# Jaimie L. Hebert

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## **EDUCATION**

Ph.D. in *Statistics*, University of Louisiana - Lafayette, 1990 Master of Science in *Statistics*, University of Louisiana - Lafayette, 1988 Bachelor of Science in *Statistics*, University of Louisiana - Lafayette, 1986

# **PROFESSIONAL EXPERIENCE**

2005 – present	<i>Dean</i> , College of Arts and Sciences Sam Houston State University
2005	<i>Interim Dean</i> , College of Arts and Sciences Sam Houston State University
2003 - 2005	Chair and Professor of Statistics Sam Houston State University
1999 – 2003	<i>Chair and Associate Professor of Statistics</i> Dept of Mathematics and Statistics Sam Houston State University
1998 – 1999	Associate Professor of Statistics Sam Houston State University
1995 – 1998	Assistant Professor of Statistics Sam Houston State University
1990 – 1995	Assistant Professor of Mathematical Science Appalachian State University

#### PUBLICATIONS

- 1. Hebert, J. L. and Scariano, S. M., "Control Charts for Equicorrelated Data," (submitted).
- 2. Hebert, J. L. and Koudelik, P. R., "A Comparison of Reliability Estimators Under Pitman's Measure of Closeness," (submitted).
- Hebert, J. L. and Scariano, S. M. (2004) "Comparing Location Estimators for Exponential Mixtures Under Pitman's Measure of Closeness," *Communications in Statistics* Vol. 33, No. 1, 29-46.
- 4. Hebert, J. L. and Scariano, S. M., (2003) "Adapting EWMA Control Charts for Batch-Correlated Data," *Quality Engineering* Vol.15, No. 4, 545-556.
- 5. Hebert, J. L. and Westbay, J. (2002) "Exact Run Lengths for One-sided Exponential Mixture CUSUM Charts" *Proceedings of the Joint Meetings of the American Statistical Association, IMS, and Biometric Societies: Section on Quality and Production* (electronically published by ASA).
- 6. Hebert, J. L. and Bandalisiri, W. A. (2002) "Nonparametric Bootstrap Estimation of Location Extrema in Exponential Mixture Models" *Proceedings of the Joint Meetings of the American Statistical Association, IMS, and Biometric Societies: Section on Physical and Engineering Statistics* (electronically published by ASA).
- 7. Hebert, J. L. and Arnholt, A. (2001) "Optimal Combinations of Estimators," *Interstat*, March No. 2.
- Arrambide, L. S. and Hebert, J. L. (1999) "Effects of Sub-sampling on Classification Methods Applied to Remotely Sensed Images," *Proceedings of the Joint Meetings of the ASA, IMS, and Biometric Societies: Section on Environmental Statistics*, pp. 124-129.
- 9. Cooper, P. A. and Hebert, J. L. (1999) "Retro-engineering Medium-Scale Client-Server Applications," *Proceedings of* WEBNET '99 Honolulu, HW.
- Hebert, J. L. and Miller, M. (1998) "Properties of the Reliability Function for Systems of Exponential Mixtures," *Proceedings of the Joint Meetings of the ASA*, *IMS, and Biometric Societies: Section on Physical and Engineering Statistics* 126-130.
- 11. Arnholt, A., Hebert, J. L., and Johnston, D. (1998) "Estimating the Mean with a Bootstrapped Coefficient of Variation," *Proceedings of the Joint Meetings of the ASA, IMS, and Biometric Societies: Section on Statistical Computing* 110-115.
- 12. Hebert, J. L. (1997) "Unsupervised Classification with Spatially Adapted Data," *Proceedings of the Joint Meetings of the ASA, IMS, and Biometric Societies: Section on Environmental Statistics*, 113-117.
- 13. Merianos, D., Marquart, J., Hebert J. L. and Damphousse, K. (1997) "From the Outside In: Using Public Health Data to Make Inferences About Older Inmates," *Crime and Delinquency* 43:3 298-313.
- Merianos, D. Marquart, J., Hebert J. L. and Carroll, L. (1997) "Health Conditions and Prisoners: A Review of Research and Emerging Areas of Inquiry," *The Prison Journal* 77:2 184-208.

- Hebert, J. L. and Carpenter, M. (1997) "Estimating Guaranteed Lifetimes of Systems in a Random Environment," *Communication in Statistics-Theory and Methods* 26:2 309-316.
- 16. Hebert, J. L. (1997) "Properties of the Dirichlet-Exponential Mixture," *Proceedings* of CAM\*97 111-119.
- 17. Button, C. and Hebert, J. L. (1997) "Unsupervised Classification of Remotely Sensed Images with Spatially Augmented Data," *Proceedings of CAM*\*97 58-67.
- 18. Xie, J., Carpenter, M., and Hebert, J. L. (1996), "Estimation in the presence of unknown mixing parameters in systems of two components in a common environment," *Proceedings of the Joint Meetings of the ASA, IMS, and Biometric Societies: Section on Physical and Engineering Science*, 68-70.
- 19. Ren, Q., Hebert, J. L., and Carpenter, M. (1996) "Estimating the minimum and maximum location parameters for two gamma-exponential mixtures in Pitman Measure," *Proceedings of the Joint Meetings of the ASA, IMS, and Biometric Societies: Section on Physical and Engineering Science,* 128-131.
- 20. Plank, P. Carpenter, M. and Hebert, J. L. (1996), "Using cluster and classification analysis to detect the impact of military training on the environment: a case study," *Proceedings of the Joint Meetings of the ASA, IMS, and Biometric Societies: Section on Environmental Statistics*, 119-122.
- 21. Arnholt, A. T. and Hebert, J. L. (1996), "Estimation and prediction for multiple batch experiments with variable start times," *Proceedings of the Joint Meetings of the ASA*, *IMS, and Biometric Societies: Section on Physical and Engineering Science*, 204-208.
- 22. Arnholt, A. T. and Hebert, J. L. (1995), "Estimating the mean with known coefficient of variation," *The American Statistician* 49, 367-369.
- 23. Arnholt, A. T. and Hebert, J. L. (1995), "A note on the expected time until next failure with an on-going experiment," *Technical Report*, Seagate Technology, Oklahoma City, OK, REL-TECH-RPT-96001A, 1-13.
- 24. Huddy, D. C., Hebert, J. L., Hyner, G. C., and Johnson, R. L. (1995), "Facilitating changes in exercise behavior: effect of structured statements of intention on perceived barriers to action," *Psychological Reports* 76, 867-875.
- 25. Carpenter, M. and Hebert, J. L. (1995), "Estimating the minimum and maximum location parameters for two IG-exponential scale mixtures," *Communications in Statistics: Theory and Methods* 24, 1227-1233.
- 26. Hebert, J. L. and Seaman, J. W., Jr. (1994), "The variance of a left-truncated mixed exponential process," *Journal of Applied Probability* 31, No. 1, 167-179.
- 27. Hebert, J. L. (1994), "Generating moments of exponential scale mixtures," *Communications in Statistics: Theory and Methods* 23, 1173-1180.
- 28. Hebert, J. L. (1994), "Moments of inverted scale mixtures," *Communications in Statistics: Theory and Methods* 23, 1181-1189.
- 29. Carpenter, M. and Hebert, J. L. (1994), "Estimating the minimum and maximum location parameters for two gamma-exponential scale mixtures," *Communications in Statistics: Theory and Methods* 23, 2367-2377.
- 30. Bauldry, W. B. and Hebert, J. L. (1993), "Truncation and variance in scale mixtures," *Mathematical Computation with Maple V: Ideas and Applications*, Thomas Lee (editor), Birkhauser, Boston, 67-76.

## **TECHNICAL REPORTS**

- 1. Hebert, J. L., Cooper, P., Konen, H., and Smith, G. (1999) "Final Report Image Analysis in Support of Threatened and Endangered Species." USACERL Technical Report Champaign, IL.
- 2. Hebert, J. L. and Stanek, G. (1997), "Monitoring an autocorrelated moving average process: A simulation study of QC attributes," *ESL Technical Report*, Texas A&M University, College Station, TX.
- 3. Carpenter, M. and Hebert, J. L. (1996), "Statistical process control applied to automated data screening," *ESL Technical Report*, Texas A&M University, College Station, TX.
- Carpenter, M. and Hebert. J. L. (1995), "Statistical aspects of remote sensing in support of classification and land-use detection," Texas Regional Institute of Environmental Studies (TRIES) Technical Report #95-03, Sam Houston State University, Huntsville, TX.
- 5. Hebert, J. L. and Seaman, J. W., Jr. (1990), "Stochastic antagonism in bi-matrix games," *Technical Report 90-7*, Department of Statistics, University of Southwestern Louisiana, Lafayette, La.

## **PROFESSIONAL PRESENTATIONS**

- 1. "The Modern Mathematics Curriculum" College of Sciences, Palawan State University, Puerto Princessa City, Palawan, Philippines October 24, 2006.
- 2. "Maximum Likelihood Estimation for Exponential Mixtures" Padagogische Hochschule Karlsruhe, Institut fur Mathematik und Informatik, Karlsruhe, Germany June 21, 2006.
- 3. "Exact Run Lengths for One-sided Exponential Mixture CUSUM Charts" Joint Meetings of the American Statistical Association, IMS, and Biometric Societies Atlanta, GA August 5-9, 2001.
- 4. "Nonparametric Bootstrap Estimation of Location Extrema in Exponential Mixture Models" *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies* Atlanta, GA August 5-9, 2001.
- 5. "Comparing Exponential Location Estimators Under Pitman's Measure of Closeness," *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies*, Indianapolis, IN, August 13-17, 2000.
- 6. "Retro-engineering Medium-Scale Client-Server Applications," WEBNET '99 Honolulu, HW, July 1999.
- "Effects of Sub-sampling on Classification Methods Applied to Remotely Sensed Images," *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies*, Baltimore, MD, August 8-12, 1999.
- "Image Analysis in Support of Threatened and Endangered Species Final Demo," Oak Ridge National Laboratory, Oak Ridge, TN August 16, 1999.
- 9. "Properties of the Reliability Function for Systems of Exponential Mixtures," *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies,* Dallas, August 10-14, 1998.

- 10. "Comparing Minimum and Maximum Location Estimators for Exponential Mixtures Under Pitman's Closeness Criterion," *Conference of Texas Statisticians*, Baylor University, Waco, TX., April 1998.
- 11. "Unsupervised Classification with Spatially Adapted Data." Joint Meetings of the American Statistical Association, IMS, and Biometric Societies, Anaheim, August 10-14, 1997.
- 12. "Properties of the Dirichlet exponential mixture model," *CAM\*97*, University of Central Oklahoma, Edmond, OK, February, 1997.
- 13. "Estimating the minimum and maximum location parameters for two gammaexponential mixtures in Pitman Measure," *Joint Meetings of the ASA, IMS, and Biometric Societies*, Chicago, August, 1996.
- 14. "Estimation and prediction for multiple batch experiments with variable start times," *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies,* Chicago, August, 1996.
- 15. "Estimating the mean with known coefficient of variation," *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies,* Orlando, Fl., August, 1995.
- 16. "Generating moments of exponential mixtures," Joint Meetings of the American Statistical Association, IMS, and Biometric Societies, Orlando, Fl., August, 1995.
- 17. "Generating moments of exponential mixtures," *Department of Mathematical Sciences*, Appalachian State University, Boone, NC, 28607, March, 1995.
- 18. "Estimating minimum and maximum location parameters in a random environment," *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies,* Toronto, Ontario, August, 1994.
- 19. "Statistical reporting in educational research: some common problems encountered in the editorial process," *Kellogg Institute*, Appalachian State University, Boone, NC, July 1994.
- 20. "Estimating the minimum and maximum location parameters for two gammaexponential scale mixtures," *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies,* San Francisco, Ca., August, 1993.
- 21. "The variance of left-truncated scale mixtures," *Joint Meetings of the American Statistical Association, IMS, and Biometric Societies,* Boston, Ma., August, 1992.
- 22. "Stochastic antagonism in bi-matrix games," Joint Meetings of the Louisiana Academy of Sciences and the LA Chapter of the American Statistical Association, New Orleans, La., March, 1990.
- 23. "Stochastic antagonism in bi-matrix games," *SIAM Conference on Applied Probability*, New Orleans, La., March, 1990.
- 24. "Payoff variance in matrix games," *Joint Meetings of the Louisiana Academy of Sciences and the LA Chapter of the American Statistical Association*, Alexandria, La., March, 1989.

## **GRANTS AND GRANT RELATED WORK**

- 1. "Mathematics for English Language Learrners." Funded through the Texas Education Agency and subcontracted through the Texas State University System. Principle Investigator.
- "Image Analysis in Support of Threatened and Endangered Species." Funded through USACERL and subcontracted through Lockheed Martin (ORNL). Co-investigators: Peter Cooper, Harry Konen, Wasin So, Radka Turcjova, Jian Wang.
- 3. "Hierarchical and Empirical Bayes Estimation of Mixing Parameters in Exponential Scale Mixtures." Submitted to the Advanced Research Program of the State of Texas. Co-investigator: Melinda Miller.
- 4. "Change Assessment for Military Landscape Monitoring in Support of Carrying Capacity Analyses for Military Ranges Via Optimal Usage of Aircraft Videography and Satellite Remotely Sensed Data," Funded through SERDP. Co-investigators: Patrick Van Fleet (PI) and Cecil Hallum.
- 5. "Time Series Modeling in Support of Quality Control Techniques for Automating Energy Data Screening," Funded through The Texas Engineering Experimental Station, Texas A&M University, College Station, TX. Co-Investigator: M. Carpenter.
- 6. "Watershed Impacts to the Terrestrial and Aquatic Ecosystem of Lake Livingston." Submitted to the National Science Foundation. Title: Research Statistician.
- 7. "Enhancement of Image Assessment Capabilities for Natural Resource Characterization." Funded through the US Department of Defense, SERDP and CERL. Co-investigators: Mark Carpenter, Johnny Carroll, Cecil Hallum, Harry Konen, Wasin So, Patrick Van Fleet.
- 8. "Reliability and Minimum Guaranteed Lifetimes of k-out-of-n Systems in a Random environment." Submitted to the Advanced Research Program of the State of Texas. Co-investigator: Mark Carpenter.
- 9. "Quality Control Techniques for Automated Energy Data Screening," Funded through The Texas Engineering Experimental Station, Texas A&M University, College Station, TX Co-Investigator's: M. Carpenter and D. Ruch.
- 10. "Statistical Aspects of Remote Sensing in Support of Classification and Land-use Detection," Funded as a component of the Texas Regional Institute of Environmental Studies, Coordinator: Mike Warnock Title: Research Statistician.

## **GRADUATE STUDENTS (Statistics)**

Quan, Ren (August 1996). "Location Estimation Under Pitman Closeness for the Gamma Exponential Mixture."

Button, Cheryl (May 1997). "Unsupervised Classification with Spatial Data."

Stanek, Greg (December 1997). "Monitoring Data Generated by an MA(1) Process Using QC Charts and an Exponentially Weighted Moving Average Model."

Wainwright, Andrea (December 1998). "Alternative Priors and MLE/MOM Comparisons for Exponential Mixtures."

Arrambide, L. S. (May 1999). "Effects of Sub-sampling on Classification Methods Applied to Remotely Sensed Images."

Koudelik, P. R. (May 2000). "A Comparison of Reliability Estimators Using Pitman's Measure of Closeness."

Westbay, J. K. (May 2001). "Exact Run Lengths for Exponential Mixture CUSUM Schemes."

Bandalasiri, W. A. (December 2001). "Nonparametric Bootstrap Estimation of Location Extrema in Exponential Mixture Models."

Henke, J. (December 2003). "Simulating a gamma-exponential mixture."

McBride, J. J. (December 2003). "Run Length Districutions for Upper-sided EWMA Charts."

Zhou, Yi (August 2004). "Method of Moments Estimation for Exponential Distributions."

Willey, Richard (August 2005). "Principle Component Regression."

## SERVICE AND PROFESSIONAL ACTIVITIES

Secretary-Treasurer, Mathematical Association of America, Texas Section (2005-present)
Senior Research Editor, Journal of Developmental Education, (Fall 1996 - 2005)
Executive Committee, Mathematical Association of America, Texas Section (2001-2003)
Research Editor, Journal of Developmental Education (Fall 1991 - Spring 1995)
Referee, Communications in Statistics, (Spring 1995 – present)
Referee, The American Statistician, (Fall 1997 – present)
Advisor, SHSU Rotoract Club (Fall 1999 – 2004)
Advisor, ASU Math Club (Fall 1992 - Spring 1995)
Advisor, ASU CoMap Mathematics Modeling Team, (Spring 1995)
Advisor, Tau Kappa Epsilon Fraternity (Fall 1991 - Spring 1995)

## HONORS AND AWARDS

ASU Project Development Award (1993) TKE Grand Prytanis National Key Leadership Award (1995) SGA Outstanding Teacher Award Nominee (1993, 1994, 1995) ΦKΦ Honor Society