Cindy L. Yu
Professor
Department of Statistics
Center of Survey Statistics and Methodology
Iowa State University

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(I)   EDUCATION

Ph.D., Statistics	Cornell University, Ithaca, NY	May 2005
M.S., Statistics	Cornell University, Ithaca, NY	May 2002
M.S., Statistics	University of Minnesota, Twin Cities, MN	May 2000
B.S., Mathematics	Sichuan University, China	July 1995

(II)   EMPLOYMENT

Iowa State University appointment

Full Professor	Department of Statistics	2020-present
Associate Professor	Department of Statistics	2012-2020
Assistant Professor	Department of Statistics	2005-2012

Center for Survey Statistics and Methodology, Iowa State University

Affiliated Faculty	2005-present

Other appointment

Quant Analyst	Merrill Lynch, NY	Summer 2001
Teaching Assistant	Cornell University, NY	2000-2005
Teaching Assistant	University of Minnesota, MN	1998-2000

(III) RESEARCH AREAS

Mathematical Finance: modelling jump processes in continuous-time asset pricing models; modelling dynamic stochastic general equilibrium
Survey Statistics: semiparametric quantile regression imputation method under ignorable and non-ignorable missing
Time Series Analyses: Bayesian shrinkage priors used in vector autoregressive models; Bayesian analyses of dynamic factor models in nowcasting
Causal Inference: analyses of multiple treatment effects using observational data from complex survey

(IV) PUBLICATIONS

[alph.] --- alphabetical order following the convention in finance journals
* --- graduate students whom I advised

(a) Referred Journal Publications:

- Li, H., Wells, M. and **Yu, C.** (2008) [*alph.*], A Bayesian Analysis of Time-Changed Levy Processes of Return Dynamics, *Review of Financial Studies*, 21: 2345-2378.

- Chan, N. H., Chen, S., Peng, L. and **Yu, C.** (2009) [*alph.*], Empirical Likelihood Methods Based on Characteristic Functions with Applications to Levy Processes, *Journal of American Statistical Association, Theory and Methods Section,* 104: 1621–1630.

- **Yu, C.** and Legg, J. (2010), A Calibration Experiment in a Longitudinal Survey with Errors-in-Variables, *Journal of Agricultural, Biological and Environmental Statistics,* 15: 139-157**.**

- Legg, J. and **Yu, C.** (2010), A Comparison of Sample Set Restriction Procedures, *Survey Methodology*, 36: 69-79.

- Du, X., Hayes, D. and **Yu, C.** (2010), Dynamics of Biofuel Stock Prices: A Bayesian Approach, *American Journal of Agricultural Economic,* 93 (2): 418–425.

- **Yu, C**., Li, H. and Wells, M. (2011), Estimation of Levy Jump Models Under the Risk Neutral and Physical Measure Using Stock and Option Prices, *Mathematical Finance*, 21, No. 3: 383–422.

- Kim, J. and **Yu, C.** (2011), A semi-parametric estimation of mean functionals with non-ignorable missing data, *Journal of American Statistical Association, Theory and Methods Section*, 106: 157-165.

- Li, W.*****, **Yu, C.**, Carriquiry, A. and Kliemann, W. (2011), The Asymptotic Behavior of the R/S Statistic for Fractional Brownian Motion, *Statistics and Probability Letters*, 81: 83-91.

- Kim, J. and **Yu, C.** (2011), A New Replication Method for Two-phase Stratified Sampling, *Survey Methodology,* 37 (1): 67-74.

- Du, X., **Yu, C.** and Hayes, D. (2011), Speculation and Volatility Spillover in the Crude Oil and Agricultural Commodity Markets: A Bayesian Analysis, *Energy Economics*, 33: 497–503.

- Du, X., Hennessy, D. and **Yu, C.** (2012), Testing Day's Conjecture that More Nitrogen Decreases Crop Yield Skewness, *American Journal of Agricultural Economic,* 94: 225-237.

- Chen, S., Peng, L. and **Yu, C.** (2013), Empirical Likelihood Estimation and Test Based on Conditional Characteristic Function, *Bernoulli*, 19 (1): 228-251.

- Li, H., Li, T. and **Yu, C.** (2013) [***alph.***], No-Arbitrage Taylor Rules with Switching Regimes, *Management Science*, 59 (10): 2278-2294.

- **Yu, C.**, Legg, J. and Liu, B.* (2013), Estimating Multiple Treatment Effects Using Two-phase Regression Estimators, *Electronic Journal of Statistics,* 7 (0): 2737-2761.

- Du, X., **Yu, C.,** Hennessy, D. and Miao R. (2015), Geography of Crop Yield Skewness, *Agricultural Economics,* 46: 1-11.

- Potoski, M., Urbatsch, R., and **Yu, C.** (2015), Temperature Biases in Public Opinion Surveys, *Weather, Climate and Society,* 7:2: 192-196.

- Chen, S.* and **Yu, C.** (2016), Parameter Estimation Through Semiparametric Quantile Regression Imputation, *Electronic Journal of Statistics*, Vol. 10, No. 2: 3621-3647.

- Kou, S., **Yu, C.,** and Zhong, H.* (2017) [***alph.***], Jumps in Equity Returns Before and During the Financial Crisis, *Management Science*, Vol. 63, No. 4: 988-1010.

- Liu, B.*, **Yu, C.**, Price, M.* and Jiang, Y. (2018), Generalized Method of Moments Estimators for Multiple Treatment Effects Using Observational Data from Complex Survey, *Journal of Official Statistics,* Vol. 34, No. 3: 753-784.

- Zhang, Y.*, **Yu, C.,** Li, H. and Hong, Y. (2018), Nowcasting China's Gross Domestic Product Using a Bayesian Approach, *Journal of Management Science and Engineering*, 3(4): 232-258.

- Follett, L.* and **Yu, C.** (2019), Achieving Parsimony in Bayesian VARs with the Horseshoe Prior, *Econometrics and Statistics,* 11: 130-144.

- Berg. E. and **Yu, C.** (2019), Semi-parametric Quantile Regression Imputation for a Complex Survey with Application to the Conservation Effects Assessment Project, *Survey Methodology*, Vol. 45, No. 2: 249-270.

- Li, E., Li, H., Wang, S. and **Yu, C.** (2019) [***alph.***], Macroeconomic Risks and Asset Pricing: Evidence from a Dynamic Stochastic General Equilibrium Model, *Management Science,* Vol. 65, No. 8, 3585–3604.

- Price, M.*, **Yu, C.,** Hennessy, D. and Du, X. (2019), Are Actuarial Crop Insurance Rates Fair? An Analysis Using a Penalized Bivariate B-spline Method, *Journal of the Royal Statistical Society, Series C (Applied Statistics)*, Vol. 68, Part 5, pp. 1207-1232.

- **Yu, C.**, Li, J., Karl, M. and Krueger, T. (2020), Obtaining a Balanced Area Sample for the Bureau of Land Management Rangeland Survey, *Journal of Agricultural, Biological and Environmental Statistics,* Vol. 25, No. 2, 250-275.

- Luo, J.* and **Yu, C.** (2021), Determining Number of Factors in Dynamic Factor Models Contributing to GDP Nowcasting, *Journal of Mathematics*, Vol. 9, No. 22, 2865, https://doi.org/10.3390/math9222865 .

- Zhang, Y.*, **Yu, C.** and Li, H. (2022), Nowcasting GDP Using Dynamic Factor Model with Unknown Number of Factors and Stochastic Volatility: A Bayesian Approach, *Econometrics and Statistics*, Vol. 24, 75-93. https://doi.org/10.1016/j.ecosta.2021.08.009 .

- Stuart, M.* and **Yu, C.** (2022), A Computationally Efficient Method for Selecting a Split Questionnaire Design, *Communications in Statistics - Simulation and Computation*, Vol. 51, No. 5, 2464-2486. https://doi.org/10.1080/03610918.2019.1697819

- Berg, E. and **Yu, C.** (2022), Estimation for Nonignorable Missing Response or Covariate Using Semi-Parametric Quantile Regression Imputation and a Parametric Response Probability Model, *Statistica Sinica* (32), 1611-1631. https://doi.org/10.5705/ss.202020.0053

- Wang, Z*, Zhu, Z and **Yu, C.** (2023), Variable Selection in Macroeconomic Forecasting with Many Predictors, forthcoming *Econometrics and Statistics*. https://doi.org/10.1016/j.ecosta.2023.01.003

- Luo, J.* and **Yu, C.** (2023), The Application of Symbolic Regression on Identifying Implied Volatility Surface, *Journal of Mathematics*, Vol. 11, No. 9, 2108. https://doi.org/10.3390/math11092108

(b) Other Publications:

- **Yu, C.** (2013), Generalized Estimating Equations Second Edition by Hardin, J. and Hilbe, J., *Journal of American Statistical Association,* 108 (504): 1553.

- Pender, J., Kuhns, M., **Yu, C**., Larson, J. and Huck, S. (2023), Linkages Between Rural Community Capitals and Health Care Provision: Findings of a Survey of Small Rural Towns in Three U.S. Regions, *Economic Information Bulletin*, No. 251, USDA, Economic Research Service. https://ers.usda.gov/webdocs/publications/106139/eib-251.pdf?v=2231.4

(c) Articles Under Revision or Review:

- Follett, L.*, Kou, S., and Stuart, M.*, and **Yu, C.** (2023) [*alph.*], Inverse Leverage Effect for Cryptocurrencies and Meme Stocks: a Comprehensive Framework, under revision for *Management Science.* SSRN https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4284817 .

- Li, E., Ma, G.*, Wang, S. and **Yu, C.** (2023) [***alph.***], Fundamental Anomalies, under revision for *Management Science*. SSRN https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3783526 .

- Garman, S. and **Yu, C.** (2023), A Composite Estimator to Combine Bureau of Land Management Rangeland Monitoring Surveys: An Example Comparing Land-Health Between Wyoming's Greater Sage-Grouse Core and NonCore Areas, under revision for *PLOS ONE*.

- Li, H., Li, T. and **Yu, C.** (2023) [***alph.***], Optimal Monetary Policy and Term Structure in a Continuous-Time DSGE Model, submitted to *Journal of Monetary Economics*.

- Stuart, M*, **Yu, C.** and Hennessy, D. (2023), The Impact of Stocks on Correlations of Crop Yields and Prices and on Revenue Insurance Premiums using Semiparametric Quantile Regression, submitted to *Journal of Applied Econometrics.*

(d) <u>Articles in Preparation</u>:

- Causal Inference Under Missing not at Random Assumption Using Quantile Regression Imputation (with Ma, G.* and Wang, Z.)

- Cross-Sectional Analysis of Conditional Stock Returns: Quantile Regression with Machine Learning (with Ma, G.* and Li, H.)

- Improving Hedging Portfolios Using Machine Learning Via Gaussian Process Hyper-parameter Tuning (with Chen, Z.*, Ma, G*. and Li, H.)

- A-Optimal Split Questionnaire Designs for Multivariate Continuous Variables (with Jang, D.* and Zhu, Z.)

- Determining Control Total Acres for Desired Geographies Using Cropland Data Layer (CDL) (with Jang, D* and Zhu, Z.)

(V) GRANT AWARDS

- USDA Natural Resources Conservation Service (NRCS)
  PI, Resource Inventory and Assessment Division. "Development of Point Re-Weighting at Various Scales for National Resource Inventory Grazing Land", $200,000, 2023-2024.
  PI, Resource Inventory and Assessment Division. "Development of Point Re-Weighting at Various Scales for CEAP-Grazing Land project", $250,000, 2022-2023.
  PI, Resource Inventory and Assessment Division. "Development of Point Re-Weighting at Various Scales for CEAP-Grazing Land project", $100,000, 2021-2022.

PI, Resource Inventory and Assessment Division. "Development of Point Re-Weighting at Various Scales for CEAP-Grazing Land project", $100,000, 2020-2021.
PI, Resource Inventory and Assessment Division. "Development of Point Re-Weighting at Various Scales for CEAP-Grazing Land project", $100,000, 2019-2020.

- U.S. Department of the Interior Bureau of Land Management (BLM)
  PI, Bureau of Land Management. "Statistical Support for the BLM Landscape Monitoring Framework", $410,000, 2023-2024.
  PI, Bureau of Land Management. "Statistical Support for the BLM Landscape Monitoring Framework", $385,000, 2022-2023.
  PI, Bureau of Land Management. "Statistical Support for the BLM Landscape Monitoring Framework", $395,000, 2021-2022.
  PI, Bureau of Land Management. "Statistical Support for the BLM Landscape Monitoring Framework", $350,000, 2020-2021.
  PI, Bureau of Land Management. "Statistical Support for the BLM Landscape Monitoring Framework", $1,750,000, 2013-2019.

- USDA Agricultural Research Service (ARS)
  PI, ARS Jornada Experimental Range. "Design, Implementation, Integration, and Analysis for the Bureau of Land Management Landscape Monitoring Framework", $315,000, 2019-2021.

- USDA Natural Resources Conservation Service (NRCS)
  Co-PI, USDA Natural Resources Conservation Service. (PI: Z. Zhu), "Statistical and Survey Methods Support for the National Resources Inventory", $ 6,777,450, 2017-2020. 25% effort.

- National Center for Food and Agricultural Policy
  Co-PI, National Center for Food and Agricultural Policy (PI: Z. Zhu), "Pet Ownership and Demographic Surveys", $361,361, 2016-2018. 30% effort

- USDA Economic Research Service (ERS)
  PI, USDA Economic Research Service. "Survey on Rural Community Wealth and Health Care Provision", $40,000, 2015-2016.

- USDA Natural Resources Conservation Service (NRCS)
  Co-PI, USDA Natural Resources Conservation Service. (PI: Z. Zhu), "Statistical and Survey Methods Support for the National Resources Inventory", $ 9,500,000, 2014-2017. 25% effort.

- USDA Natural Resources Conservation Service (NRCS)
  Co-PI, USDA Natural Resources Conservation Service. (PI: E. Berg), "Statistical and Survey Methods Support for the Conservation Effects Assessment Project", $500,000, 2013-2016. 33% effort.

- USDA Natural Resources Conservation Service (NRCS)
  Co-PI, USDA Natural Resources Conservation Service. (PI: S. Nusser), "Developing Integrated Grazinglands Surveys", $150,000, 2012-2013. 80% effort.

- USDA Natural Resources Conservation Service (NRCS)
  Co-PI, USDA Natural Resources Conservation Service. (PI: Z. Zhu), "Statistical and Survey Methods Support for the National Resources Inventory", $ 8,200,000, 2011-2014. 15% effort.

- USDA National Agricultural Statistics Service (NASS)
  Co-PI, USDA National Agricultural Statistics Service. (PI: J. Kim), "New Approaches for Area Frame Development, Area Sample Design, and Geospatial Data Collection", $1,019,050, 2011-2016. 25% effort.

- USDA Economic Research Service (ERS)
  PI, USDA Economic Research Service. "Effects of Community Assets on Rural Business Development", $689,873, 2010-2015.

- USDA National Agricultural Statistics Service (NASS)
  Co-PI, USDA National Agricultural Statistics Service. (PI: J. Kim), "New Approaches for Area Frame Development, Area Sample Design, and Geospatial Data Collection", $50,000, 2010-2013. 25% effort.

- USDA Natural Resources Conservation Service (NRCS)
  Co-PI, USDA Natural Resources Conservation Service. (PI: S. Nusser), "Statistical and Survey Methods Support for the National Resources Inventory", $15,015,387, 2005-2011. 25% effort.

(VI)   TEACHING EXPERIENCE

- Stat 226: *Introduction to Business Statistics*
  An undergraduate level course on Business Statistics
  – Fall 2005, Fall 2007, Fall 2008, Fall 2012, Spring 2017, Fall 2017, Fall 2019, Spring 2022

- Stat 421 or Stat 473/573: *Survey Sampling Techniques*
  A major undergraduate/nonmajor graduate course on survey sampling designs
  – Spring 2006, Spring 2007, Spring 2009, Spring 2011, Spring 2012, Spring 2013, Spring 2014, Spring 2015, Spring 2019, Spring 2021, Spring 2023

- Stat 521: *Theory and Application of Survey Sampling*
  A graduate level course on the practical aspects and basic theory of design and estimation in sample surveys for finite populations
  – Spring 2008, Spring 2010, Spring 2011

- Stat 401A or Stat 587A (Ag & Vet): *Statistical Methods for Research Workers*

A nonmajor graduate course about applied statistical tools used in Agricultural and Veterinary Science
– Spring 2016, Spring 2017

- Stat 401B or Stat 587B (Social Sciences): *Statistical Methods for Research Workers*
A nonmajor graduate course about applied statistical tools used in Social Sciences
– Spring 2018, Spring 2020

- Stat 690A: *Mathematical Finance: Continuous Time Asset Pricing Models*
A Ph.D. level advanced course on mathematical finance and financial statistics
– Fall 2018, Fall 2020, Spring 2023

(VII) STUDENT ADVISING

(a) <u>Ph.D. Students Whom I have Advised or I am Advising (count: 14)</u>

- Yuyang Li, Statistics, in progress.

- Mingyue Hu, Statistics, in progress.

- Guoliang Ma, Statistics, expected to graduate in July 2023.

- Dae Gyu Jang, Ph.D. in Statistics, 2022. (co-advisor: Z. Zhu)
"Topics on survey statistics, survey designs, and small area estimation"
Current Position: Postdoctoral researcher, University of Michigan.

- Matthew Stuart, Ph.D. in Statistics, 2022.
"Statistical applications in actuarial science: From cryptocurrency to meme stocks to crop insurance"
Current Position: Assistant Professor, Department of Mathematics and Statistics, Loyola University Chicago.

- Zihao Chen, Ph.D. in Statistics, 2022.
"Applications of machine learning in asset pricing, prediction of extreme returns and implied volatility surface"
Current Position: Quantitative Associate, Wells Fargo.

- Jiayi Luo, Ph.D. in Statistics, 2022.
"Nowcasting GDP using Bayesian shrinkage approach and identifying implied volatility surface using symbolic regression"
Current Position: Quantitative Finance Analyst, Citi Bank.

- Zhenzhong Wang, Ph.D. in Statistics, 2020 (co-advisor: Z. Zhu)
"High-dimensional time series analysis and its application in economic forecasting."
Current Position: Research Scientist, Eli Lilly.

- Yixiao Zhang, Ph.D. in Statistics, 2019.
  "Bayesian analyses of dynamic factor models in nowcasting."
  Current Position: Assistant Vice President, Quantitative Finance Analyst, Bank of America.

- Michael Price, Ph.D. in Statistics, 2018.
  "Penalized B-splines and their application with an in-depth look at the bivariate tensor product penalized B-splines."
  Current Position: Mathematical Statistician, USDA Animal and Plant Health Inspection Service, Veterinary Services.

- Lendie Follett, Ph.D. in Statistics, 2016.
  "Bayesian approaches to macroeconomic forecasting."
  Current Position: Assistant Professor, Business Analytics, Drake University.

- Senniang Chen, Ph.D. in Statistics, 2014.
  "Imputation of missing values using quantile regression."
  Current Position: Senior Process Simulation Scientist, Corning Inc.

- Bin Liu, Ph.D. in Statistics, 2013.
  "Estimating multiple treatment effects in two-phase observational data."
  Current Position: Data Mining Specialist, Xiaohongshu.

- Wen Li, Ph.D. in Statistics, 2009. (co-advisor: A. Carriquiry, and W. Kliemann)
  "Memory structures in stochastic finance models."
  Current Position: Principal Research Scientist, Pfizer.

(b) <u>M.S. Students Whom I have Advised or I am Advising (count: 13)</u>

- Lynn Huang, MS in Statistics, expected 2023.
- Yusi Li, MS in Statistics, MS in Statistics, 2021.
- Minsung Jang, MS in Statistics, 2020.
- Guoliang Ma, MS in Statistics, 2020.
- Matthew Stuart, MS in Statistics, 2019.
- Haiyang Zhang, MS in Statistics, 2018.
- Lawrence Hii, MS in Statistics, 2017.
- Michael Price, MS in Statistics, 2014.
- Miguel Carriquiry, MS in Statistics, 2013.
- Derek Watson, MS in Statistics, 2012.
- Senniang Chen, MS in Statistics, 2011.
- Dongyan Wang, MS in Statistics, 2009.
- Reka Howard, MS in Statistics, 2008.

(c) <u>Undergraduate Students (honor program) (count: 2)</u>

- Sarah Ronnkvist (Advised for her honor course component), Graduated in 2019.
- Ji Ju, Statistics (Advised for her honor project), Graduated in 2013.

(d) Ph.D. Committee (count: 29)

- Hyoungji Kim (Ph.D., Mathematics, 2022)
- Ju-Heung Kim (Ph.D., Statistics, 2022)
- Gang Han (Ph.D., Statistics, 2021)
- Feng Zhao (Ph.D., Human Development Family Study, 2020)
- Shaobai Jiang (Ph.D., Economics, 2020)
- Ju Ji (Ph.D., Statistics, 2020)
- Tianyang Zhang (Ph.D., Economics, 2020)
- Hai Jiang (Ph.D., Physics, 2019)
- Manman Qian (Ph.D., English, 2018)
- Linkai Li (Ph.D., Aerospace Engineering, 2018)
- Hejian Sang (Ph.D., Statistics, 2018)
- Yang He (Ph.D., Economics, 2018)
- Samantha Tyner (Ph.D., Statistics, 2017)
- Xiaoguang Feng (Ph.D., Economics, 2017)
- Wenwen Xi (Ph.D., Economics, 2017)
- Chao Li (Ph.D., Economics, 2016)
- Dong Zhang (Ph.D., Human Development Family Study, 2016)
- Huawei Jiang (Ph.D., Electrical Engineering, 2016)
- Lisha Li (Ph.D., Economics, 2015)
- Jongho Im (Ph.D., Statistics, 2015)
- Shan Yang (Ph.D., Statistics, 2014)
- Minsun Riddles (Ph.D., Statistics, 2013)
- Sixia Chen (Ph.D., Statistics, 2012)
- Nicholas Beyler (Ph.D., Statistics, 2010)
- Kanlaya Barr (Ph.D., Economics, 2009)
- Jittinan Aukayanagul (Ph.D., Economics, 2009)
- Lifeng You (Ph.D., Statistics, 2009)
- Xiaodong Du (Ph.D., Economics, 2008)
- Chengyong Tang (Ph.D., Statistics, 2008)
- Lixia Diao, (Ph.D., Statistics, 2008)
- Jennifer Huckett (Ph.D., Statistics, 2008)

(e) Master Committee (count: 21)

- Zhenzhen Chen (MS, Statistics, 2019)
- Steven Harms (MS, Statistics, 2019)
- Xin Zhang (MS, Statistics, 2018)

- Dinesh Poddaturi (MS, Statistics, 2018)
- He Jiang (MS, Statistics, 2018)
- Dong Zhang (MS, Statistics, 2016)
- Min Ren (MS, Statistics, 2016)
- Crystal Peoples (MS, Sociology, 2015)
- Angela Stone (MS, Public Administration, 2015)
- Cheng Peng (MS, Statistics, 2015)
- Yan Huang (MS, Statistics, 2013)
- Ge Wang (MS, Journalism and Mass Communication, 2013)
- Ying Wei (MS, Political Science, 2013)
- Zhenxing Ke (MS, Statistics, 2013)
- Guangyu Liu (MS, Statistics, 2011)
- Cheng Peng (MS, Public Administration, 2011)
- Yan Wang (MS, Statistics, 2010)
- Kim Young (MS, Statistics, 2009)
- Feng Wei (MS, Community and Regional Planning, 2009)
- Yao Chang (MS, Journalism and Mass Communication, 2008)
- Penglai Li (MS, Electrical Engineering, 2006)

(VIII) PRESENTATIONS

(a) Invited Presentations

- "Marginal Treatment Effect Estimation Without Ignorability Using Observational Study", Invited Talk, ICSA Applied Statistics Symposium, Chengdu, China, June 2023.

- "Marginal Treatment Effect Estimation Without Ignorability Using Observational Study", Invited Talk, JSM, Toronto, August 2023.

- "Conditional Return Distributions: Quantile Regression with Machine Learning", Invited Talk, The 5th International Conference on Econometrics and Statistics (EcoSta 2022), Kyoto, Japan, June 2022.

- "Asymmetric Laplace jumps in returns on cryptocurrencies", Invited Talk, 14th International Conference of Computational and Financial Econometrics, Virtual, December 2020.

- "Computation Efficiency for a Split Questionnaire Design", Invited Seminar, Westat, Rockville, MD, August 2019.

- "Quantile Regression Imputation with Missing Covariates and Response Under Non-ignorable Missing", Departmental Seminar, Department of Statistics, Oregon State University, April 2019.

- "Achieving Parsimony in Bayesian VARs using the Horseshoe Prior", The 2nd International Conference on Econometrics and Statistics (EcoSta 2018), City University of Hong Kong, June 2018.

- "Achieving Parsimony in Bayesian VARs using the Horseshoe Prior", 2018 Kansas Econometrics Workshop at the University of Kansas, Lawrence, Kansa, April 2018.

- "Semi-parametric Quantile Regression Imputation for a Complex Survey with Application to the Conservation Effects Assessment Project", Departmental Seminar, Department of Statistics, University of Wisconsin-Madison, Madison, March 2018.

- "Semi-parametric Quantile Regression Imputation for a Complex Survey with Application to the Conservation Effects Assessment Project", Departmental Seminar, Department of Statistics, Purdue University, West Lafayette, Indiana, March 2018.

- "Nowcasting GDP Using Dynamic Factor Models", Annual Symposium on Modern Statistics (invited guest speaker), Xiamen University, China, 2017.

- "Achieving Parsimony in Bayesian VARs using the Horseshoe Prior", 2017 IMS-China International Conference on Statistics and Probability, 2017, Nanning, China.

- "Parameter Estimation through Semiparametric Quantile Regression Imputation", Departmental Seminar, Department of Mathematics, University of South Dakota, 2017.

- "A New Approach of Spatially Balanced Design in Area Sampling", 2015 Federal Committee on Statistical Methodology (FCSM) Research Conference, Washington DC, 2015.

- "Quantile Regression Imputation Implemented in Complex Survey Data", ICSA/Graybill Conference, 2015, Fort Collins, Colorado.

- "Generalized Method of Moments Estimator Based On Semiparametric Quantile Regression Imputation", ICSA Applied Statistics Symposium, Portland, Oregon, 2014.

- "Statistical Modelling in ART", Producer School, Holmes Murphy, Des Moines, 2014.

- "Generalized Method of Moments Estimator Based On Semiparametric Quantile Regression Imputation", IMS Annual Meeting, Sydney, Australia, 2014.

- Sampling and Estimation of the Bureau of Land Management Rangeland Health Survey", 23rd Annual Conference of the International Enviornmentrics Society", Anchorage, Alaska, 2013.

- "Estimating Multiple Treatment Effects Using Two-phase Regression Estimators", Fifth International Conference on Statistics and Society at Renmin University, Beijing, China, 2012.

- "Estimating Multiple Treatment Effects Using Two-phase Regression Estimators", ICSA Applied Statistics Symposium, Boston, MA, 2012.

- "A Measurement Study in a Longitudinal Survey with Errors-in-Variables", TIES Third North American Regional Meeting, La Crosse, WI, 2011.

- "A semi-parametric estimation of mean functionals with non-ignorable missing data", The Eighth ICSA International Conference: Frontiers of Interdisciplinary and Methodological Statistical Research, Guangzhou, China, 2010.

- "A semi-parametric estimation of mean functionals with non-ignorable missing data", Joint Statistical Meeting, Vancouver, Canada, 2010.

- "Empirical Likelihood Estimation and Test Based on Conditional Characteristic Function", 2009 international conference on statistical finance and econometrics, Chengdu, China, 2009.

- "Return Dynamics with Levy Jumps: Evidence from Stock and Option Prices", 2009 ICSA applied statistics symposium, San Francisco, CA, 2009.

- "Return Dynamics with Levy Jumps: Evidence from Stock and Option Prices", Department of Statistics and Actuarial Science, University of Iowa, Iowa City, IA, 2009.

- "Protocol Calibration in the National Resources Inventory", 2007 Federal Committee on Statistical Methodology Research Conference, Arlington, VA, 2007.

- "A Joint Analysis of Return Dynamics with Levy Jumps Using Stock and Option Prices", 17th Annual Derivatives, Securities and Risk Management Conference, Arlington, VA, 2007.

- "A Bayesian Analysis of Time-Changed Levy Processes of Return Dynamics", Seminar on Bayesian Inference in Econometrics and Statistics, Iowa City, IA, 2006.

- "A Joint Analysis of Return Dynamics with Levy Jumps Using Stock and Option Prices", Department of Statistics, Iowa State University, Ames, IA, 2005.

- "A Joint Analysis of Return Dynamics with Levy Jumps Using Stock and Option Prices", School of Business, Virginia Common Wealth University, Richmond, VA, 2005.

- "A Joint Analysis of Return Dynamics with Levy Jumps Using Stock and Option Prices", School of Business, The Hong Kong University of Science & Technology, HongKong, China, 2005.

(b) Contributed Presentations

- "Achieving Parsimony in Bayesian VARs using the Horseshoe Prior", the third China Meeting of the Econometric Society, Chengdu, China, 2016.

- "Generalized Method of Moments Estimator Based On Semiparametric Quantile Regression Imputation", the 60th ISI World Congress, Rio de janeiro, Brazil, 2015.

- "Imputation of Missing Data Based On Quantile Regressions", International Chinese Statistical Association, Bethesda, MD, 2013.

- "Estimating Multiple Treatment Effects Using Two-phase Regression Estimators", International Chinese Statistical Association, NYC, NY, 2011.

- "Protocol Calibration in the National Resources Inventory", 2008 Joint Statistical Meeting, Denver, Colorado, 2008.

- "Empirical Likelihood Estimation and Test Based on Conditional Characteristic Function", 2008 ICSA Applied Statistics Symposium, Piscataway, New Jersey, 2008.

- "Estimation of Levy Jump Models Under the Risk Neutral and Physical Measure Using Stock and Option Prices", IMS/CSPS Joint Meeting, Beijing, China, 2005.

- "Estimation of Levy Jump Models Under the Risk Neutral and Physical Measure Using Stock and Option Prices", Financial Engineering Workshop, Cornell University, Ithaca, NY, 2004.

- "A Bayesian Analysis of Time-Changed Levy Processes of Return Dynamics", 2004 IMS Annual Metting/6th Bernoulli Congress, Barcelona, Spain, 2004.

- "A Bayesian Analysis of Time-Changed Levy Processes of Return Dynamics", ICSA Annual Applied Statistics Symposium, San Diego, CA, 2004.

- "A Bayesian Analysis of Time-Changed Levy Processes of Return Dynamics", CIRANO-CIREQ Financial Econometrics, Montreal, Canada, 2004.

- "A Bayesian Analysis of Time-Changed Levy Processes of Return Dynamics", Department of Statistical Science Seminar, Cornell University, Ithaca, NY, 2004.

(IX)   CONSULTING EXPERIENCE

(a) Statistical Consulting for National Agencies

- Bureau of Land Management:
  o Provided statistical support and consulting to BLM rangeland surveys to assess trends and status of health conditions on BLM rangeland. Tasks included how to design sampling using NRI foundation segments as frames, weighting, estimation, and final estimation.

- o Developed a new approach for area frame sampling for BLM rangeland study, and a statistical method for integrating multiple surveys data.

- Natural Resources Conservation Service:
  - o NRI grazing land surveys. Provided statistical support for NRI rangeland and pastureland surveys to assess trends and status of health conditions on nonfederal grazing lands. Tasks included weighting, combing multiple year data and statistical inferences.
  - o Developed a new sampling design to achieve spatial balance in the NRI grazing land survey samples, a statistical method for integrating rangeland surveys across federal and nonfederal lands in US.
  - o NRI measurement study. Developed a statistical approach to examine the effects of image change from film to digital. Tasks included sampling, experimental design and statistical analyses.
  - o NRI Puerto Rico and Hawaii masher study. Conducted a statistical analysis to assess the change between the new data collection protocol and the old one in Puerto Rico and Hawaii.
  - o NRI generalized lease square estimate study. Explored the difference in efficiency between two options of co-variance matrixes. Tasks included computing panel weights, control totals and ratio adjustments to the weights.
  - o NRI calibration study. Provided statistical consulting to study the effect of changing survey modes due to technology advancements in NRI survey. Tasks included designing sampling, randomization of data collectors' assignments, and statistical analyses.

- Economic Research Service:
  - o Provided statistical support and consulting to ERS's rural business survey to assess effects of community assets on rural business development. Tasks included helping design the study, selecting communities and respondents, building statistical model and analyzing data to make correct inference about the population.

- National Agricultural Statistics Service:
  - o Provided statistical support and consulting to help NASS modernize sampling and estimation processes in their June Agricultural survey. Tasks included developing an approach to adjust the bias in the farm service agency estimate, combining it with the June agricultural survey estimates, and expanding the farm service agency data to represent the universe of agricultural land.

- National Center for Food and Agricultural Policy:
  - o Provided statistical support and consulting to the American Veterinary Medical Association on pet demographic survey and related research survey. Tasks included designing and carrying out a national survey, weighting and performing statistical analyses.

(b) <u>Statistical Consulting at University Level and Community level</u>
- ISU Daily Readership Survey:

- o   Helped designing the sampling, data collection and weight calculation, missing data adjustment in the survey to help ISU Daily evaluate and improve its new coverage and advertising patterns in printed newspaper and online edition.

- ISU Faculty Activity Survey (three times)
  - o   Helped selecting samples, providing weights, estimating parameters and constructing statistical inference in the survey to estimate the average number of hours worked per hour by ISU faculty.

- CyRide Survey
  - o   Helped CyRide Transit meet reporting requirements established by the US department of Transportation. Tasks included evaluating a sample size calculation to achieve the precision specified by Federal Transit Administration, finding a handful of errors and suggesting corrections.

- ISU Student Health Assessment
  - o   Helped Thielen Student Health Center at ISU to obtain weighted estimates for responses by ISU students to the 2007 National College Health Assessment survey. Tasks included imputing missing gender values, creating weights, providing statistical consultation to Health Center staff on SAS output and future survey designs.

- ISU STATCOM – Ames Public Library Survey
  - o   Helped students from Statistics in the Community (STATCOM) to conduct a survey for Ames Public Library survey. Tasks included advising students to design sampling according to time slots within days, weeks and months of the year, and do estimation afterwards.

- ISU Vet Med Survey – Bovine Viral Diarrhea (BVD) Cow Disease
  - o   Helped a telephone survey with veterinarians and cattle producers in 2007 focusing on cattle diagnosed with BVD virus. Tasks included developing a stratified two-stage cluster sampling design and sample size determination after taking into account the intra-cluster correlation.

- Center for Industrial Research and Service (CIRAS) Bio-Product Survey
  - o   Helped a telephone survey of manufacturers and distributors of bio-based products in 2010. Tasks included providing consulting to a CIRAS industrial specialist on the sampling frame, the design and the final data analysis

- Center for Industrial Research and Service (CIRAS) Bio-Product Index Pilot Survey
  - o   Provided data collection services for a pilot study being conducted for CIRAS to test the development of an index that would provide benchmark data on the bio-based industry. Tasks included providing consulting to help sampling design, analyses of data, and giving recommendations in the final report to USDA.

- ISU Political Science Professors

o Helped two professors from department of political science at ISU on some public opinion surveys about global warming issue. Tasks included proposing and implementing a way to adjust biases in their estimates caused by temperature, gender and age effects.

- Holmes Murphy ART Assessment
  o Helped Holmes Murphy company in Des Moines to develop a methodology to estimate the relationship between their several key risk indicators with their loss in dollar value.

- American Pop Corn Panel Survey
  o Helped a popcorn consumer survey, and provided statistical analysis for another consumer perception survey with respect to two popcorn flavors.

- ISU Parks Library
  o Helped students from Statistics in the Community (STATCOM) to conduct a survey for ISU Parks Library survey. Tasks included advising students to design sampling, and to do estimation afterwards.

(X)   HONORS & AWARDS

- Laha Award (2004). Institute of Mathematical Statistics
- Best Student Paper Award (2004), International Chinese Statistical Association
- Graduate School Fellowship (2003, 2004), Cornell University.

(XI)   SERVICES

(a) Departmental Committees (Statistics) or University Committees

- Seminar Chair: 2012 Fall, 2016 Fall, 2019 Spring
- Ph.D. & M.S. Prelim Exam Committee: 2009 question writer, 2010-2011 member, 2012 question writer, 2014 question writer, 2016 question writer, 2017 question writer, 2018 question writer, 2019 member, 2020 member
- Reading Room Committee: 2007-2008 member, 2008-2010 chair
- Social Committee: 2006-2007 chair
- Admission Committee: 2006-2007 member, 2015-2016 member, 2016-2017 member, 2017-2018 member
- Diversity Committee: 2005-2007 and 2009-2011 member, 2007-2008 and 2012-2013 chair
- Snedecor Remodeling Committee: 2007-2009 member
- Faculty Search Committee
  o Stat Chair Search Committee, 2012-2013 member, 2013-2014 member
  o Stat-Math Joint Position Search Committee, 2013-2014 member
  o Stat Applied Probability Search Committee, 2014-2015 member
  o Stat-CSAFE Position Search Committee, 2016-2017 member
  o Stat-Data Science Position Search Committee, 2019-2020 member
- Honors & Awards Committee: 2014-2015 member, 2022-2023 member
- Adviser for STATCOM: 2012-2016

- Adviser for STAT-ers: 2017-2020
- Curriculum Committee: 2020-2021 member
- Diane Brandt Scholarship Nomination Evaluation, ISU Graduate College: 2016, 2017, 2018
- Distinguished Lectures Committee: 2021-2023 chair
- 75th Anniversary Celebration Committee: 2021-2023 member
- Undergraduate Recruitment Committee: 2021-2022 member

(b) <u>Committee of Professional Statistical Organizations</u>

- ASA Survey Review Committee Member: 2020 - present
- ASA Student Travel Award Committee (Business and Economics Session): 2015 – 2019
- ASA Publication Officer (Business and Economic Statistics Section): January of 2014 – December of 2016
- JASA/TAS Review Associate Editor: January of 2013 – January of 2014
- ASA Edward C. Bryant Scholarship Committee: January of 2012 – December of 2014
- Open Statistics Journal Associate Editor: January of 2022 - Present

(c) <u>Conference Organization</u>

- Session Chair, Invited Session on Survey Statistics, Conference Celebrating the 75th anniversary of the Statistical Laboratory, Department of Statistics and Statistical Laboratory, Iowa Stat University, Ames IA (June 2009).
- Session Chair, Invited Session on Financial Statistics, International Chinese Statistical Association Applied Symposium, Piscataway, New Jersey (June 2008).

(d) <u>Refereeing for Journals</u>

- Journal of the American Statistical Association
- Journal of Financial Econometrics
- Survey Methodology
- Annals of Applied Statistics
- Journal of Official Statistics
- Australian and New Zealand Journal of Statistics
- Statistical Science
- Statistica Sinica
- Statistics and Its Inference
- Statistics and Probability Letters
- Mathematical Finance
- Journal of Nonparametric Statistics

(e) <u>Refereeing for Grant Panel</u>

- Invited External Reviewer for the Research Fellow Scheme and Senior Research Fellow Scheme of the Research Grants Council: Social Sciences and Business Studies Selection Panel, April of 2021.
- Invited NSF Panel Review (external expert): Social and Economic Sciences - Methodology, Measurement, and Statistics, May of 2015.
- Invited NSF Panel Review (external expert): Social and Economic Sciences - Methodology, Measurement, and Statistics, December of 2013.
- Invited NSF Panel Review (external expert): Social and Economic Sciences - Methodology, Measurement, and Statistics, December of 2012.
- Invited NSF Panel Review: Social and Economic Sciences - Methodology, Measurement, and Statistics, December of 2010.

(f) Membership in Professional Organization

- American Statistical Association
- Institute of Mathematical Statistics
- International Chinese Statistical Association

(g) Synergistic Activities

- Faculty adviser of undergraduate honor program, mentoring two Statistics undergraduate female students for their honor programs, June 2012 – May 2013, January 2019 – May 2019.
- Faculty mentor for the Research Experiences for Undergraduates (REU) program sponsored by the NSF, organized by the Mathematics and Statistics Department of Iowa State University, Summer of 2009.