

SHUJIE MA

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Education

- **Ph.D. in Statistics**, Michigan State University August 2011

Research Interests

- Precision medicine, subgroup analysis, dimension reduction, factor models, nonparametric and semiparametric methods
- Inference of high-dimensional data, functional data and nonlinear time series data
- Applications to gene-environment interaction, environmental risk assessment, nutrition, medicine and financial data

Professional Experience

- **Assistant Professor**, Department of Statistics, UC-Riverside July 2011- June 2017
- **Associate Professor**, Department of Statistics, UC-Riverside July 2017-

Publications

1. **Ma, S.**, Zhu, L., Zhang, Z., Tsai, C. L. and Carroll, R. J. (2018). A Robust and Efficient Approach to Causal Inference Based on Sparse Sufficient Dimension Reduction. *Annals of Statistics*. Forthcoming.
2. **Ma, S.** and Su, L. (2018). Estimation of Large Dimensional Factor Models with an Unknown Number of Breaks. *Journal of Econometrics* Forthcoming.
3. **Ma, S.**, Lan, W., Su, L., and Tsai, C. L. (2018). Testing Alphas in Conditional Time-Varying Factor Models with High Dimensional Assets. *Journal of Business & Economic Statistics*. Forthcoming.
4. Zhang, Z., Liu, C., **Ma, S.**, and Zhang, M. (2018). Estimating Mann-Whitney-Type Causal Effects for Right-Censored Survival Outcomes. *Journal of Casual Inference*. Forthcoming.
5. Zhang, Z. and Ma, S. (2018). Machine Learning Methods for Leveraging Baseline Covariate Information to Improve the Efficiency of Clinical Trials. *Statistics in Medicine*. Forthcoming.
6. He, K., Lian, H., **Ma, S.** and Huang, J. Z. (2018). Dimensionality Reduction and Variable Selection in Multivariate Varying-Coefficient Models with a Large Number of Covariates. *Journal of American Statistical Association-Theory and Methods*. . 113(522), 746754.
7. Fan, G., Zhu, L. and **Ma, S.** (2017). Nonlinear interaction detection through model-based sufficient dimension reduction. *Statistica Sinica*. Accepted.

9. **Ma, S.**, Lian, H., Liang, H. and Carroll, R. J. (2017). SiAM: A Hybrid of Single Index Models and Additive Models. *Electronic Journal of Statistics*. 11, 2397-2423.
10. Zhang, Z., **Ma, S.**, Nie, L. and Soon, G. (2017). A Quantitative Concordance Measure for Comparing and Combining Treatment Selection Markers. *International Journal of Biostatistics*. 13(1), 1-24.
11. **Ma, S.**, Ma, Y., Wang, Y., Kravitz, E., S., and Carroll, R. J. (2017). A Semiparametric Single-Index Risk Score Across Populations. *Journal of American Statistical Association-Theory and Methods*. 112(520), 16481662.
12. **Ma, S.** and Huang, J. (2017). A Concave Pairwise Fusion Approach to Subgroup Analysis. *Journal of American Statistical Association-Theory and Methods*. 112(517), 410-423.
13. **Ma, S.**, Li, R., and Tsai, C. L. (2017). Variable Screening via Quantile Partial Correlation. *Journal of American Statistical Association-Theory and Methods*. 112(518), 650-663.
14. Zhao, W., Lian, H. and **Ma, S.** (2017). Robust Reduced-rank Modeling via Rank Regression. *Journal of Statistical Planning and Inference*. 180, 1-12.
15. Guo, W., Liu, Z. and **Ma, S.** (2016). Nonparametric Regularized Regression for Phenotype Associated Taxa Selection and Network Construction with Metagenomic Count Data. *Journal of Computational Biology*. 23(11), 877-890.
16. **Ma, S.** and He, X. (2016). Inference for Single-index Quantile Regression Models with Profile Optimization. *Annals of Statistics*, 44(3), 1234-1268.
17. Chen, T., **Ma, S.**, Kobie, J., Rosenberg, A., Sanz, I. and Liang, H. (2016). Identification of Significant B Cell Associations with Undetected Observations Using a Tobit Model. *Statistics and Its Interface*, 9, 79-91.
18. **Ma, S.** (2016). Estimation and Inference in Functional Single-index Models. *Annals of the Institute of Statistical Mathematics*, 68(1), 181-208.
19. **Ma, S.**, Huang, Z. and Tsai, C.L. (2016). Parameter Estimation for A Generalized Semiparametric Model with Repeated Measurements. *Annals of the Institute of Statistical Mathematics*, 68(4), 725-764
20. **Ma, S.**, Carroll, R., Liang, H. and Xu, S. (2015). Estimation and Inference in Generalized Additive Coefficient Models for Nonlinear Interactions with High-dimensional Covariates. *Annals of Statistics*, 43, 2102-2131.
21. **Ma, S.** and Song, Peter X.K. (2015). Varying Index Coefficient Models. *Journal of American Statistical Association-Theory and Methods*, 110, 341-356.
22. **Ma, S.**, Racine, J. and Yang, L. (2015). Spline Regression in the Presence of Categorical Predictors. *Journal of Applied Econometrics*, 30, 705-717.
23. **Ma, S.** and Xu, S. (2015). Semiparametric Nonlinear Regression for Detecting Gene and Environment Interactions. *Journal of Statistical Planning and Inference*, 156, 31-47.
24. **Ma, S.**, Zhang, J., Sun, Z. and Liang, H. (2014). Integrated Conditional Moment Test for Partial Linear Single Index Models Incorporating Dimension-Reduction. *Electronic Journal of Statistics*, 8, 523-542.
25. **Ma, S.** (2014). A plug-in Number of Knots Selector for Polynomial Spline Regression. *Journal of Nonparametric Statistics*, 26, 489-507.

26. **Ma, S.**, Liang, H. and Tsai, C. L. (2013). Partially Linear Single Index Models for Repeated Measurements. *Journal of Multivariate Analysis*, 130, 354375.
27. **Ma, S.**, Song, Q. and Wang, L. (2013). Simultaneous Variable Selection and Estimation in Semiparametric Modeling of Longitudinal/Clustered Data. *Bernoulli*, 19(1), 252-274.
28. **Ma, S.** and Racine, J. (2013). Additive Regression Splines with Irrelevant Categorical and Continuous Regressors. *Statistica Sinica*, 23(2), 515-541.
29. **Ma, S.** and Yang, L. (2013). Oracally Efficient Two-step Estimation for Additive Regression in *Handbook of Applied Nonparametric and Semiparametric Econometrics and Statistics*, Eds: Ullah, A., Racine, J. and Su, L., Oxford University Press.
30. **Ma, S.** (2012). Two-step Spline Estimating Equations for Generalized Additive Partially Linear Models with Large Cluster Sizes. *Annals of Statistics*, 40(6), 2943-2972.
31. **Ma, S.**, Yang, L. and Carroll, R. (2012). A Simultaneous Confidence Band for Sparse Longitudinal Regression. *Statistica Sinica*, 22(1), 95-122.
32. **Ma, S.**, Yang, L., Romero, R. and Cui, Y. (2011). Varying-coefficient Models for Gene-environment Interaction: A Non-linear Look. *Bioinformatics*, 27(15), 2119-2126.
33. **Ma, S.** and Yang, L. (2011). Spline-backfitted Kernel Smoothing of Partially Linear Additive Model. *Journal of Statistical Planning and Inference*, 141(1), 204-219.
34. **Ma, S.** and Yang, L. (2011). A Jump-detecting Procedure based on Polynomial Spline Estimation. *Journal of Nonparametric Statistics*, 23(1), 67-81.

Editorial Service

- Associate Editor, Journal of Statistical Planning and Inference, 2014-
- Associate Editor, Statistica Sinica, 2017-
- Associate Editor, The American Statistician, 2018-
- Associate Editor, Computational Statistics & Data Analysis, 2018-
- Associate Editor, Journal of Business & Economic Statistics, 2018-

Teaching Experience

- Assistant Professor, Department of Statistics, UC-Riverside

Courses developed

STAT 255 Longitudinal Data Analysis

STAT 201ABC Theory of Probability & Statistics

Courses taught

STAT 155 Probability and Statistics for Science and Engineering Fall 2011, 2012

STAT 205 Discrete Data Analysis Winter 2012

STAT 255 Longitudinal Data Analysis Winter 2013

STAT 171 General Statistical Models Spring 2012, 2013, 2014, 2015

STAT 201ABC Theory of Probability & Statistics 2013, 2014, 2015, 2016, 2017,2018

NASC 93 Freshman Seminar Fall 2015

Presentations

- **Keynote Speaker** The Southern California Chapter of ASA, Azus, California December 2018

- **Seminar Speaker** Department of Applied Mathematics & Statistics, John Hopkins University November 2018
- **Seminar Speaker** ORFE, Princeton University November 2018
- **Topic Contributed Speaker** Joint Statistical Meetings, Vancouver, British Columbia, Canada August 2018
- **Invited Speaker** IMS-APRM 2018, Singapore July 2018
- **Invited Speaker** EcoSta2018, Hong Kong, China June 2018
- **Invited Speaker** The 6th Workshop on Biostatistics and Bioinformatics, Georgia May 2018
- **Invited Speaker** The 10th International Conference on Multiple Comparison Procedures, UC-Riverside June 2017
- **Invited Speaker** The 10th ICSA International Conference, Shanghai, China December 2016
- **Invited Speaker** Workshop for the ASA nonparametric section, University of Michigan October 2016
- **Invited Speaker** Workshop on Higher-Order Asymptotics and Post-Selection Inference, Washington University in St. Louis September 2016
- **Invited Speaker** International Indian Statistical Association Conference, Corvallis, Oregon August 2016
- **Invited Speaker** ICSA Conference on Data Science, Dali, China July 2016
- **Invited Speaker** 25th ICSA Applied Statistics Symposium, Atlanta, Georgia June 2016

- **Seminar Speaker** Department of Economics, University of Southern California April 2016
- **Seminar Speaker** Department of Econometrics and Business Statistics, Monash University, Melbourne, Australia March 2016
- **Invited Speaker** The 8th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK December 2015
- **Seminar Speaker** Department of Biostatistics, University of Washington October 2015
- **Invited Speaker** Workshop on Statistical Methods for Children's Health Research, University of Michigan September 2015
- **Invited Speaker** ICSA Canada Chapter Conference, Calgary, Canada August 2015
- **Invited Speaker** IMS-China International Conference on Statistics and Probability, Kunming, China July 2015
- **Seminar Speaker** Department of Economics, UCR April 2015
- **Invited Speaker** Conference in Honor of Aman Ullah, Riverside, CA March 2015
- **Seminar Speaker** Department of Biostatistics, UCLA October 2014
- **Invited Speaker** Joint Statistical Meetings, Boston, MA August 2014
- **Seminar Speaker** Center for Advanced Statistics & Econometrics Research, Soochow University, China July 2014

- **Invited Speaker** IMS-APRM 2014, Taiwan June 2014
- **Invited Speaker** The Second International Forum on Non/Semi-parametric Statistics 2014, Chengdu, China June 2014
- **Invited Speaker** Plant & Animal Genome XXII, San Diego January 2014
- **Seminar Speaker** Department of Statistics, NC State University January 2014
- **Invited Speaker** The Ninth ICSA International Conference, Hong Kong December 2013
- **Invited Speaker** The Second HKUST International Forum on Probability and Statistics, Hong Kong December 2013
- **Seminar Speaker** School of Management, Fudan University, China December 2013
- **Seminar Speaker** Department of Economics, UC-San Diego December 2013
- **Seminar Speaker** Department of Statistics, Kansas State University October 2013
- **Seminar Speaker** Department of Mathematics, UC-San Diego October 2013
- **Seminar Speaker** Department of Statistics, George Washington University September 2013
- **Seminar Speaker** Department of Statistics, Penn State University September 2013
- **Seminar Speaker** Department of Mathematics, Hong Kong University of Science & Technology, Hong Kong August 2013
- **Seminar Speaker** Department of Statistics and Applied Probability, National University of Singapore, Singapore July 2013
- **Seminar Speaker** School of Mathematics and Statistics, Xi'an Jiaotong University, Xi'an, China July 2013
- **Invited Speaker** 2013 International Forum on Modern Statistics and Econometrics, Wang Yanan Institute for Studies in Economics (WISE), Xiamen University, China July 2013
- **Invited Speaker** The Second Taihu International Statistics Forum, Suzhou, China July 2013
- **Invited Speaker** IMS-China, Chengdu, China June 2013
- **Seminar Speaker** School of Statistics and Management, Shanghai University of Finance and Economics June 2013
- **Seminar Speaker** Department of Economics, UC-Riverside May 2013
- **Invited Speaker** ENAR, Orlando, FL March 2013
- **Seminar Speaker** Department of Mathematics and Statistics, San Diego State University February 2013
- **Invited Speaker** CFE-ERCIM, Spain December 2012
- **Topic Contributed Speaker** Joint Statistical Meetings, San Diego, CA August 2012
- **Poster Presentation** 14th Meeting of New Researchers in Statistics and Probability, San Diego, CA July 2012
- **Invited Speaker** Weierstrass Institute for Applied Analysis and Stochastics (WIAS), Berlin, Germany June 2012
- **Seminar Speaker** Department of Statistics, UC-Los Angeles May 2012

- **Seminar Speaker** Department of Statistics, UC-Santa Babara May 2012
- **Seminar Speaker** Department of Statistics, UC-Riverside March 2012
- **Seminar Speaker** Department of Economics, UC-Riverside October 2011
- **Topic Contributed Speaker** Joint Statistical Meetings, Vancouver, British Columbia, Canada August 2010
- **Invited Speaker** The International Conference on Statistical Analysis of Complex Data, Yunnan, China July 2010
- **Invited Speaker** The Applied Statistics Symposium, International Chinese Statistical Association, Indianapolis, IN June 2010
- **Invited Speaker** The Third Midwest Statistics Research Colloquium, Chicago March 2010
- **Contributed Speaker** Joint Statistical Meetings, Washington, DC August 2009
- **Contributed Speaker** the Applied Statistics Symposium, International Chinese Statistical Association, San Francisco May 2009
- **NSF Supported** poster presentation at the University of Florida Eleventh Annual Winter Workshop on Semiparametric Methodology, Gainesville, FL January 2009

(Updated on June 22, 2018)