

Bin Li

Department of Experimental Statistics
Room 173 Martin D. Woodin Hall
Louisiana State University
Baton Rouge, LA 70803-5606
Office Phone: (225)-578-1343

Email: bli@lsu.edu
Phone: (504)-667-6934
Fax: (225)-578-8344
<http://statweb.lsu.edu/faculty/li/index.html>

Education

Ph.D. Statistics, August 2006, The Ohio State University, Columbus, OH.

Dissertation Title: Statistical Learning and Predictive Modeling in Data Mining.

Adviser: Prem K. Goel, Ph.D.

M.A. Biometrics, August 2002, The Ohio State University, Columbus, OH.

Thesis Title: Estimation of Smoking-Attributable Mortality in US.

Adviser: Melvin Moeschberger, Ph.D.

B.S. Biophysics & Physiology, August 1998, Fudan University, Shanghai, China.

Professional Experience

08/2006 – 08/2012 Assistant Professor (tenured) in Department of Experimental Statistics, LSU

09/2012 – 07/2021 Associate Professor in Department of Experimental Statistics, LSU

08/2021 – present Full Professor in Department of Experimental Statistics, LSU

Teaching at Department of Experimental Statistics, LSU

7000-level courses are graduate-level courses.

EXST4142 – *Introduction to R and Statistical Data Mining* (undergraduate-level course)

EXST7003 – *Statistical Inference I*

EXST7005 – *Statistical Techniques I*

EXST7014 – *Experimental Statistics II*

EXST7015 – *Statistical Techniques II*

EXST7142 – *Statistical Data Mining*

EXST7152 – *Advanced Topics in Statistical Modeling*

Advisory Activity

MAPST (Master of Applied Statistics) major advisor for 35+ students (33 graduated).

Ph.D. and Master committee member for 80+ students (60+ graduated).

Research Interests

Statistical data mining; high-dimensional data analysis and variable selection; signal regression.

Peer Reviewed Publications

- 107) **Li, B.**, Marx, B.D., Chakraborty, S. and Weindorf, D.C. (2021) “Multivariate calibration on heterogeneous samples”, *Chemometrics and Intelligent Laboratory Systems*, 217: 104386. <https://www.sciencedirect.com/science/article/abs/pii/S0169743921001544>
- 106) **Li, B.**, Chakraborty, S., Weindorf, D.C. and Yu, Q. (2021) “Data Integration Using Model-Based Boosting”, *SN Computer Science*, 2 Article number 400. <https://link.springer.com/article/10.1007/s42979-021-00797-0>
- 105) Gurdian, C.E., Torrico, D.D., **Li, B.**, Turri, G. and Prinyawiwatkul, W. (2021) “Effect of Disclosed Information on Product Liking, Emotional Profile, and Purchase Intent: A Case of Chocolate Brownies Containing Edible-Cricket Protein”, *Foods* 10(8): 1769. <https://www.mdpi.com/2304-8158/10/8/1769>
- 104) Gurdian, C.E., Torrico, D.D., **Li, B.**, Turri, G. and Prinyawiwatkul, W. (2021) “Effect of Informed Conditions on Sensory Expectations and Actual Perceptions: A Case of Chocolate Brownies Containing Edible-Cricket Protein”, *Foods* 10(7): 1480. <https://www.mdpi.com/2304-8158/10/7/1480>
- 103) Gurdian, C.E., Torrico, D.D., **Li, B.** and Prinyawiwatkul, W. (2021) “Effect of Serving Plate Types and Color Cues on Liking and Purchase Intent of Cheese-Flavored Tortilla Chips”, *Foods* 10(4): 886. <https://doi.org/10.3390/foods10040886>
- 102) Ferreira, G.W.D., Ribeiro, B.T., Weindorf, D.C., Teixeira, B.I., Chakraborty, S., **Li, B.**, Guilherme, L.R.G. and Scolforo, J.R.S. (2021) “Assessment of iron-rich tailings via portable X-ray fluorescence spectrometry: the Mariana dam disaster, southeast Brazil” *Environmental Monitoring and Assessment* 193:203. <https://link.springer.com/article/10.1007/s10661-021-08982-7>
- 101) Slaughter, L., Deb, S., Chakraborty, S., **Li, B.**, Bakr, N., Edwards, B. and Weindorf, D.C. (2021) “On-farm evaluation of regenerative land-use practices in a semi-arid pasture agroecosystem in West Texas, USA”, *Revista Brasileira de Ciência do Solo*. 45:e0200163. <https://doi.org/10.36783/18069657rbc20200163>
- 100) Văcar, C.L., Covaci, E., Chakraborty, S., **Li, B.**, Weindorf, D.C., Frențiu, T., Pârvu, M. and Podar, D. (2021) “Heavy metal-resistant filamentous fungi as potential mercury bioremediators”, *Journal of Fungi*. 7(5), 386. <https://www.mdpi.com/2309-608X/7/5/386>
- 99) **Li, B.**, Yu, Q., Zhang, L. and Hsieh, M. (2021) “Regularized multiple mediation analysis”, *Statistics and Its Interface*, 14(4): 449-458. DOI link: <https://dx.doi.org/10.4310/21-SII664>
- 98) Sérgio Henrique Godinho Silva, Bruno Teixeira Ribeiro, Marcelo Braga Bueno Guerra, Hudson Wallace Pereira de Carvalho, Guilherme Lopes, Geila Santos Carvalho, Luiz Roberto Guimarães Guilherme, Mauro

- Resende, Marcelo Mancini, Nilton Curi, Rogerio Borguete Alves Rafael, Valeria Cardelli, Stefania Cocco, Giuseppe Corti, Somsubhra Chakraborty, **Bin Li**, David C Weindorf (2021) “pXRF in tropical soils: Methodology, applications, achievements and challenges”, *Bioremediation Science: From Theory to Practice*, CRC Press, pp92.
- 97) Day, J.W., **Li, B.**, Marx, B.D., Zhao, D. and Lane, R. (2020) “Multivariate analyses of water quality dynamics over four decades in the Barataria basin, Mississippi delta”, *Water* **12(11)**, 3143; <https://doi.org/10.3390/w12113143>
- 96) Yu, Q. and **Li, B.** (2020) “Third-variable effect analysis with multilevel additive models”, *PLOS ONE* <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0241072>
- 95) **Li, B.**, Bakshi, B.R. and Goel, P. (2020) “Computationally Intensive Nonlinear Regression Methods”, in Brown, S., Tauler, R., Walczak, B. (eds.) *Comprehensive Chemometrics: Chemical and Biochemical Data Analysis* (2nd Ed.), Elsevier, pp. 505–517.
- 94) Swetha, R.K., Bende, P.S., Singh, K., Gorthi, S., Biswas, A., **Li, B.** and Weindorf, D.C., Chakraborty, S. (2020) “Predicting soil texture from smartphone-captured digital images and an application”, *Geoderma*, Vol. 376. DOI: <https://doi.org/10.1016/j.geoderma.2020.114562>
- 93) Gorthi, S., Chakraborty, S., **Li, B.** and Weindorf, D.C. (2020) “A field-portable acoustic sensing device to measure soil moisture”, *Computers and Electronics in Agriculture*, Vol. 174. DOI: <https://doi.org/10.1016/j.compag.2020.105517>
- 92) Yu, Q. and **Li, B.** (2020) “A multivariate multiple third-variable effect analysis with an application to explore racial and ethnic disparities in obesity”, *Journal of Applied Statistics*, **48(4)**, 750-764. DOI: 10.1080/02664763.2020.1738359
- 91) Yu, Q. and **Li, B.** (2020) “Model-guided adaptive sampling for Bayesian model selection”, *Journal of the Korean Statistical Society*, **49(4)**, 1195-1213.
- 90) Dutta, S., Chakraborty, S., Banerjee, H., Goswami, R., Majumdar, K. and **Li, B.** (2020) “Maize Yield in Smallholder Agriculture System – an Approach Integrating Socio-economic and Crop Management Factors” *PLOS ONE* <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0229100>
- 89) Mukhopadhyay, S., Chakraborty, S., Bhadoria, P.B.S., **Li, B.** and Weindorf, D.C. (2020) “Assessment of heavy metal and soil organic carbon by portable X-ray fluorescence spectrometry and NixPro sensor in landfill soils of India”, *Geoderma Regional* Vol. 20. <https://doi.org/10.1016/j.geodrs.2019.e00249>
- 88) S. Irving, **B. Li**, S.-M. Chen, Lu Peng, Weihua Zhang, and Lide Duan, (2020). “Computer Comparisons in the Presence of Performance Variation”, *Frontiers of Computer Science (Springer)*, 14(1): 21-41.
- 87) Xu, Y., Wang, L., Ma, Z., **Li, B.**, Bartels, R., Liu, C., Zhang, X. and Dong, J. (2020) “Spatially Explicit Model for Statistical Downscaling of Satellite Passive Microwave Soil Moisture”, *IEEE Transactions on Geoscience and Remote Sensing*, DOI: 10.1109/TGRS.2019.2944421

- 86) Kagiliery, J., Chakraborty, S., Acree, A., Weindorf, D.C., Brevik, E.C., Jelinski, N.A., **Li, B.** and Jordan, C. (2020) “Rapid quantification of lignite sulfur content: Combining optical and X-ray approaches.” *International Journal of Coal Geology*, 216 <https://doi.org/10.1016/j.coal.2019.103336>
- 85) **Li, B.** Yu, Q. and Peng, L. (2019) “Ensemble of Fast Learning Stochastic Gradient Boosting.” *Communications in Statistics - Simulation and Computation*.
<https://doi.org/10.1080/03610918.2019.1645170>
- 84) **Li, B.**, B.D. Marx., Chakraborty, S. and Weindorf, D.C. (2019). “Multivariate calibration with robust signal regression”, *Statistical Modelling: An International Journal*, Vol. **19(5)**: 524-544.
- 83) Liu, H., Xu, K., **Li, B.**, Han, Y. and Li, G. (2019) “Sediment identification using machine-learning classifiers in a mixed-texture dredge pit of Louisiana shelf for coastal restoration.” *Water*, 11(6): 1257. DOI: 10.3390/w11061257
- 82) Chakraborty, S., **Li, B.**, Weindorf, D.C. Deb, S. Acree, A. De, P. and Panda, P. (2019). “Use of portable X-ray fluorescence spectrometry for classifying soils from different land use land cover systems in India.” *Geoderma*, Vol. **338**:5-13.
- 81) Rawal, A., S. Chakraborty, **B. Li**, K. Lewis, M. Godoy, L. Paulette, and D.C. Weindorf. (2019). Determination of base saturation percentage in agricultural soils via portable X-ray fluorescence spectrometer. *Geoderma*, Vol. **338**:375-382.
- 80) Chakraborty, S., **Li, B.**, Weindorf, D.C. and Morgan, C.L.S. (2019). “External parameter orthogonalisation of Eastern European VisNIR-DRS soil spectra”. *Geoderma*, Vol. **337**: 65–75.
- 79) Yu, Q., Wu, X., **Li, B.** and Scribner, R.A. (2019). “Multiple mediation analysis with survival outcomes: With an application to explore racial disparity in breast cancer survival”, *Statistics in Medicine*. **Vol. 28(3)**: 398-412.
- 78) **Li, B.**, Chakraborty, S., Godoy, M., Kusi, N.Y.O. and Weindorf, D.C. (2018). “Compost cation exchange capacity via portable X-ray fluorescence (PXRF) spectrometry”, *Compost Science and Utilization*. **Vol. 26(4)**: 271-278.
- 77) G. Mariotti, H. Huang, Z. Xue, **B. Li**, D. Justic, and Z. Zang. (2018). “Biased wind measurements in estuarine waters”, *Journal of Geophysical Research: Oceans*. **Vol. 123(5)**: 3577-3587.
- 76) D. Pearson, D.C. Weindorf, S. Chakraborty, **B. Li**, J. Koch, P. Van Deventer, J. de Wet, and N. Yaw Kusi. (2018). “Analysis of metal-laden water via portable X-ray fluorescence spectrometry”, *Journal of Hydrology*. **Vol. 561**: 267-276.
- 75) Kahlon, C.S., **Li, B.**, Board, J., Dia, M., Sharma, P. and Jat, P. (2018). “Cluster and Principle Component Analysis of Soybean Grown at Various Row Spacings, Planting Dates and Plant Populations”, *Open Agriculture*. **Vol. 3**: 110-121.

- 74) C. McGladdery, D.C. Weindorf, S. Chakraborty, **B. Li**, L. Paulette, D. Podar, D. Pearson, N.Y.O. Kusi, and B. Duda. (2018). “Elemental assessment of vegetation via portable X-ray fluorescence (PXRF) spectrometry”, *Journal of Environmental Management*. **Vol. 210**: 21-225.
- 73) Weindorf, D.C., Chakraborty, S., **B. Li**, S. Deb, A. Singh, and N.Y. Kusi. (2018). “Compost salinity assessment via Portable X-ray fluorescence (PXRF) spectrometry”, *Waste Management*. **78**:158-163.
- 72) Hagan, J. and **Li, B.** (2018). “Phase II Performance of P-Charts and P'-Charts”, *Journal of Medical Statistics and Informatics*. **Vol. 6**: Article 3. DOI: 10.7243/2053-7662-6-3
- 71) Raj, A., Chakraborty, S., B.M. Duda, D.C. Weindorf, **B. Li**, S. Roy, M.C. Sarathjith, B.S. Das, and L. Paulette. (2018). “Soil mapping via diffuse reflectance spectroscopy based on variable indicators: An ordered predictor selection approach”, *Geoderma*. **314**:146-159.
- 70) **Li, B.** and Yu, Q. (2017). “A Nonparametric Test of Independence between Two Variables”, *Statistical Analysis and Data Mining*, **Vol. 10(6)**: 422-435. One of the most downloaded papers in SADM 2018-2019.
- 69) Koch, J., Chakraborty, S., **Li, B.**, Kucera, J.M., Van Deventer, P., Daniell, A., Faul, C., Man, T., Pearson, D., Duda, B., Weindorf, C.A., Weindorf, D.C. (2017). “Proximal sensor analysis of mine tailings in South Africa: An exploratory study”, *Journal of Geochemical Exploration*. **Vol. 181**: 45 – 57
- 68) S. Chakraborty, D.C. Weindorf, C. Weindorf, B. Das, **B. Li**, B. Duda, S. Pennington, R. Ortiz. (2017). “Semi-Quantitative Evaluation of Secondary Carbonates via Portable X-ray Fluorescence Spectrometry”. *Soil Science Society of America Journal*. **Vol. 81(4)**: 844-852.
- 67) Raj, A., S. Chakraborty, B.M. Duda, D.C. Weindorf, **B. Li**, S. Roy, M.C. Sarathjith, B.S. Das, and L. Paulette. (2018). “Soil mapping via diffuse reflectance spectroscopy based on variable indicators: An ordered predictor selection approach”, *Geoderma* **314**:146-159.
- 66) Duda, B.M., Weindorf, D.C., Chakraborty, S., Li, B., Man, T., Paulette, L., Deb, S. (2017). “Soil characterization across catenas via advanced proximal sensors”. *Geoderma*, **Vol. 298**: 78 – 91.
- 65) S. Chakraborty, **B. Li**, S. Deb, S. Paul, D.C. Weindorf, B.S. Das. (2017). “Predicting soil arsenic pools by visible near infrared diffuse reflectance spectroscopy”. *Geoderma*, Vol. **296**: 30–37.
- 64) S. Chakraborty, D.C. Weindorf, S. Deb, **B. Li**, S. Paul, A. Choudhury, D. Ray. (2017). “Rapid Assessment of Regional Soil Arsenic Pollution Risk via Diffuse Reflectance Spectroscopy”, *Geoderma*, **Vol. 289**: 72-81.
- 63) Cardelli, V., D.C. Weindorf, S. Chakraborty, **B. Li**, M. DeFeudis, S. Cocco, A. Agnelli, A. Choudhury, D. Ray, and G. Corti. (2017). “Non-saturated soil organic horizon characterization via advanced proximal sensors”. *Geoderma*, **Vol. 288**: 130-142.
- 62) D. Pearson, S. Chakraborty, B. Duda, **B. Li**, D.C. Weindorf, S. Deb, E. Brevik, D.P. Ray. (2017). “Water analysis via portable X-ray fluorescence spectrometry”, *Journal of Hydrology*, **Vol. 544**: 172–179.
- 61) S. Chen, G. Bronevetsky, L. Peng, **B. Li**, and X. Fu. (2016). “Soft Error Resilience in Big Data Kernels through Modular Analysis,” *The Journal of Supercomputing*, Vol. 72(4): 1570–1596.

- 60) Weindorf, D.C., S. Chakraborty, J. Herrero, **B. Li**, C. Castañeda, and A. Choudhury. (2016). “Simultaneous assessment of key properties of arid soil by combined PXRF and Vis–NIR data”, *European Journal of Soil Science*, **Vol. 67**: 173 - 183.
- 59) Weindorf, D.C., S. Chakraborty, L. Paulette, E. Michéli, **B. Li**, T. Man. (2015). “Proximal Sensor Identification of Lithologic Discontinuities in Eastern Europe”, *ProEnvironment*, **Vol. 8** 176 - 185.
- 58) Weindorf, D.C., S. Chakraborty, A. Aldabaa, L. Paulette, G. Corti, S. Cocco, E. Michéli, D. Wang, **B. Li**, T. Man, A. Sharma, and T. Person. (2015). “Lithologic discontinuity assessment in soils via portable x-ray fluorescence spectrometry and visible near-infrared diffuse reflectance spectroscopy”, *Soil Science Society of America Journal*, **Vol. 79(6)**: 1704-1716.
- 57) Y. Zhang, L. Duan, **B. Li**, L. Peng, S. Sadagopan. (2015). “Cross-architecture Prediction Based Scheduling for Energy Efficient Execution on Single-ISA Heterogeneous Chip-multiprocessors,” *Journal of Microprocessors and Microsystems (Elsevier)*, **Vol. 39(4-5)**: 271-285.
- 56) S.-M. Chen, L. Peng, Y. Hu, Z. Zhao, A. Srivastava, Y. Zhang, J. Choi, **B. Li**, and E. Song. (2015). “Powering Up Dark Silicon: Mitigating the Limitation of Power Delivery via Dynamic Pin Switching,” *IEEE Transactions on Emerging Topics in Computing*, **Vol. 3(4)**: 489-501.
- 55) S. Chen, G. Bronevetsky, **B. Li**, M. Casas, and L. Peng, (2015) “A Framework For Evaluating Comprehensive Fault Tolerance Mechanisms In Numerical Programs,” *Journal of Supercomputing*, **Vol. 71**: 2963-2984.
- 54) Chakraborty, S., D.C. Weindorf, **B. Li**, A.A.A. Aldabaa, R.K. Gosh, S. Paul, and M.N. Ali. (2015). “Development of a hybrid proximal sensing method for rapid identification of petroleum contaminated soils”. *Science of the Total Environment*, **Vol. 514**:399-408.
- 53) Wang, D.D., S. Chakraborty, D.C. Weindorf, **B. Li**, A. Sharma, S. Paul, and M. Nasim Ali. (2015). “Synthesized proximal sensing for soil characterization: Total carbon and total nitrogen”. *Geoderma*, **Vol. 243-244**:157-167.
- 52) **B. Li**, S.-M. Chen, and L. Peng, “Precise Computer Performance Comparisons Via Statistical Resampling Methods,” In *Proceedings of The 2015 IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS)*, Philadelphia, PA. Mar. 2015.
- 51) Yu, Q. and **Li, B.** (2014). “Regularization and Estimation in Regression with Cluster Variables”, *Open Journal of Statistics*, **Vol.4**, (10) page: 814-825.
- 50) S. Chen, G. Bronevetsky , **B. Li**, M. Casas, and L. Peng, “Evaluating Application Resilience with XRay,” In *The 10th Workshop on Silicon Errors in Logic – System Effects (SELSE)*, Stanford University, CA, Apr. 2014.
- 49) Y. Zhang, L. Duan, **B. Li**, L. Peng, and S. Sadagopan, “Energy efficient job scheduling in single-ISA heteroge-neous chip-multiprocessors,” In *Proceedings of The 15th IEEE International Symposium on Quality Electronic Design (ISQED)*, Santa Clara, CA, Mar. 2014.

- 48) Aldabaa, A.A.A., D.C. Weindorf, S. Chakraborty, A. Sharma, and **B. Li**. (2014). Combination of proximal and remote sensing methods for rapid soil salinity quantification. *Geoderma*, **239-240**:34-46.
- 47) S. Chakraborty, D.C. Weindorf, **B. Li**, M.N. Ali, K. Majumdar, D.P. Ray. (2014) “Analysis of petroleum contaminated soils by spectral modeling and pure response profile recovery of n-hexane”, *Environmental Pollution*, **190** page 10-18.
- 46) Chakraborty, S., Das, B., Ali, M.N., **Li, B.**, Sarathjith, M.C., Majumdar, K., Ray, D.P. “Rapid estimation of compost enzymatic activity by spectral analysis method combined with machine learning”, *Waste Management* , **34** (2014) page 623–631.
- 45) L. Duan, Y. Zhang, **B. Li**, and L. Peng, “Comprehensive and Efficient Design Parameter Selection for Soft Error Resilient Processors via Universal Rules,” In *IEEE Transactions on Computers*, Volume **63** , Issue 9, pages 2201 – 2214, Sep. 2014.
- 44) Y. Zhang, L. Duan, **B. Li**, L. Peng, and X. Fu, “Design Configuration Selection for Hard-error Reliable Processors via Statistical Rules”, In *Journal of Microprocessors and Microsystems*, **38(1)**, Feb. 2014, Pages 22–30.
- 43) Chakraborty, S., Weindorf, D.C., Ali, M.N., **Li, B.**, Ge, Y., and J.L. Darilek, (2013). “Spectral Data Mining for Rapid Measurement of Organic Matter in Unsieved Moist Compost.” *Applied Optics*, **52(4)**: 82-92.
- 42) L. Duan, L. Peng, and **B. Li**, (2013). "Predicting Architectural Vulnerability on Multi-Threaded Processors under Resource Contention and Sharing," *IEEE Transactions on Dependable and Secure Computing*, **10(2)**: 114-127.
- 41) Wang, Y., Tuomilehto, J., Jousilahti, P., Salomaa, V., Li, B., Antikainen, R., Mähönen, M., Katzmarzyk, P.T. and Hu, G. (2013). "Serum gamma-glutamyltransferase and the risk of heart failure in men and women in Finland", *Heart*, **99(3)**: 163-167.
- 40) Barrera, W., Hoy, J. and **Li, B.** (2013). "Effects of Temperature and Moisture Variables on Brown Rust Epidemics in Sugarcane". *Journal of Phytopathology*. Vol. **161(2)**: 98-106.
- 39) Chakraborty, S., Weindorf, D.C., Zhu, Y., **Li, B.**, Morgan, C.L.S., Ge, Y. and Galbraith, J. "Assessing spatial variability of soil petroleum contamination using visible near-infrared diffuse reflectance spectroscopy". (2012). *Journal of Environmental Monitoring*. Vol. **14(11)**: 2886-92.
- 38) Q. Yu, **B. Li**, Z. Fang, and L. Peng, (2012). "Model Guided Adaptive Design and Analysis in Computer Experiment", *Statistical Analysis and Data Mining*, Vol. **5(5)**, 399–409.
- 37) McWhirt, A.L., D.C. Weindorf, S. Chakraborty, and **B. Li**. 2012. Visible near infrared diffuse reflectance spectroscopy (VisNIR DRS) for rapid measurement of organic matter in compost. *Waste Management and Research* Vol. **30(10)**: 1049-1058.

- 36) Chakrabortya, S., Weindorf, D.C., Zhu, Y., **Li, B.**, Morgan, C.L.S., Ge, Y. and Galbraith, J. (2012) "Spectral Reflectance Variability from Soil Physicochemical Properties in Oil Contaminated Soils." (2012). *Geoderma*, **177-178**: 80-89.
- 35) Barrera, W., Hoy, J. and **Li, B.** (2012) "Effects of Temperature and Leaf Wetness on Infection of Sugarcane by *Puccinia melanocephala*." *Journal of Phytopathology*. , Vol. **160(6)**: 294-298.
- 34) Tang, Q., Wang, L., **Li, B.** and Yu, J. (2012) "Toward a Comprehensive Evaluation of VIS Sub-pixel Fractions and Land Surface Temperature for Urban Land Use Classification in the U.S." *International Journal of Remote Sensing*. **33(19)**: 5996-6019. DOI:10.1080/01431161.2012.675453.
- 33) Y. Zhang, L. Duan, **B. Li** and L. Peng, "Optimal Microarchitectural Design Configuration Selection for Processor Hard-Error Reliability," In *Proceedings of The 13th IEEE International Symposium on Quality Electronic Design (ISQED)*, Santa Clara, CA, Mar. 2012.
- 32) Marx, B., Eilers, P. and **Li, B.** (2011) "Multidimensional single-index signal regression." *Chemometrics and Intelligent Lab Systems*, **109(2)**: 120-130.
- 31) **Li, B.**, Sanderlin R, Melanson R and Yu, Q. (2011) "Spatio-Temporal Analysis of A Plant Disease in A Non-uniform Crop: A Monte Carlo Approach". In *Journal of Applied Statistics*, Vol. **38(1)**: 175-182.
- 30) Marx. B.D., Eilers. P.H.C., and **Li, B.** (2011). Multidimensional single-index signal regression. In: *Proceedings of the 26th International Workshop on Statistical Modelling*, Valencia, Spain. Eds. Armero *et al.*
- 29) Y. Zhang, Y. Hu, **B. Li** and L. Peng, "Performance and Power Analysis of ATI GPU: A Statistical Approach", In *Proceedings of The 6th IEEE International Conference on Networking, Architecture, and Storage (NAS)*, Dalian, China, Jul. 2011.
- 28) J. Chen, **B. Li**, Y. Zhang, L. Peng and J.-K. Peir, "Tree Structured Analysis on GPU Power Study," In *Proceedings of The 29th IEEE International Conference on Computer Design (ICCD)*, Amherst, MA, Oct. 2011.
- 27) L. Duan, L. Peng and **B. Li**, "Two-Level Soft Error Vulnerability Prediction on SMT/CMP Architectures," In Proceedings (short paper) of *The 2011 IEEE International Symposium on Workload Characterization (IISWC)*, Austin, TX, Nov. 2011.
- 26) Y. Zhang, L. Peng, **B. Li**, J.-K. Peir and J. Chen, "Architecture Comparisons between NVidia and ATI GPUs: Computational Parallelism and Data Communications," In *Proceedings of The 2011 IEEE International Symposium on Workload Characterization (IISWC)*, Austin, TX, Nov. 2011.
- 25) L. Duan, Y. Zhang, **B. Li** and L. Peng, "Universal Rules Guided Design Parameter Selection for Soft Error Resilient Processors," In *Proceedings of The 2011 IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS)*, Austin, TX, Apr. 2011.
- 24) Curtis, A., **Li, B.**, Marx, B., Pine, J. and Mills, J. (2011) "A Multiple Additive Regression Tree Analysis of Three Exposure Measures during Hurricane Katrina: Implications for Recovery in Orleans Parish". In *The Journal of Disaster Studies, Policy and Management*, Vol. **35(1)**, 19-35.

- 23) Chakraborty, S., Weindorf, D.C., Morgan, C.L.S., Ge, Y., Galbraith, J., **Li, B.** and Kahlon, C.S. (2010) “Rapid, On-site Identification of Oil Contaminated Soils using Visible Near-Infrared Diffuse Reflectance Spectroscopy”. In *Journal of Environmental Quality*, Vol. **39**(4): 1378-1387.
- 22) R. Tao, L. Yang, L. Peng and **B. Li.** (2010). “A Host-Based Intrusion Detection System Using Architectural Features to Improve Sophisticated Denial-of-Service Attack Detections,” In *International Journal of Information Security and Privacy*, Vol. **4**(1): 18-31, Jan.-Mar. 2010.
- 21) Oard, Svetalana; Enright, Frederick; **Li, Bin.** (2010). “Structural changes induced in thionins by chloride anions as determined by molecular dynamics simulations”. *Biophysical Chemistry*, Vol. **147**: 42-52.
- 20) **B. Li.**, L. Duan., and L. Peng. “Efficient Microarchitectural Vulnerabilities Prediction Using Boosted Regression Trees and Patient Rule Inductions”. *IEEE Transactions on Computers, Special Issue on System Level Design of Reliable Architectures*, Vol. **59**(5), pp. 593-607, May, 2010.
- 19) Yu, Q., **Li, B.**, Fang, Z. and Peng, L. (2010). An adaptive sampling scheme guided by BART - with an application to predict processor performance. *The Canadian Journal of Statistics*, Vol. **38**: 136-152.
- 18) **Li, B.**, Bakshi, B.R. and Goel, P. (2009) “Computationally Intensive Nonlinear Regression Methods”, in Brown, S., Tauler, R., Walczak, B. (eds.) *Comprehensive Chemometrics: Chemical and Biochemical Data Analysis* (1st Ed.), Elsevier, pp. 463–476.
- 17) **Li, B.** and Yu, Q. (2009). “Robust and Sparse Bridge Regression”. *Statistics and Its Interface*. Vol. **2**: 481-491.
- 16) Yu, Q., **Li, B.** and Scribner, R. (2009). “Hierarchical Additive Modeling of Nonlinear Association with Spatial Correlations - An Application to Relate Alcohol Outlet Destruction and Changes in Neighborhood Rates of Assaultive Violence”. *Statistics in Medicine*. Vol. **28**: 1896-1912.
- 15) P. Eilers, **B. Li** and B. Marx, (2009). “Multivariate Calibration with Single-Index Signal Regression”. *Chemometrics and Intelligent Laboratory Systems*, **96**: 196-202.
- 14) **B. Li**, L. Peng and B. Ramadass. (2009) “Accurate and Efficient Processor Performance Prediction via Regression Tree Based Modeling”. *Journal of Systems Architecture*, Vol. **55**, 457-467.
- 13) Xu, J., Chen, J. and **B. Li**, “Random Forest for Relational Classification with Application for Terrorist Profiling”. In *Proceeding of the Eighteenth International Symposium on Methodologies for Intelligent Systems (ISMIS'09)*
- 12) L. Duan, **B. Li** and L. Peng. “Versatile Prediction and Fast Estimation of Architectural Vulnerability Factor from Processor Performance Metrics”, In *Proceedings of the 15th IEEE International Symposium on High Performance Computer Architecture (HPCA 2009)*, Raleigh, NC, Feb. 2009: 129-140.
- 11) R. Tao, L. Yang, L. Peng, **B. Li** and A. Cemerlic, “A Case Study: Using Architectural Features to Improve Sophisticated Denial-of-Service Attack Detections,” In *Proceeding of the 2009 IEEE Symposium on Computational Intelligence in Cyber Security*, Nashville, TN, Mar. 2009.

- 10) **B. Li**, L. Peng and B. Ramadass, “Efficient MART-Aided Modeling for Microarchitecture Design Space Exploration and Performance Prediction,” (extended abstract), In *Proceedings of 2008 ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS 2008)*, Annapolis, MD, Jun. 2008: 439-440.
- 9) **Li, B.** and Yu, Q. (2008). Classification of Functional Data: A Segmentation Approach. *Computational Statistics and Data Analysis*, **52(10)**: 4790-4800.
- 8) Yu, Q. Stasny, E.A. and **Li, B.** (2008). Bayesian Models to Adjust for Response Bias in Survey Data: An Example in Estimating Rape and Domestic Violence Rates from the NCVS. *Annals of Applied Statistics*, **2**: 665-686.
- 7) **Li, B.** and Marx, B. (2008). Sharpening P-spline Signal Regression. *Statistical Modelling: An International Journal*, **4**: 367-384.
- 6) **Li, B.** and Goel, P.K. (2007). Additive Regression Trees and Smoothing Splines - Predictive Modeling and Interpretation in Data Mining. *Contemporary Mathematics*, Vol: **443**: 83-101.
- 5) **Li, B.** and Goel, P.K. (2006). Regularized Optimization in Statistical Learning: A Bayesian Perspective. *Statistica Sinica*, **16**: 411-424.
- 4) Matkovic V, Goel P, Badenhop-Stevens NE, Landoll JD, **Li B**, Ilich J, Skugor M, Nagode L, Mobley S, Eun-Yeong H, Hangartner T, Clairmont A, Calcium Supplementation and Bone Mineral Density in Females from Childhood to Young Adulthood: A Randomized Controlled Trial. *American Journal of Clinical Nutrition*. **81**: 175-188, 2005.
- 3) Matkovic V, Landoll JD, Badenhop-Stevens NE, Ha EY, Crncevic-Orlic Z, **Li B**, Goel P. Nutrition Influences Skeletal Development from Childhood to Adulthood: a Study of Hip, Spine, and Forearm in Adolescent Females. *The Journal of Nutrition*. Vol. **134 (3)**: 701-705, 2004.
- 2) Smiraglia DJ, Rush LJ, Fruhwald MC, Dai Z, Held WA, Costello JF, Lang JC, Eng C, **Li B**, Wright FA, Caligiuri MA, Plass C. Excessive CpG Island Hypermethylation in Cancer Cell Lines Versus Primary Human Malignancies. *Human Molecular Genetics*. Vol. **10 (13)**: 1413-1419, 2001.
- 1) Dai Z, Lakshmanan RR, Zhu WG, Smiraglia DJ, Rush LJ, Fruhwald MC, Brena RM, **Li B**, Wright FA, Ross P, Otterson GA, Plass C. Global Methylation Profiling of Lung Cancer Identifies Novel Methylated Genes. *Neoplasia*. Vol. **3 (4)**: 314-323, 2001.

Google Scholar Citation:

Webpage: <https://scholar.google.com/citations?user=KEwX24wAAAAJ>

Total Citations: 2911 (1721, since 2016); h-index: 28 (24); i10-index: 56 (48)

Software

- 3) Yu, Q. and **Li, B.**, May 2018. R package *mmabig*: Multivariate Mediation Analysis with Large Data Sets. Available on CRAN at <https://cran.r-project.org/web/packages/mmabig/index.html>

2) Yu, Q. and Li, B., March 2017. *mma*: An R Package for Mediation Analysis with Multiple Mediators.

Available on CRAN at <https://cran.r-project.org/web/packages/mma/index.html>

1) Yu, Q. and Li, B., October 2016. R package *mlma*: Multilevel Mediation Analysis.

Available on CRAN at <https://cran.r-project.org/web/packages/mlma/index.html>

Funded Grants and Contracts

1) Soil Spatial Variability Assessment at Bayer CropScience Facilities Worldwide. Sponsor: Texas Tech University. PI: Bin Li. \$1,500 funded. 10/07/2015 - 08/31/2016.

2) NSF, Computer Communication Foundation Core Program. Exploring Statistical Models to Optimize Hardware and Software under Processor Reliability Constraints. (PI: Lu Peng; Co-PI: Bin Li.) \$374,424 funded, 2010-2013.

3) Architectural Vulnerabilities Analysis and Prediction for Multi-threaded Processors. Pilot Funding for New Research and Technology. Principal Investigator: Lu Peng. Co-Investigator: Bin Li. \$10,000 Funded (2009).

Issued Patent

1) US Patent 8365181: Energy Efficient Job Scheduling in Heterogeneous Chip Multiprocessors Based on Dynamic Program Behavior Using PRIM Model, September, 2016. Inventors: Lu Peng and Bin Li.

Honors and Awards

1) Ransom Marian Whitney Research Award, Statistics, The Ohio State University, 2006.

2) Winner of Student Paper Competition in ASA Section on Bayesian Statistical Science (SBSS), 2005.

Selected Presentations

8) Multivariate calibration with robust signal regression, *Lloyd Roeling UL Lafayette Mathematics Conference* (2019), October, Lafayette, LA.

7) Multivariate calibration with robust signal regression, *Joint American Statistical Association Meetings* (2018), August, Vancouver.

6) Ensemble of fast learning stochastic gradient boosting, *Joint American Statistical Association Meetings* (2017), August, Baltimore.

5) A nonparametric test on the dependence of two continuous variables, *Lloyd Roeling Mathematics Conference*, 2015, Lafayette, LA.

4) Robust and Sparse Bridge Regression. *Conference on Nonparametric Statistics and Statistical Learning* (2010). Columbus, OH.

- 3) Efficient Large Design Space Exploration and Prediction in Computer Microarchitectural Study. *Joint American Statistical Association Meetings* (2009). Washington, D.C.
- 2) Classification of Functional Data: A Segmentation Approach. *Joint American Statistical Association Meetings* (2007). Salt Lake City, UT.
- 1) Regularized Optimization in Statistical Learning: A Bayesian Perspective. *Joint American Statistical Association Meetings* (2005). Minneapolis, MN.

Reviewer for Journals

Journal of the American Statistical Association
Annals of Applied Statistics
Journal of Computational and Graphical Statistics
Journal of the Royal Statistical Society (Series A)
Statistical Analysis and Data Mining
Chemometrics and Intelligent Laboratory Systems
Journal of Chemometrics
Computational Statistics and Data Analysis
Journal of Statistical Computation and Simulation
Journal of Applied Statistics
Applied Mathematics and Computation
Statistics and Computing
Statistical Methodology
IEEE Transactions on Cybernetics
Geoderma
Environmental Pollution
Remote Sensing
IEEE Transactions on Cybernetics

Professional Member and Services

2004-Present American Statistical Association, since 2004.
2014-2015 Treasurer of Louisiana Chapter of American Statistical Association
2013-2014 President of Louisiana Chapter of American Statistical Association
2012-2013 Vice president of Louisiana Chapter of American Statistical Association