Zhihua Su

Assistant Professor
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Dr. Su joined University of Florida after she received a PhD in Statistics from the University of Minnesota in 2012. Her primary research interests fall in a new research area called envelope models which provide efficient estimation in multivariate analysis. Multivariate analysis is concerned with extracting information from datasets containing measurements for many variables. It is a useful tool for understanding relationships between variables and is widely used in applied sciences. Many standard methods are available for analyzing multivariate data, but these methods are not applicable to many contemporary problems, especially the "big data" problems. The envelope model is a new approach to multivariate analysis and is applicable to contemporary studies. Realizing that not all the information is useful, the idea of an envelope is to distinguish between material and immaterial information, throw out the immaterial information and then extract the signal from the material information.

- Su, Z., Zhu, G. Chen, X. and Yang, Y. (2016). Sparse Envelope Model: Efficient Estimation and Response Variable Selection in Multivariate Linear Regression. *Biometrika*, 103, 579-593.
- Khare, K., Pal, S. and Su, Z. A Bayesian Approach for Envelope Models. Accepted. *Annals of Statistics*.
- Liu, H., Tayyari, F., Edison, A., Su, Z. and Gu, L. (2016) NMR-Based Metabolomics Reveals Urinary Metabolome Modifications in Female Sprague-Dawley Rats by Cranberry Procyanidins. *Journal of Nutritional Biochemistry*, 34, 136-145.

Global Research Interests
- Optimization theory
- Elliptical contoured distributions
- Copula model

Countries of Focus
- China
- Argentina
- Canada

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