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Employment

Associate Professor, Department of Statistics, Texas A&M University, 2019 Sep–present.

Assistant Professor, Department of Statistics, Texas A&M University, 2015 Aug–2019 Aug.

Assistant Professor, Department of Statistics, University of Missouri-Columbia, 2013 Sep–2015 July.

Education

Ph.D. Statistics, University of Illinois at Urbana-Champaign, 2013 Aug.

B.S. Statistics, University of Science and Technology of China, 2008 July.

Publications and Forthcoming Articles

Chen, J., and Zhang, X. (2021) D-MANOVA: Fast Distance-based Multivariate Analysis of Variance for Large-scale Microbiome Association Studies, *Bioinformatics*, forthcoming.

Yi, S., Zhang, X., Yang, L., Huang, J., Liu, Y., Wang, C., Schaid, D., and Chen, J. (2021) 2dFDR: A New Approach to Confounder Adjustment Substantially Increases Detection Power in Omics Association Studies, *Genome Biology*, forthcoming.

Kong, S., Yu, Z., Zhang, X., and Cheng, G. (2021) High Dimensional Robust Inference for Cox Regression Models, *Scandinavian Journal of Statistics*, forthcoming.

Zhou, H., Zhang, X., and Chen, J. (2020) Covariate Adaptive Family-wise Error Rate Control for Genome-Wide Association Studies, *Biometrika*, forthcoming.

Yi, S., and Zhang, X. (2020) Projection-based Inference for High-dimensional Linear Models, *Statistica Sinica*, forthcoming.

Zhang, X., and Chen, J. (2020) Covariate Adaptive False Discovery Rate Control with Applications to Omics-Wide Multiple Testing, *Journal of the American Statistical Association*, forthcoming.

Yun, S., Zhang, X., and Li, B. (2020) Detection of Local Differences in Spatial Characteristics Between Two Spatio-temporal Random Fields, *Journal of the American Statistical Association*, forthcoming.

Zhu, C., Zhang, X., Yao, S., and Shao, X. (2020) Distance-based and RKHS-based Dependence Metrics in High-dimension, *Annals of Statistics*, forthcoming.

Huang, J., Bai, L., Cui, B., Wu, L., Wang, L., An, Z., Ruan, S., Yu, Y., Zhang, X., and Chen. J. (2020) Leveraging Biological and Statistical Covariates Improves the Detection Power in Epigenome-wide Association Testing, *Genome Biology*, **21**: 88.

Lee, C., Zhang, X., and Shao, X. (2020) Testing Conditional Mean Dependence for Functional Data, *Biometrika*, **107**, 331-346.

Chakraborty, S., and Zhang, X. (2019) Distance Metrics for Measuring Joint Dependence with Application to Causal Inference, *Journal of the American Statistical Association*, **114**, 1638-1650.

Kim, S., Cho, H., and Zhang, X. (2019) Initial Severity-dependent Longitudinal Model With Application to a Randomized Controlled Trial of Women with Depression, *Statistics in Medicine*, **38**, 1678-1689.

Xiao, J., Chen, L., Yu, Y., Zhang, X., and Chen, J. (2018) A Phylogeny-regularized Sparse Regression Model for Predictive Modeling of Microbial Community Data, *Frontiers in Microbiology*, **9**, 3112.

Xiao, J., Chen, L., Johnson, S., Zhang, X., and Chen, J. (2018) Predictive Modeling of Microbiome Data Using a Phylogeny-regularized Generalized Linear Mixed Model, *Frontiers in Microbiology*, **9**, 1391.

Yao, S., Zhang, X., and Shao, X. (2018) Testing Mutual Independence in High Dimension via Distance Covariance, *Journal of the Royal Statistical Society Series B*, **80**, 455-480.

Zhang, X., and Cheng, G. (2018) Gaussian Approximation for High Dimensional Vector Under Physical Dependence, *Bernoulli*, **24**, 2640-2675.

Zhang, X., Yao, S., and Shao, X. (2018) Conditional Mean and Quantile Dependence Testing in High Dimension, *Annals of Statistics*, **46**, 219-246.

Zhang, X., and Cheng, G. (2017) Simultaneous Inference for High Dimensional Linear Models, *Journal of the American Statistical Association*, **112**, 757-768.

Zhang, X. (2016) White Noise Testing and Model Diagnostic Checking for Functional Time Series, *Journal of Econometrics*, **194**, 76-95.

Zhang, X. (2016) Fixed-smoothing Asymptotics in the Generalized Empirical Likelihood Estimation Framework, *Journal of Econometrics*, **193**, 123-146.

Zhang, X., and Shao, X. (2016) On the Coverage Bound Problem of Empirical Likelihood Methods for Time Series, *Journal of the Royal Statistical Society Series B*, **78**, 395-421.

Zhang, X., and Shao, X. (2015) Two Sample Inference for the Second-order Property of Temporally Dependent Functional Data, *Bernoulli*, **21**, 909-929.

Zhang, X., and Shao, X. (2014) Fixed-*b* Asymptotics for Blockwise Empirical Likelihood, *Statistica Sinica*, **24**, 1179-1194.

Zhang, X., Li, B., and Shao, X. (2014) Self-normalization for Spatial Data, *Scandinavian Journal of Statistics*, **41**, 311-324.

Zhang, X., and Shao, X. (2013) Fixed-smoothing Asymptotics for Time Series, *Annals of Statistics*, **41**, 1329-1349.

Zhang, X., Shao, X., Hayhoe, K., and Wuebbles, D. J. (2011) Testing the Structural Stability of Temporally Dependent Functional Observations and Application to Climate Projections, *Electronic Journal of Statistics*, **5**, 1765-1796.

Shao, X., and Zhang, X. (2010) Testing for Change Points in Time Series, *Journal of the American Statistical Association*, **105**, 1228-1240.

Selected Conference and Seminar Presentations

Seminar Presentations

Invited Talk, "Two-dimensional False Discovery Rate Control for Powerful Confounder Adjustment in Omics Association Studies". Florida State University, 2021

Invited Talk, "Two-dimensional False Discovery Rate Control for Powerful Confounder Adjustment in Omics Association Studies". University of Illinois at Urbana-Champaign, 2020

Invited Talk, "High-dimensional Change-point Detection Using Generalized Distance Metrics". University of Kentucky, 2020

Invited Talk, "A New Framework for Distance Metrics in High Dimension". East China Normal University, 2020

Invited Talk, "A New Framework for Distance Metrics in High Dimension". Sun Yat-sen University, China, 2019

Invited Talk, "A New Framework for Distance Metrics in High Dimension". University of Illinois at Chicago, 2019 Fall

Invited Talk, "A New Framework for Distance Metrics in High Dimension". Baylor University, 2019 September

Invited Talk, "A New Framework for Distance Metrics in High Dimension". University of South Carolina, 2019 April 25

Invited Talk, "A New Framework for Distance Metrics in High Dimension". Department of Mathematics and Statistics at Washington University in Saint Louis, 2019

Invited Talk, "Distance Metrics for Testing Mutual Independence". Renmin University of China, 2017

Invited Talk, "Distance Metrics for Testing Mutual Independence", Department of Statistics, University of California, Irvine, 2017

Invited Talk, "Bootstrapping High Dimensional Time Series". Department of Statistics, Purdue University, 2015

Conference Presentations

Invited Talk, "High-dimensional Change-point Detection Using Generalized Distance Metrics". ICSA, 2020

Invited Talk, "High-dimensional Change-point Detection Using Generalized Distance Metrics". CM-statistics, 2020

Invited Talk, "A New Framework for Distance Metrics in High Dimension". ICSA, Zhejiang University, 2019

Invited Talk, "A New Framework for Distance Metrics in High Dimension". JSM, 2019

Invited Talk, "A New Framework for Distance Metrics in High Dimension", New England Statistics Symposium, 2019

Invited Talk, "A New Framework for Distance Metrics in High Dimension". Symposium on "Statistics and Data Science: Beyond big, corrupted or missing data", University of California, San Diego, 2019

Invited Talk, "A New Framework for Distance Metrics in High Dimension". International Conference on Big Data and Information Analytics, 2018.

Invited Talk, "Covariate Adaptive Multiple Testing". Qingdao, ICSA conference, 2018

Invited Talk, "Covariate Adaptive Multiple Testing". Hong Kong, EcoSta2018

Invited Talk, "Gaussian Approximation for High Dimensional Vector Under Physical Dependence". ERCIM 2017

Invited Talk, "Conditional Mean and Quantile Dependence Testing in High Dimension". JSM, 2017

Invited Talk, "Distance Metrics for Measuring Joint Dependence With Application to Causal Discovery". IMS-China, Nanning, 2017

Invited Talk, " Distance Metrics for Measuring Joint Dependence With Application to Causal Discovery". Hong Kong, EcoSta2017

"White Noise Testing and Model Diagnostic Checking for Functional Time Series". 26th Annual Meeting of the Midwest Econometrics Group, 2016

Invited Talk, "Conditional Mean and Quantile Dependence Testing in High Dimension". ICSA Applied Statistics Symposium, Atlanta, 2016

"Testing High Dimensional Mean Under Sparsity". Structured Multivariate Data Workshop, College Station, 2016

Invited Talk, "White Noise Testing and Model Diagnostic Checking for Functional Time Series". Joint 24th ICSA Applied Statistics Symposium and 13th Graybill Conference, Fort Collins, 2015

"On the Coverage Bound Problem of Empirical Likelihood Methods for Time Series", Plenary session. NBER-NSF Time Series Conference, Federal Reserve Bank of St. Louis, 2014

Invited Talk, "Fixed-*b* Asymptotics for Blockwise Empirical Likelihood". Joint Statistical Meetings, Boston, 2014

Invited Talk, "Bootstrapping High Dimensional Vector: Interplay Between Dependence and Dimensionality". ICSA and KISS Joint Applied Statistics Symposium, Portland, 2014

Invited Talk, "Bootstrapping High Dimensional Vector: Interplay Between Dependence and Dimensionality". Low-dimensional Structure in High-dimensional Systems Transition Workshop, SAMSI, 2014

Teaching

Texas A&M University

Probability for Statistics (2015 Fall, 2016 Fall, 2017 Fall, 2018 Fall)
Principles of Statistics (2016 Spring, 2017 Spring, 2018 spring)
Distribution theory (2018 Fall, 2019 Fall)
Asymptotic Statistics (2019 Spring, 2020 Spring)
Methods in time series analysis (2020 Spring)

Last updated: July 20, 2021