

## CURRICULUM VITAE OF WEIXING SONG

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### *OFFICE ADDRESS*

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### **EDUCATION**

Ph.D. in Statistics, Michigan State University, May, 2006.  
Ph.D. in Mathematical Statistics, Academia Sinica, Beijing, China, July, 1999.  
M.S. in Statistics, Shanxi Normal University, China, July, 1996.  
B.S. in Mathematics, Shanxi Normal University, China, July, 1993.

### **RESEARCH INTEREST**

Nonparametric and Semi-parametric Inferences, Measurement Error Models, Finite Mixture Models, Asymmetric Kernel Regression, Robust Regression, High Dimensional Statistics.

### **WORKING EXPERIENCE**

Visiting Professor, Shanxi Normal University, China, June –August, 2015, 2016.  
Visiting Research Associate, Michigan State University, August 2013- December 2013.  
Associate Professor, Kansas State University, 2012 --- present.  
Assistant Professor, Kansas State University, August, 2006 --- July 2012.  
Visiting Assistant Professor, University of Rochester, May, 2007 --- July, 2007.  
Research Assistant, Michigan State University, August, 2005 --- May, 2006.  
Assistant Professor, Beijing Normal University, China, September, 2001 --- July, 2002.  
Postdoc, Beijing Normal University, China, September, 1999 --- July, 2001.  
Visiting Scholar, University of Hong Kong, China, September, 2000 --- November, 2000.

### **HONORS**

William L. Harkness Teaching Award, Michigan State University, 2006.  
Graduate School Dissertation Completion Fellowship, Michigan State University, 2006.

Excellent Researcher, Beijing Normal University, China, 2002.

Gallop Prize Winner, 5th Beijing-Tianjing Joint Statistics Conference, China, 1999.

#### **PUBLICATIONS UNDER REVISION, PUBLISHED AND ACCEPTED**

1. Shi, J.H., Yang, Q., Li, X.Y. and **Song, W.X.** Effects of measurement error on a class of single-index varying coefficient regression models. (2017). Accepted by Computing Statistics.
2. Li, X., Xiao, J. X., **Song, W.X.** and Shi, J. H. Local Linear Regression with Reciprocal Inverse Gaussian Kernel. *Under revision for Metrika*.
3. **Song, W. X.** Semi-Deconvolution estimate in partial measurement regression models. *Under revision for Canadian Journal of Statistics*.
4. Koul, H.L., **Song, W.X.** and Zhu, X.Q., Goodness-of-fit Testing of Error Distribution in Linear Measurement Error Models. *second revision submitted to Annals of Statistics*
5. Shi, J.H. and **Song, W.X.** Sparse principal component analysis with measurement errors. (2016). Journal of Statistical Planning and Inference. 175(5), 87–99.
6. Zhao, F.R., Shi, J.H. and **Song, W.X.** Semi-parametric varying coefficient regression model with measurement errors. (2016). Accepted by Communication in Statistics – Theory and Methods.
7. Su, X., Xu, J., Rhodes, D., Shen, Y., **Song, W.X.**, Katz, B., Tomich, J. and Wang, W. Identification and Quantification of Anthocyanins in Transgenic Purple Tomato. (2016), Food Chemistry, 2016. 202, 184-188.
8. Koul, H. L. and **Song, W.X.** Minimum distance partial linear regression model checking with Berkson measurement errors. (2016). Journal of Statistical Planning and Inference. 174, 129-152.
9. **Song, W.X.** and Shi, J.H. Nonlinear Statistical Inference with Laplace Measurement Error. (2015). Journal of Systems Science and Mathematical Sciences. 35(12), 1510-1528.
10. Shi, J.H., Yue, L.L. and **Song, W.X.** A parametric bootstrap approach for two-way error component regression models. (2015). Accepted by Communications in Statistics – Simulation and Computation.
11. Shi, J.H., Li, J. and **Song, W.X.** Parametric bootstrap simultaneous confidence intervals for differences of means from several two-parameter exponential distributions. (2015). Statistics and Probability Letters, 106, 39-45.
12. Wu, J. and **Song, W.X.** On Hong-Tamer's estimation in parametric models with Laplace measurement error. (2015). Statistics and Probability Letters. 97, 165-175.
13. Koul, H.L. and **Song, W.X.** SIMEX for parametric models with Laplace measurement errors. (2014). Electronic Journal of Statistics. 8(2), 1973-1995.
14. Shi, J.H., **Song, W.X.** (2014). Asymptotic results in gamma kernel regression. Accepted by Communications in Statistics – Theory and Methods.

15. Koul, H.L., **Song, W.X.** and Liu, S. (2014). Model checking in Tobit regression via nonparametric smoothing. *Journal of Multivariate Analysis*. 125, 36-49.
16. Shi, J.H., **Song, W.X.** and Chen, K. (2014). Robust errors-in-variables linear regression via Laplace Distribution. *Statistics and Probability Letters*. 84, 113-120.
17. **Song, W.X.** (2014). Efficient estimation in two-sided truncated model. *Contemporary Developments in Statistical Theory, Springer Proceedings in Mathematics & Statistics*, 68, 311-327.
18. **Song, W.X.**, Yao, W.X. and Xing, Y.R. (2014). Robust mixture linear regression by Laplace distribution. *Computational Statistics and Data Analysis*. 71, 128-137.
19. Yao, W.X. and **Song, W.X.** (2013). Mixtures of linear regression with measurement errors. To appear in *Communications in Statistics – Theory and Methods*.
20. Koul, H.L., and **Song, W.X.** (2013). Large sample results for varying kernel regression. *Journal of Nonparametric Statistics*. 25, 829-853.
21. **Song, W.X.** and Zhang, Y. (2012). Empirical L2-distance lack-of-fit tests for Tobit regression models. *Journal of Multivariate Analysis*. 111, 380-396.
22. Samarakoon, N., **Song, W.X.** (2012). Empirical Smoothing Lack-of-Fit Tests For Variance Function. *Journal of Statistical Planning and Inference*. 142(5), 1128–1140.
23. Koul, H.L., **Song, W.X.**, Bickel-Rosenblatt type goodness-of-fit tests in errors-in-variables model. (2012). *Journal of French Statistics Society*, Vol. 153 No. 1 52-70.
24. **Song, W.X.**, Empirical likelihood confidence intervals for density function in errors-in-variables model. (2011). *Journal of Statistical Research*. 45(2), 95-110.
25. **Song, W.X.**, Yao, W.X., A lack-of-fit test in Tobit errors-in-variables regression model. *Statistics and Probability Letters*. (2011), 81(12), 1792-1801.
26. **Song, W.X.**, Distribution-free test in Tobit mean regression model. (2011). *Journal of Statistical Planning and Inference*. 141(8), 2891-2901.
27. Li, X., Zhu, C.S., Lin, Z.W., Wu, Y., Zhang, D.B., Bai, G.H., **Song, W.X.**, Ma, J.X., Muehlbauer, G.J., Scanlon, M.J., Zhang, M., Yu, J.M., The pattern and dynamics of genome and chromosome size variation. *Molecular Biology and Evolution*. (2011), 28(6), 1901-1911.
28. **Song, W.X.**, Du, J. A note on testing the functional forms for regression functions via nonparametric smoothing. *Canadian Journal of Statistics*. (2011), 39(1), 108-125.
29. Samarakoon, N., **Song, W.X.**, Minimum distance conditional variance function checking in heteroscedastic regression models. *Journal of Multivariate Analysis*. (2011), 102(3), 579-600.
30. **Song, W.X.**, Du, J., Distributional free lack-of-fit tests in balanced mixed models. *Statistics and Probability Letters*. (2010), 80(17-18), 1378-1387.
31. Koul, H.L., **Song, W.X.**, Conditional variance model checking. *Journal of Statistical Planning and Inference*, (2010), 140(4), 1056-1072.

32. Sun, G., Zhu, C.S., Kramer, M.H., Yang, S.S., **Song, W.X.**, Piepho H.P., Yu, J.M., Variation explained in mixed-model association mapping, *Heredity*. (2010), 105, 333-340.
33. **Song, W.X.**, Moderate deviations for deconvolution kernel density estimators with ordinary smooth measurement errors, *Statist. and Prob. Letters*. (2010), 80(3-4), 169--176.
34. **Song, W.X.**, Relative potency estimation in direct bioassay with measurement errors, *The 2009 Proceeding of Conference on Applied Statistics in Agriculture*.
35. Koul, H.L., **Song, W.X.**, Model checking in partial linear regression models with Berkson measurement error. *Statistica Sinica*. (2010), 20, 1551-1579.
36. **Song, W.X.**, Wang, H.Y., Yao, W.X., On the robust modal local polynomial regression. *International Journal of Statistical Science*. (2009), 9, 217-231.
37. **Song, W.X.**, Lack-of-fit testing in errors-in-variable model with validation data. *Statist. and Prob. Letters*, (2009), 79, 765-773.
38. Liang, H., **Song, W.X.**, Improved estimation in multiple linear regression models with measurement error and general constraint. *J. Mult. Analysis*. (2009), 100, 726-741.
39. Koul, H.L., **Song, W.X.**, Minimum distance regression model checking with Berkson error. *Ann. of Statist.* (2009), 37(1), 132-156. (with H. L. Koul)
40. Koul, H.L., **Song, W.X.**, Model checking with Berkson measurement error. *J. Statist. Planning and Inference*. (2008), 138, 1615-1628.
41. **Song, W.X.**, Model checking in errors-in-variables regression. *J. Mult. Analysis*. (2008), 99, 2406-2433.
42. **Song, W.X.**, Bahadur efficiency of parameter estimators in non-common support regression models. *Journal of Beijing Normal University*, (2003), 39(1), 1--7.
43. Zhu, L.X., **Song, W.X.**, Cui, H.J., Testing lack-of-fit for a polynomial errors-in-variables model. *Acta Math. Appl. Sin. Engl. Ser.* (2003), 19(3), 353-362.
44. **Song, W.X.**, Quasi-maximum likelihood estimator in non-regular location parameter models. *Acta Math. Appl. Sin.* (2002), 25(1), 49--57.
45. **Song, W.X.**, Cheng, P., Convolution theorem and asymptotic efficiency in two sided truncated distribution family---the normal case. *J. Syst. Sci. Complex*. (2002), 15(3), 315-328.
46. **Song, W.X.**, Cheng, P., Convolution theorem and asymptotic efficiency in two sided truncated distribution families. *Acta Math. Sinica*. (2001), 44(4), 737-746.
47. **Song, W.X.**, One sided asymptotic efficiency in uniform distributions. *J. Syst. Sci. Complex*. (2001), 14(2), 159--164.
48. **Song, W.X.**, Bahadur efficiency of parameter estimators in non-common support regression models. *Journal of Beijing Normal University (Natural Science)*, (2003), 39(1), 1--7.
49. **Song, W.X.**, Cui, H.J., Lack-of-fit testing for a linear errors-in-variables model. *Journal of Beijing Normal University (Natural Science)*, (2002), 38(4), 462--469.

50. **Song, W.X.**, Bahadur efficiency in a kind of two-sided truncated distribution families. *Journal of Beijing Normal University (Natural Science)*, 38(1), (2002), 34--40.
51. **Song, W.X.**, Highest consistent order of parameter estimation in non-regular distribution families. *Journal of Beijing Normal University (Natural Science)*, (2002), 38(2), 148--155.
52. **Song, W.X.**, Yang, Q.M. Generalized Fibonacci sequence and magic 8 Problem, *Mathematics Bulletin*, (2001), 4, 42--44.
53. **Song, W.X.**, The ridge-type principal component estimator of regression parameter. *Journal of Shanxi Normal University (Natural Science)*, 1995 (2).
54. **Song, W.X.**, The ridge estimator in growth curve model. *Journal of Shanxi Normal University (Natural Science)*. 1996 (3).
55. Yu, Y.L., **Song, W.X.**, Stein-type principal component estimates of regression coefficients. *J. Math. Study* (1995), 28(3), 85--88.

## GRANT

1. University Small Research Grant, No.2232, Kansas State University. Improved Statistical Inference Procedures in Bioassay. (2008)
2. NSF DMS Collaborative Grant (1205276). Lack-of-fit Test in Measurement Error Model and Tobit Regression Models. (2012-2015)
3. Faculty Development Award (FDA), No.3344, Kansas State University. (2015)

## PRESENTATIONS AND TALKS

1. August, 2016. Invited. Workshop on "Newest Developments and Urgent Issues in Measurement Error and Latent Variable Problems". Banff, Canada.
2. June, 2016. Invited. ISNPS conference in Avignon, France.
3. December, 2015. Invited. School of Mathematics and Computer Sciences, Shanxi Normal University.
4. December, 2015. Invited. International conference in the frontier of Statistics, Beijing.
5. December, 2014. Invited. School of Mathematics and Computer Sciences, Shanxi Normal University.
6. December, 2014. Invited. Department of Mathematics, Capital Normal University.
7. June, 2014. Invited. ISNPS Meeting in Cadiz, Spain.
8. April, 2014. Invited. Department of Mathematics and Statistics, Auburn University.
9. December, 2013. Invited. Department of Statistics and Probability, Michigan State University.
10. July, 2013. Invited. IMS-SWUFE International Conference on Statistics and Probability.
11. June-July, 2013. Invited. Fujian Normal University, Shanxi Normal University.
12. August, 2012. Invited. 2012 JSM, San Diego, USA.

13. March 30, 2012. Invited. Spring Section Meeting, AMS, University of Kansas.
14. August, 2011. Invited. 2011 JSM, Miami, USA.
15. November, 2010. Department of Statistics and Probability, Michigan State University.
16. January, 2010. Invited. International Conference on Statistics, Probability, Operations Research, Computer Science and Allied Areas, to be held in Visakapatnam, India.
17. June, 2009. Invited. The 6th Workshop on Simulation. St. Petersburg State University, St. Petersburg, Russia.
18. May, 2009. Invited. The International Meeting on Nonparametric Methods in Measurement Error Models, sponsored by Fields Institute, at Carleton University, Canada.
19. April, 2009. Improved Estimation in Direct Bioassay. Invited. Conference on Applied Statistics in Agriculture. Manhattan, KS.
20. February, 2009. Marked empirical process for lack-of-fit test in partial linear regression model. Invited. University of Missouri, Columbia.
21. August, 2008. Model checking in partial linear regression model, Denver, JSM2008
22. May, 2008. Lack-of-fit test in the partial linear regression model with Berkson measurement error. Invited. IISA annual meeting, University of Connecticut.
23. May, 2008. Some problems on the adequacy checking in regression models. Invited talk in the meeting for honoring Professor Hira.L. Koul's 65th birthday, Michigan State University.
24. September, 2007, Lack-of-fit test in the partial linear regression model with Berkson measurement error. Department of statistics, Kansas State University.
25. August, 2007. Minimum distance regression model checking with Berkson error.
26. Young Research Meeting, JSM, Salt Lake City.
27. April, 2006. Minimum distance model fitting with measurement error model. Department of Statistics, Kansas State University
28. September, 2005. Invited. Model checking in Berkson measurement error model. Department of Statistics, University of Michigan.
29. August, 2005. Minimum distance model checking in errors in variables model. JSM, Minneapolis.
30. February, 2005. Model checking for EV model when the density of predictor is known. Department of Statistics and Probability, Michigan State University

## **GRADUATE STUDENTS**

### Ph.D. Students

- Nishantha Samarakoon (2011). Conditional variance function checking in heteroscedastic regression models.
- Bala Natarajan (Current, final defense planned on September, 2017). Asymmetric kernel regression with beta kernels.

Xiongya Li (Current, prelim passed on April 2017). Robust regression using multivariate Laplace distribution.

Weijia Jia (Current, prelim passed on April 2017). Goodness-of-Fit tests in measurement error models with replication

Jia Liang (Current). Variable selection using the generalized ridge and principal component Lasso.

#### M.S. Students

- Tej B. Shrestha (2010). Comparison study on some classical lack-of-fit tests in regression models.
- Tianhong Zhou (2010). Numerical Comparisons of Bioassay Methods in Estimating LC50.
- Yi Zhang (2011). Empirical L2 distance lack-of-fit tests for Tobit regression models.
- Shu Chen (2011). Some limit behaviors for the LS estimators in mixed errors-in-variables regression model.
- Shan Liu (2012). Model checking in Tobit regression via nonparametric smoothing.
- Antoniette Leiker (2012). Comparison Study on the Estimation in Tobit Regression Models.
- Chunxia Chen (2012). Semi-Parametric Estimation in Tobit Regression Models.
- Yantong Liu (2012). Robust mixture linear EIV regression models by t-distribution.
- Yanru Xing (2013). Robust mixture linear regression via Laplace distribution.
- Jingyi Zhang (2013). Robust mixture modeling via Pearson type VII distribution.
- Chendi Cao (2016). Linear regression with Laplace measurement error.
- Zhenzhen Shi (Current).

#### **JOURNAL REVIEWING ACTIVITIE**

Review papers for:

Journal of American Statistical Association, Journal of Royal Statistics Society (B), Biometrika, Econometrica, Statistical Sinica, Journal of Nonparametric Statistics, Canadian Journal of Statistics, Science in China, Statistics and Probability Letters, Test, Journal of Statistical Planning and Inference, Journal of Multivariate Analysis, Journal of System Science and Complexity, Journal of Statistical Research.

#### **ADMINISTRATIVE EXPERIENCE**

Interim Department Head: Fall of 2015.

Faculty Search Committee Chair: 2010-2011.

Graduate Program Committee Member, January, 2014 --- Present.

Graduate Program Co-Director: Department of Statistics, August, 2008 --- Present.  
Graduate Program Director: Department of Statistics, August, 2008 --- August, 2013.  
Secretary and Treasurer of Kansas/Western Missouri Chapter of ASA, 2008-2010.  
Served and/or Serving on important department committees, like Graduate Progress  
Committee, Bachelors Assessment Committee.  
Served as Seminar Chair, Faculty Advisor of Statistics Club, and Open House Coordinator.

## **EDITORIAL SERVICE**

**Associate Editor** for Letters of Probability and Statistics, 2012 – Present.  
**Editor** for the Applied Statistics in Agriculture Conference Proceedings, 2009, 2012,  
and 2013.

## **MEMBERSHIPS**

American Statistical Association (ASA)  
Institute of Mathematical Statistics (IMS)  
International Chinese Statistical Association (ICSA)