters on this paper see the same journal, **66** 2878–2879, 2006.

Doss, H. (2007). Bayesian model selection: Some thoughts on future directions. *Statistica Sinica* **17** 413–421.

Doss, H. (2008). Quantifying information loss in survival studies. *Statistical Science* **23** 313–317. (This is a discussion of "Quantifying the fraction of missing information for hypothesis testing in statistical and genetic studies" by D. Nicolae, X.-L. Meng, and A. Kong.)

Doss, H. (2010). Estimation of large families of Bayes factors from Markov chain output. *Statistica Sinica* **20** 537–560.

Doss, H. and Hobert, J. (2010). Estimation of Bayes factors in a class of hierarchical random effects models using a geometrically ergodic MCMC algorithm. *Journal of Computational and Graphical Statistics* **19** 295–312.

Buta, E. and Doss, H. (2011). Computational approaches for empirical Bayes methods and Bayesian sensitivity analysis. *The Annals of Statistics* **39** 2658–2685.

Doss, H. (2012). Hyperparameter and model selection for nonparametric Bayes problems via Radon-Nikodym derivatives. *Statistica Sinica* **22** 1–26.

Anton, S., Embry, C., Marsiske, M., Lu, X., Doss, H., Leeuwenburgh, C., and Manini, T. (2014). Safety and metabolic outcomes of resveratrol supplementation in older adults: Results of a twelve-week, placebo-controlled pilot study. *Experimental Gerontology* **57** 181–187.

Doss, H. and Tan, A. (2014). Estimates and standard errors for ratios of normalizing constants from multiple Markov chains via regeneration. *Journal of the Royal Statistical Society,* Series B **76** 683–712.

Cesari, M., Vellas, B., Hsu, F., Newman, A., Doss, H., King, A., Manini, T., Church, T., Gill, T., Miller, M., and Pahor, M. (2015). A physical activity intervention to treat the frailty syndrome in older persons: Results from the LIFE-P study. *Journal of Gerontology: Medical Sciences* **70** 216–222.

Tan, A., Doss, H., and Hobert, J. (2015). Honest importance sampling with multiple Markov chains. *Journal of Computational and Graphical Statistics* **24** 792–826.

George, C.P. and Doss, H. (2018). Principled selection of hyperparameters in the latent Dirichlet allocation model. *Journal of Machine Learning Research* **18** No. 162, 1–38.

Doss, H. and Park, Y. (2018). An MCMC approach to empirical Bayes inference and Bayesian sensitivity analysis via empirical processes. *The Annals of Statistics* **46** 1630–1663.

Chen, Z. and Doss, H. (2019). Inference for the number of topics in the latent Dirichlet allocation model via Bayesian mixture modelling. *Journal of Computational and Graphical Statistics* **28** 567–585.

Xia, W. and Doss, H. (2020). Scalable hyperparameter selection for latent Dirichlet allocation. *Journal of Computational and Graphical Statistics* **29** 875–895.

Yang, C.-H., Doss, H. and Vemuri, B. (2024). An empirical Bayes approach to shrinkage estimation on the manifold of symmetric positive-definite matrices. *Journal of the American Statistical Association* **119** 259–272.

UNREFEREED OR MINIMALLY REFEREED PAPERS

Doss, H., Freitag, S., and Proschan, F. (1986). Assessing system reliability using censoring methodology. *Software System Design Methods*, NATO ASI Series, Volume F22, 423–438.

Antoine, R., Doss, H., and Hollander, M. (1993). A comparison of various estimators in reliability models involving mutual censorship of component lifelengths. *Proceedings of the Fourth International Research Conference on Reliability*, 1–19.

Athreya, K.B., Doss, H., and Sethuraman, J. (1993). Easy-to-apply results for establishing convergence of Markov chains in Bayesian analysis. *Proceedings of the Thirty-Eighth Conference on the Design of Experiments* held by the Army Research Office, 263–270.

Doss, H. and MacEachern, S.N. (1997). The Dirichlet process. *Encyclopaedia of Mathematics*, suppl. vol. I, M. Hazewinkel, ed., 224–225, Kluwer Academic Publishers, Dordrecht.

Suciu, G., Hoshaw-Woodard, S., Elliot, M., and Doss, H. (2001). Uninsured estimates by county: A review of options and issues. Report written under contract for the Ohio Department of Health.

INVITED TALKS AT CONFERENCES AND MEETINGS

Neural Sciences Learning and Memory Conference (workshop sponsored by the Office of Naval Research), Washington, D.C., February 1984. *The detection and identification of neuronal interactions.*

IMS Central Regional Meeting, Austin, Texas, March 1985. *Bayesian nonparametric estimation of the median.*

NSF Lecture Series on The Construction and Salient Properties of Nonparametric Priors, Pennsylvania State University, June 1985. *Using the Dirichlet prior to estimate the quantile of a distribution.*

NATO Advanced Study Institute Conference on Software Reliability, Grey College, University of Durham, England, August 1985. *Assessing system reliability using censoring methodology.*

IMS Central Regional Meeting, Purdue University, June 1986. *Bayesian nonparametric estimation in the symmetric location problem.*

Conference on Reliability and Quality, University of Missouri-Columbia, June 1986. *Estimating jointly system and component life distributions using a mutual censorship approach.*

International Mathematical Banach Center Conference on Selected Topics of Mathematical Statistics, Warsaw, Poland, March 1989. Two lectures: *Estimating the dependence between two point processes*, and *Estimating jointly system and component life distributions using a mutual censorship approach.*

Fourth International Research Conference on Reliability, University of Missouri, June 1991. *A comparison of various estimators in reliability models involving mutual censorship of component lifelengths.*

IMS Eastern Meeting, Cincinnati, Ohio, March 1992. Invited Discussant on Special Invited Paper "Statistical uses of successive substitution" by M. Schervish.

Fifth Purdue Symposium on Statistical Decision Theory and Related Topics, Purdue University, June 1992. *Successive substitution sampling in nonparametric Bayesian survival analysis.*

IMS Directions in Probability Workshop on Monte Carlo Markov Chains, Stanford, California, August 1993. *Bayesian nonparametric estimation for incomplete data via successive substitution sampling.*

Second International Workshop on Bayesian Robustness, Rimini, Italy, May 1995. *Bayesian Poisson regression using the Gibbs sampler: Sensitivity analysis through dynamic graphics.*

Fifty-First Meeting of the Seminar on Bayesian Inference in Econometrics and Statistics, Ohio State University, May 1997. *Dynamically varying prior and posterior in Bayesian nonparametric analysis of censored data.*

Joint Statistical Meetings, Anaheim, California, August 1997. *Monte Carlo methods for Bayesian analysis of censored data using mixtures of Dirichlet priors.*

ENAR/IMS Spring Meeting, Pittsburgh, Pennsylvania, March, 1998. *Reconstruction of phylogenetic trees via Markov chain Monte Carlo.*

International Conference in Reliability and Survival Analysis, Northern Illinois University, May 1998. *Dynamic visualization of changing prior and posterior in Bayesian nonparametric analysis of censored data.*

Joint Ohio State University, Cleveland Clinic Foundation, Case Western Reserve University Annual Biostatistics Symposium, Ohio State University, May 1998. *Dynamic visualization of changing prior and posterior in Bayesian nonparametric analysis of censored data.*

Computer Science and Statistics: 33rd Symposium on the Interface, Costa Mesa, California, June 2001. *Dynamic visualization of changing prior and posterior in Bayesian analysis.*

Bayesian Nonparametrics Summit, Ann Arbor, Michigan, July 2001. *Using MCMC output for dynamic visualization of changing prior and posterior in Bayesian analysis.*

Speaker, Annual Distinguished Statistician Lecture Series, Department of Computer and Mathematical Sciences, Penn State University, Harrisburg, April 2002. *A meta-analysis of studies on the association of the platelet PlA polymorphism of Glycoprotein IIIa and risk of coronary heart disease.*

International Conference in Reliability and Survival Analysis, University of South Carolina, May 2003. *Monte Carlo methods for Bayesian analysis of survival data using mixtures of Dirichlet process priors.*

Invited Discussant, Session on "Machine Learning in Biostatistics," Joint Statistical Meetings, San Francisco, California, August 2003.

Conference in Honor of Myles Hollander, Florida State University, April 2007. *Estimation of large families of Bayes factors from Markov chain output.*

Joint Statistical Meetings, Washington, DC, August 2009. *Estimation of large families of Bayes factors from Markov chain output.*

International Chinese Statistical Association Applied Statistics Symposium, Indianapolis, June 2010. *Computational approaches for empirical Bayes methods and Bayesian sensitivity analysis.*

IMS Asia Pacific Rim Meeting, Tsukuba, Japan, July 2012. *Hyperparameter and model selection for nonparametric Bayes problems via Radon-Nikodym derivatives.*

Workshop on Statistical Frontiers, Taipei, Taiwan, December 2012. *Hyperparameter and model selection for nonparametric Bayes problems via Radon-Nikodym derivatives.*

Workshop on New Directions in Monte Carlo Methods, University of Florida, January 2013. *Hyperparameter and model selection for nonparametric Bayes problems via Radon-Nikodym derivatives.*

Ninth Conference on Bayesian Nonparametrics, Amsterdam, The Netherlands, June 2013. *Hyperparameter and model selection for nonparametric Bayes problems via Radon-Nikodym derivatives.*

Frontiers of Hierarchical Modelling in Observational Studies, Complex Surveys and Big Data: A Conference Honoring Malay Ghosh; College Park, Maryland, May 2014. *Inference for the number of topics in the latent Dirichlet allocation model via a pseudo-marginal Metropolis-Hastings algorithm.*

ISI World Statistics Congress, Rio de Janeiro, July 2015. *An MCMC approach to empirical Bayes inference and Bayesian sensitivity analysis via empirical processes.*

Twelfth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Stanford, California, August 2016. *An MCMC approach to empirical Bayes inference and Bayesian sensitivity analysis via empirical processes.*

Invited discussant in Royal Statistical Society Journal Webinar "Theoretical guarantees for approximate sampling from smooth and log-concave densities" by Arnak Dalalyan, October 2023.

INVITED TALKS AT UNIVERSITIES

Stanford University, Statistics/Psychology Departments Joint Seminar Series on Neural Sciences, July 1984. *A statistical method for detecting and quantifying neuronal interactions.*

Carnegie-Mellon University, Department of Statistics, January 1985. *Estimating the dependence between two point processes.*

University of Florida, Department of Statistics, February 1985. *Estimating the dependence between two point processes.*

University of Michigan, Department of Statistics, February 1985. *Bayesian nonparametric estimation of quantiles.*

Johns Hopkins University, Department of Mathematical Sciences, February 1985. *Bayesian nonparametric estimation of quantiles.*

University of Chicago, Department of Statistics, March 1985. *Estimating the dependence between two point processes.*

University of Minnesota, Department of Statistics, March 1985. *Estimating the dependence between two point processes.*

Stanford University, Department of Statistics, June 1985. *Estimating the dependence between two point processes.*

Stanford University, Statistics/Psychology Departments Joint Seminar Series on Neural Sciences, July 1985. *Relating the spike train of a neuron to its environment.*

Stanford University, Department of Statistics, July 1986. *Assessing system reliability using censoring methodology.*

University of Southern California, Department of Mathematics, January 1987. *Estimating the dependence between two point processes.*

Texas A&M University, Department of Statistics, September 1990. *A method for obtaining weak convergence results for quantile processes, with applications to censored survival data.*

University of Florida, Department of Statistics, October 1992. *Bayesian nonparametric estimation for incomplete data via successive substitution sampling.*

Purdue University, Department of Statistics, March 1995. *Bayesian Poisson regression using the Gibbs sampler: Sensitivity analysis through dynamic graphics.*

Michigan State University, Department of Statistics, November 1997. *Bayesian analysis of censored data using mixtures of Dirichlet priors.*

University of Chicago, Department of Statistics, April 2000. *Reconstruction of phylogenetic trees via Markov chain Monte Carlo.*

University of Connecticut, Department of Community Medicine and Health Care, March 2002. *A meta-analysis of studies on the association of the platelet PlA polymorphism of Glycoprotein IIIa and risk of coronary heart disease.*

Penn State University, Department of Health Evaluation Sciences, May 2002. *A meta-analysis of studies on the association of the platelet PlA polymorphism of Glycoprotein IIIa and risk of coronary heart disease.*

University of Pittsburgh, Department of Statistics, April 2003. *A Bayesian semi-parametric model for random effects meta-analysis.*

Harvard University, Department of Statistics, September 2003. *A meta-analysis of studies on the association of the platelet PlA polymorphism of Glycoprotein IIIa and risk of coronary heart disease.*

Yale University, Department of Statistics, October 2003. *A computing environment for visualization of posterior distributions obtained from MCMC output.*

University of Connecticut, Department of Statistics, November 2003. *A meta-analysis of studies on the association of the platelet PlA polymorphism of Glycoprotein IIIa and risk of coronary heart disease.*

University of Minnesota, Department of Statistics, December 2004. *A Bayesian semi-parametric model for random effects meta-analysis.*

University of Florida, Department of Statistics, January 2005. *A Bayesian semi-parametric model for random effects meta-analysis.*

Joint Florida State University / University of Florida Colloquium, held at Florida State, September 2005. *Estimation of large families of Bayes factors for nonparametric Bayes problems via Radon-Nikodym derivatives.*

University of Iowa, Department of Statistics, September 2011. *Hyperparameter and model selection for nonparametric Bayes problems via Radon-Nikodym derivatives.*

Iowa State University, Department of Statistics, March 2012. *Computational approaches for empirical Bayes methods and Bayesian sensitivity analysis.*

University of Pennsylvania, Department of Statistics, Wharton School, September 2012. *Hyperparameter and model selection for nonparametric Bayes problems via Radon-Nikodym derivatives.*

Iowa State University, Department of Statistics, October 2013. *Hyperparameter and model selection for nonparametric Bayes problems via Radon-Nikodym derivatives.*

Michigan State University, Department of Statistics and Probability, February 2015. *An MCMC approach to empirical Bayes inference and Bayesian sensitivity analysis via empirical processes.*

Florida State University, Department of Statistics, August 2015. *An MCMC approach to empirical Bayes inference and Bayesian sensitivity analysis via empirical processes.*

Duke University, Department of Statistical Science, November 2017. *An MCMC approach to empirical Bayes inference and Bayesian sensitivity analysis via empirical processes.*

University of Pittsburgh, Department of Statistics, January 2018. *An MCMC approach to empirical Bayes inference and Bayesian sensitivity analysis via empirical processes.*

Arizona State University, School of Mathematical and Statistical Sciences, February 2020. *An MCMC approach to empirical Bayes inference and Bayesian sensitivity analysis via empirical processes.*

University of Illinois at Urbana-Champaign, Department of Statistics, October 2020. *A Scalable Approach to Empirical Bayes Inference and Bayesian Sensitivity Analysis via Empirical Processes.*

SHORT COURSES

Survival Analysis [two-hour course]—March 1998, July 1998, May 1999, October 1999, May 2000 (for Biomedical Researchers at OSU); June 1999 (for the Ohio Department of Health).

Basic Biostatistics for Biomedical Researchers [10-hour course, taught jointly with Dennis Pearl]—May 1998, May 1999, October 1999, May 2000 (for Biomedical Researchers at OSU); June 1999 (four times, for the Ohio Department of Health).

Ph.D. STUDENTS GRADUATED

Steven Freitag, "Estimating Jointly System and Component Reliabilities Using a Mutual Censorship Approach," 1986 (joint direction with F. Proschan).

Yuang-Chin Chiang, "Choosing the Resampling Scheme when Bootstrapping: A Case Study in Reliability," 1988. Chiang is Associate Professor at the Institute of Statistics, National Tsing-Hua University, Taiwan.

Ji-Hyun Kim, "Conditional Bootstrap Methods for Censored Data," 1990. Kim is Professor in the Department of Statistics and Actuarial Science at Soongsil University, Korea.

Robin Antoine, "On Identifiability in the Autopsy Model of Reliability Theory," 1991 (joint direction with M. Hollander). Antoine is Senior Lecturer in the Department of Mathematics at University of West Indies, Trinidad.

Gang Li, "Generalized Pearson-Fisher Chi-Square Goodness-of-Fit Tests, with Applications to Models with Life History Data," 1992. Li is Professor in the Department of Biostatistics at UCLA.

Kevin Lawson, "Bayesian Nonparametric Estimation via Gibbs Sampling for Coherent Systems with Redundancy," 1994 (joint direction with F. Huffer). Lawson is Director of Department of Biostatistics, Pharmaceutical Product Development, Inc., Austin, Texas.

Eugenia Buta, "Computational Approaches for Empirical Bayes Methods and Bayesian Sensitivity Analysis," 2010. Buta is currently Research Scientist in the Department of Epidemiology and Biostatistics at Yale University.

Antonio Linero, "Nonparametric Bayes: Inference Under Nonignorable Missingness and Model Selection," 2015 (joint direction with Michael Daniels). Linero is Associate Professor in the Department of Statistics and Data Sciences at the University of Texas at Austin.

Yeonhee Park, "A Markov Chain Monte Carlo Approach to Empirical Bayes Inference and Bayesian Sensitivity Analysis via Empirical Processes," 2015. Park is Assistant Professor, Department of Biostatistics and Medical Informatics University of Wisconsin-Madison.

Zhe Chen, "Inference for the Number of Topics in the Latent Dirichlet Allocation Model via Bayesian Mixture Modelling," 2015. First job: Postdoctoral Fellow in the Department of Biostatistics at Columbia University.

Clint George (Department of Computer and Information Science and Engineering), "Latent Dirichlet Allocation: Hyperparameter Selection and Applications to Electronic Discovery," 2015 (joint direction with Joseph Wilson). George is Associate Professor, School of Mathematics and Computer Science, Indian Institute of Technology Goa, India.

Wei Xia, "Scalable Hyperparameter Selection for Latent Dirichlet Allocation," 2018. Xia is Applied Scientist at Amazon (in Seattle).

Chun-Hao Yang, "Shrinkage Estimation on Riemannian Manifolds," 2021 (joint direction with Baba Vemuri). Yang is Assistant Professor, Department of Mathematics and Institute of Applied Mathematical Sciences, National Taiwan University, Taiwan.

Xiran Fan, "Dimensionality Reduction and Classification in Hyperbolic Spaces ," 2023 (joint direction with Baba Vemuri). Fan is Research scientist at VISA.

Ph.D. STUDENT IN PROGRESS

Jaewoong Joo (co-advising with Bikram Karmakar)

Xiaoda Qu (co-advising with Baba Vemuri)

GRANTS

Co-PI, Air Force Office of Scientific Research grant "Statistical Aspects of Reliability, Maintainability, and Availability"; October 1984 to September 1987 (PI's Myles Hollander and Frank Proschan).

Co-PI, Air Force Office of Scientific Research grant "Statistical Aspects of Reliability, Maintainability, and Availability"; October 1987 to September 1990 (PI's Myles Hollander and Frank Proschan).

PI, Air Force Office of Scientific Research grant "Statistical Inference for Coherent Systems from Partial Information, and in Resampling Techniques in Survival Analysis"; $188,000 for three-year period September 1990 to September 1993.

PI, Air Force Office of Scientific Research grant "Statistical Inference for Coherent Systems from Partial Information and Markov Chain Monte Carlo Methods"; $100,000 for two-year period November 1993 to December 1995 (first year at Florida State and second at Ohio State).

PI, Air Force Office of Scientific Research grant "Studies in Reliability Theory and Survival Analysis and in Markov Chain Monte Carlo Methods"; $83,500 for two-year period May 1995 to April 1997.

PI, National Security Agency grant "Dynamic Visualization of Varying Prior and Posterior in Bayesian Analysis"; $48,000 for period January 2003 to July 2005.

Co-PI, National Institutes of Health grant "Allergic Condition Biomarkers and Glioma Risk" (PI Judith Schwartzbaum); September 2003 to August 2005 (11% academic year support).

PI, National Science Foundation grant "Bayesian Model Selection and Objective Methods"; $10,000 (workshop) 2008.

Co-PI, National Science Foundation grant "Development and Analysis of MCMC Algorithms and Computational Methods in Bayesian Sensitivity Analysis"; $180,000 for three-year period August 2008 to July 2011 (PI James Hobert; amount to Doss = $180,000/2).

Co-PI, National Science Foundation grant "Problems in Bayesian Model Selection and Development and Analysis of Markov Chain Sampling Algorithms"; $240,000 for three-year period September 2011 to August 2015 (PI James Hobert; amount to Doss = $240,000/2).

PI, National Science Foundation grant "New Directions in Monte Carlo Methods"; $8,500 (workshop) 2013.

Co-PI, National Institutes of Health grant "Claude D. Pepper Older Americans Independence Center"; 15% calendar year support for the period August 2012–March 2014. Director, Biostatistics and Data Management Core of the grant. (PI Marco Pahor.)

Co-PI, National Science Foundation grant "Automated Analysis of Movement Disorders from Diffusion and Functional MRI"; October 2017 to September 2023; amount to Doss = $72,000. (PI Baba Vemuri.)

PI, National Science Foundation grant "Distributed Algorithms for Topic Models with Applications to Streaming Document Data and Cancer Genomics"; $350,000 for period August 2019 to July 2023 (co-PI George Michailidis).

Co-PI, National Institutes of Health grant "Higher Order Convolutional Neural Network for Classification of Lewy-body Diseases and Alzheimer's Disease"; February 2022 to March 2026; amount to Doss = $142,036. (PI Baba Vemuri.)