Zijian Guo

CONTACT INFORMATION

Department of Statistics,
Rutgers University,
Piscataway, NJ 08854

(848)445-2690
zijguo@stat.rutgers.edu
`http://statistics.rutgers.edu/home/zijguo/`

EDUCATION

Ph.D. Statistics, Wharton School, University of Pennsylvania   2017
Thesis advisor: T. Tony Cai
"Statistical Inference For High-Dimensional Linear Models"

B.S. Mathematics, The Chinese University of Hong Kong   2012
First Class Honor

POSITIONS

Associate Professor (with tenure)   July 2022- present
Department of Statistics
Rutgers, the State University of New Jersey

Assistant Professor   Sep 2017- June 2022
Department of Statistics
Rutgers, the State University of New Jersey

VISITING POSITIONS

Invited Research Fellow   Sep 2019
The Chan School of Public Health, Harvard University
Host: Tianxi Cai

Invited Research Fellow   Nov 2018
Forschungsinstitut für Mathematik, ETH, Zürich
Host: Peter Bühlmann

Invited Research Fellow   Aug 2017
Perelman School of Medicine, Upenn
Host: Hongzhe Li

RESEARCH INTERESTS

High-dimensional statistical inference, causal inference, nonstandard inference, multi-source and semisupervised learning, and applications to genetics and health studies.

1. Uncertainty quantification for high-dimensional models
2. Causal inference with instrumental variables
3. Machine learning for statistical tasks
4. Transfer learning and distributionally robust learning
5. Nonstandard inference with sampling methods
6. Mediation analysis
7. Semisupervised inference

HONORS AND AWARDS

- Honorary mention for Bernoulli Society New Researcher Award 2023   Nov. 2022
- ICSA New Researcher Award, ICSA 2019   Dec. 2019
- IMS travel Award, JSM   Aug. 2017
- President Gutmann Leadership Award, University of Pennsylvania   Apr. 2017
- J. Parker Bursk Prize   Sept. 2016
  Awarded by the Statistics Department at the Wharton School
  for excellence in research.
- Statistics in Epidemiology Young Investigator Award, JSM   Aug. 2013

1

Awarded by the American Statistical Association section on Statistics in Epidemiology.

- Dr. Chao Yong Chi-hsing Scholarship in Mathematics, CUHK   2011
- Chung Chi Ivy League Exchange Scholarship, CUHK   2010
- Dean's List, College of Arts and Science, University of Pennsylvania   2010
- Dean's Honors List, Faculty of Science, CUHK   2008, 2009
- Honors at Entrance to the Chinese University of Hong Kong (4 years)   2008

REPRESENTATIVE WORK

* indicates alphabetical ordering authorship;

(R1) *Cai, T. T., and **Guo, Z.** (2017). Confidence intervals for high-dimensional linear regression: Minimax rates and adaptivity. *Annals of Statistics*, 45(2), 615-646.

(R2) **Guo, Z.**, Kang, H., Cai, T. T., and Small, D. S. (2018). Confidence Interval for Causal Effects with Invalid Instruments using Two-Stage Hard Thresholding. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 80(4), 793-815.

(R3) **Guo, Z.**, Ćevid, D., and Bühlmann, P. (2022). Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding. *Annals of Statistics*, 50 (3), 1320 - 1347.

(R4) **Guo, Z.** (2020). Statistical Inference for Maximin Effects: Identifying Stable Associations across Multiple Studies. *arXiv preprint arXiv:2011.07568*. Minor Revision at *Journal of the American Statistical Association*.

(R5) **Guo, Z.** (2021). Causal Inference with Invalid Instruments: Post-selection Problems and A Solution Using Searching and Sampling. *arXiv preprint arXiv:2104.06911. Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, to appear.

(R6) **Guo, Z.** and Bühlmann, P. (2022). Two Stage Curvature Identification with Machine Learning: Causal Inference with Possibly Invalid Instrumental Variables. *arXiv preprint arXiv:2203.12808*.

(R7) **Guo, Z.**, Li, X., Han, L., and Cai, Tianxi. (2023). Robust Inference for Federated Meta-Learning. *arXiv preprint arXiv:2301.00718*.

PREPRINTS

* indicates alphabetical ordering authorship; underline indicates supervised students; ✉ indicates the co-corresponding authorship

1. **Guo, Z.**, Li, X., Han, L., and Cai, Tianxi. (2023). Robust Inference for Federated Meta-Learning. *arXiv preprint arXiv:2301.00718*.

2. Carl, D., Emmenegger, C., Bühlmann, B., **Guo, Z.** (2023). TSCI: Two Stage Curvature Identification for Causal Inference with Invalid Instruments. *arXiv preprint arXiv:2304.00513*.

3. Yao, M., **Guo, Z.** ✉, and Liu, Z ✉. (2023). Selecting Valid Genetic Instruments and Constructing Robust Confidence Intervals for Two-sample Mendelian Randomization Using Genome-wide Summary Statistics. *medRxiv, 2023.02. 20.23286200*.

4. Liu, Y., Liu, M., **Guo, Z.**, and Cai, Tianxi. (2023). Surrogate-Assisted Federated Learning of high dimensional Electronic Health Record Data. *arXiv preprint arXiv:2302.04970*.

5. Cai, T. T., **Guo, Z.**, and Xia, Y. (2023). Statistical Inference and Large-scale Multiple Testing for High-dimensional Regression Models. *arXiv preprint arXiv:2301.10392*.

6. Koo, T., Lee, Y., Small, D. S., and **Guo, Z.** (2023). RobustIV and controlfunctionIV: Causal Inference for Linear and Nonlinear Models with Invalid Instrumental Variables. *arXiv preprint arXiv:2301.04412*.

7. **Guo, Z.** and Bühlmann, P. (2022). Two Stage Curvature Identification with Machine Learning: Causal Inference with Possibly Invalid Instrumental Variables. *arXiv preprint arXiv:2203.12808*.

8. *Fan, Q., **Guo, Z.**, Mei, Z. (2022). Testing Overidentifying Restrictions with High-Dimensional Data and Heteroskedasticity. *arXiv preprint arXiv:2205.00171*. Reject and Resubmit at *Journal of Econometrics*.

9. Hou, J., **Guo, Z.**, Cai, Tianxi (2021). Surrogate Assisted Semi-supervised Inference for High Dimensional Risk Prediction. *arXiv preprint arXiv:2105.01264*. Reject and Resubmit at *Journal of Machine Learning Research*.

10. Rakshit, P., Wang, Z., Cai, T. T., and **Guo, Z.** (2021). `SIHR`: An R Package for Statistical Inference in High-dimensional Linear and Logistic Regression Models. arXiv preprint arXiv:2109.03365.

11. **Guo, Z.** (2020). Statistical Inference for Maximin Effects: Identifying Stable Associations across Multiple Studies. *arXiv preprint arXiv:2011.07568*. Minor Revision at *Journal of the American Statistical Association*.

12. Li, S., and **Guo, Z.** (2020). Causal Inference for Nonlinear Outcome Models with Possibly Invalid Instrumental Variables. *arXiv preprint arXiv:2010.09922*. Major Revision at *Journal of Econometrics*.

13. ****Guo, Z.**, Yuan, W. and Zhang, C. (2019). Decorrelated Local Linear Estimator: Inference for Non-linear Effects in High-dimensional Additive Models. *arXiv preprint arXiv:1907.12732*.

PUBLICATIONS   * indicates alphabetical ordering authorship; underline indicates the supervised students; ✉ indicates the co-corresponding authorship.

1. **Guo, Z.** (2021). Causal Inference with Invalid Instruments: Post-selection Problems and A Solution Using Searching and Sampling. *arXiv preprint arXiv:2104.06911. Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, to appear.

2. Ma, R., **Guo, Z.**, Cai, T. T., and Li, H. (2020). Statistical Inference of Genetic Relatedness using High-Dimensional Logistic Regression. To appear in *Statistica Sinica*. *arXiv preprint arXiv:2202.10007*.

3. Wang, X., Zhou, H., · · ·, 4CE, Avillach, P.✉, **Guo, Z.**✉, and Cai, Tianxi✉. (2022) Surv-Maximin: Robust Federated Approach to Transporting Survival Risk Prediction Models. To appear in *Journal of Biomedical Informatics*. medRxiv 2022.02.03.22270410.

4. **Guo, Z.**, Ćevid, D., and Bühlmann, P. (2022). Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding. *Annals of Statistics*, 50 (3), 1320 - 1347. arXiv preprint arXiv:2004.03758.

5. *Cai, T. T., **Guo, Z.**, and Ma, R. (2021+). Statistical Inference for High-Dimensional Generalized Linear Models with Binary Outcomes. To appear in *Journal of the American Statistical Association*.

6. ****Guo, Z.** and Zhang, C. (2022). Extreme Nonlinear Correlation for Multiple Random Variables and Stochastic Processes with Applications to Additive Models. To appear in *Stochastic Processes and their Applications*. 150, 1037-1058. arXiv preprint arXiv:1904.12897.

7. **Guo, Z.**, Renaux, C., Bühlmann, P., and Cai, T. T. (2021). Group Inference in High Dimensions with Applications to Hierarchical Testing. *Electronic Journal of Statistics*, 15(2), 6633-6676. arXiv preprint arXiv:1909.01503.

8. **Guo, Z.**, Rakshit, P., Herman, D., and Chen, J. (2021). Inference for Case Probability in High-dimensional Logistic Regression. *Journal of Machine Learning Research*,

22(254), 1-54. arXiv preprint arXiv:2012.07133.

9. *Cai, Tianxi, Cai, T. T., and **Guo, Z.** (2021). Optimal Statistical Inference for Individualized Treatment Effects in High-dimensional Models. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 83(4), 669-719. arXiv preprint arXiv:1904.12891.

10. *Cai, T. T., and **Guo, Z.** (2020). Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 82(2), 391-419. arXiv preprint arXiv:1806.06179.

11. **Guo, Z.**, Wang, W., Cai, T. T., and Li, H. (2019). Optimal Estimation of Genetic Relatedness in High-dimensional Linear Models. *Journal of the American Statistical Association*, 114(525), 358-369. arXiv preprint arXiv:1605.07244.

12. **Guo, Z.**, Kang, H., Cai, T. T., and Small, D. S. (2018). Testing Endogeneity with High Dimensional Covariates. *The Journal of Econometrics*, 207(1), 175-187. arXiv preprint arXiv:1609.06713.

13. **Guo, Z.**, Kang, H., Cai, T. T., and Small, D. S. (2018). Confidence Interval for Causal Effects with Invalid Instruments using Two-Stage Hard Thresholding. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 80(4), 793-815. arXiv preprint arXiv:1603.05224.

14. *Cai, T. T., and **Guo, Z.** (2018). Accuracy assessment for high-dimensional linear regression. *Annals of Statistics*, 46(4), 1807-1836. arXiv preprint arXiv:1603.03474.

15. **Guo, Z.**, Small, D. S., Gansky, S. A., and Cheng, J. (2018). Mediation analysis for count and zero-inflated count data without sequential ignorability and its application in dental studies. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, 67(2), 371-394.

16. Cheng, J., Cheng N. F., **Guo, Z.**, Gregorich, S., Amid I. I., and Gansky, S. A. (2018). Mediation analysis for count and zero-inflated count data. *Statistical Methods in Medical Research*, 27(9), 2756-2774. arXiv preprint arXiv:1601.06294.

17. *Cai, T. T., and **Guo, Z.** (2017). Confidence intervals for high-dimensional linear regression: Minimax rates and adaptivity. *Annals of Statistics*, 45(2), 615-646. arXiv preprint arXiv:1506.05539.

18. **Guo, Z.**, and Small, D. S. (2016). Control function instrumental variable estimation of nonlinear causal effect models. *Journal of Machine Learning Research*, 17(100), 1-35. arXiv preprint arXiv:1602.01051.

19. **Guo, Z.**, Cheng, J., Lorch, S. A., and Small, D. S. (2014). Using an instrumental variable to test for unmeasured confounding. *Statistics in Medicine*, 33(20), 3528-3546. arXiv preprint arXiv:1601.06288.

20. **Guo, Z.**, Kogan, R., Qiu, H., and Strichartz, R. S. (2014). Boundary value problems for a family of domains in the Sierpinski gasket. *Illinois Journal of Mathematics*, 58(2), 497-519. arXiv preprint arXiv:1310.6463.

GRANTS

1. National Institute of Health
   R01LM013614 "Semi-supervised Approaches to Denoising Electronic Health Records Data for Risk Prediction"

   - Role: Co-Principal Investigator (PI: Dr. Tianxi Cai)
   - Period: Aug 2021 to Aug 2025.

2. National Institute of Health
   R01GM140463 "Predictive Modeling with High-Dimensional Incomplete Data."

- Role: Principal Investigator

- Period: July 2020 to June 2023.

3. National Science Foundation
DMS 2015373 "Repro Sampling Method: A Transformative Artificial-Sample-Based Inferential Framework with Applications to Discrete Parameter, High-Dimensional Data, and Rare Events Inferences."

   - Role: Co-Principal Investigator (PI: Dr. Min-ge Xie)

   - Period: July 2020 to June 2023.

4. National Science Foundation
DMS 1811857 "Inference in High-Dimensional Linear Models: Methods, Theory and Applications."

   - Role: Principal Investigator

   - Period: Aug 2018 to Aug 2021.

5. National Institute of Health
R56-HL-138306-01 "Statistics Methods for Analyzing Electronic Health Record Data."

   - Role: Co-Investigator (PI: Dr. Jinbo Chen)

   - Period: June 2018 to Aug 2018.

6. University of Pennsylvania Medical School
"Statistics Methods for Analyzing Electronic Health Record Data."

   - Role: Senior Investigator (PI: Dr. Jinbo Chen)

   - Period: June 2019.

SOFTWARE

1. R package **SIHR**: statistical inference in high-dimensional regression. Available at `https://cran.r-project.org/web/packages/SIHR/index.html`

2. R package **RobustIV**: robust causal inference with Possibly Invalid Instruments. Available at `https://cran.r-project.org/web/packages/RobustIV/index.html`

3. R package **TSCI**: two stage curvature identification with machine learning. Available at `https://cran.r-project.org/web/packages/TSCI/index.html`

4. R package **maczic**: mediation analysis for count and zero-inflated count data. Available at `https://cran.r-project.org/web/packages/maczic/index.html`.

5. R package **MaximinInfer**: inference for maximin effects in high-dimensional settings. Available at `https://cran.r-project.org/web/packages/MaximinInfer/index.html`

6. R package **DLL**: inference for function derivative in high-dimensional additive models. Available at `https://cran.r-project.org/web/packages/DLL/index.html`

7. R package **DDL**: inference for regression parameters in high-dimensional models with hidden confounders. Available at `https://cran.r-project.org/web/packages/DDL/index.html`

8. R package **controlfunctionIV**: control function method with possibly invalid instruments. Available at `https://cran.r-project.org/web/packages/controlfunctionIV/index.html`

R codes are available at `https://github.com/zijguo`.

Course Instructor

- **Rutgers University (Ph.D. level)**

STAT 594: Advanced Modern Statistical Inference II	Spring 2019

Instructor Rating: 4.82 out of 5.0

- **Rutgers University (Master level)**

FSRM 588: Financial Data Mining	Fall 2021

Instructor Rating: 4.75 out of 5.0

FSRM 588: Financial Data Mining (Virtual)	Spring 2021
FSRM 588: Financial Data Mining	Spring 2020

Instructor Rating: 4.50 out of 5.0

FSRM 588: Financial Data Mining	Fall 2019

Instructor Rating: 4.75 out of 5.0

FSRM 588: Financial Data Mining	Fall 2018

Instructor Rating: 4.71 out of 5.0

FSRM 588: Financial Data Mining	Fall 2017

Instructor Rating: 4.82 out of 5.0

- **Rutgers University (Undergraduate level)**

STAT 384: Intermediate Statistical Analysis (Virtual)	Spring 2021
STAT 484: Basic Applied Statistics (Virtual)	

- **The Wharton School, University of Pennsylvania**

STAT 111 : Introductory Statistics	Summer 2016

Recitation Instructor Fall 2014

The Wharton School, University of Pennsylvania

STAT 111: Introductory Statistics

Teaching Assistant

The Wharton School, University of Pennsylvania

STAT 102: Business Statistics	Spring 2017
STAT 970: Mathematical Statistics	Fall 2016
STAT 622: Statistical Modeling	Spring 2016
STAT 550: Mathematical Statistics	Fall 2015

PhD Thesis Advisor: Prabrisha Rakshit (expected 2023); Taehyeon Koo (expected 2025); Zhenyu Wang (expected 2027); Mengchu Zheng (expected 2028).

PhD Students and Post Doc Mentor[1]: David Carl (ETH); Domagoj Cevid (ETH); Corinne Emmenegger (ETH); Larry Han (Harvard); Jue Hou (Harvard); Sai Li (UPenn); Xiudi Li (Harvard); Molei Liu (Harvard); Yue Liu (Harvard); Rong Ma (UPenn); Ziwei Mei (CUHK); Claude Renaux (ETH); Cyrill Scheidegger (ETH); Ye Tian (Rutgers); Lu Wang (Upenn); Xuan Wang (Harvard); Xiong Xin (Harvard); Siqi Xu (HKU); Minhao Yao (HKU); Wei Yuan (Rutgers).

PhD Thesis Committee: Sai Li (2018); Yisha Yao (2021).

PhD Proposal Committee: Xiaokang Luo.

Master and Undergraduate Research Advisor: Tai Yang (2018-2019); Saide Tang (2019-2020); Wei Yuan (2020-2021); Yunjiao Bai (2021); Shiyu Yang (2021); Enyan Zhang

---

[1]I am mentoring these PhD students or Post Doc for one or multiple projects but not their advisor

(2021); Zhenyu Wang (2021-2022); Wenshuo Liu (2022); Mengchu Zheng (2022-current); Rui Chen (2022-current).

Master Thesis Advisor: Yankun Xu (2018); Yangdi Li (2018); Guanyu Huang (2018); Haoze Tang (2018); Wenzhe Zhang (2018); Yaran Su (2018); Xinyi Zhang (2018); Yuan Liang (2019); Hequan Zhang (2019); Qiaochu Chen (2019); Jiamin Deng (2019); Zeen Huo (2019); Jianyu Li (2020); Junjie Chen (2020); Lyujiangnan Ye (2021); Jung Hyun Kim (2021); Saide Tang (2021); Wei Yuan (2021).

ACADEMIC
SERVICE

1. Associate Editor

   - *Journal of the American Statistical Association*, 2023-2026
   - *Frontiers in Applied Mathematics and Statistics*, 2023-

2. Organizer of Causal Inference Reading Group (Joint with Nicole Pashley and Tirthankar Dasgupta), Department of Statistics, Rutgers

3. Department Retreat Chair (2019-2020), Department of Statistics, Rutgers

4. Department Seminar Chair (2018-2019), Department of Statistics, Rutgers

5. Other Rutgers Committee service:

   - Department website committee (2020-2023)
   - Department retreat committee (2017-2018)
   - FSRM/MSDS committee (2017-2023)
   - Ph.D. Exam committee (2018-2020)
   - Graduate Curriculum committee (2019-2021)

6. Organizing Committee for 2019 Rutgers Statistics Symposium

7. Program Committee for ICSA 2019 11th International Conference

8. Local Organizing Committee for 2018 ICSA Applied Symposium.

9. Reviewer for the following journals: *Annals of Statistics, Journal of the American Statistical Association, Journal of the Royal Statistical Society: Series B (Statistical Methodology), Biometrica, Journal of Machine Learning, Journal of Econometrics, Biometrics,Statistica Sinica, IEEE International Symposium on Information Theory, Journal of Applied Statistics, COLT.*

INVITED TALKS

1. Invited talk (virtual), Peking University, China, *"Robust Inference for Federated Meta-Learning."*, March 2023

2. Invited talk (virtual), *"Statistical Inference for Maximin Effects: Identifying Stable Associations across Multiple Studies."*, 1st joint webinar of the IMS New Researchers Group, Young Data Science Researcher Seminar Zürich and the YoungStatS Project, March 2023

3. Invited talk (virtual), CMStatistics 2022, London, UK, *"Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding."*, Dec 2022

4. Levin Lecture, Department of Biostatistics, Columbia University, *"Multi-data Replicability via the Maximin Criterion: High-dimensional Inference for Group Distributionally Robust Models."*, Sep 2022

5. Lab seminar (virtual) led by Tianxi Cai, The Chan School of Public Health, Harvard University, *"Robust Inference for Federated Meta-Learning."*, Sep 2022

6. Rand center causal inference Symposium (virtual), *"Two Stage Curvature Identification with Machine Learning: Causal Inference with Possibly Invalid Instrumental Variables."*, Aug 2022

7. Invited speaker, *"Causal Inference with Invalid Instruments: Post-selection Problems and A Solution Using Searching and Sampling."* JSM 2022, Aug 2022

8. Invited speaker (virtual), *"Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding."*, ICSA 2022, University of Florida, June 2022

9. Online causal inference seminar (virtual, discussed by Professor Frank Windmeijer), *"Two Stage Curvature Identification with Machine Learning: Causal Inference with Possibly Invalid Instrumental Variables."*, April 2022

10. Center for causal inference seminar (virtual), University of Pennsylvania, USA, *"Two Stage Curvature Identification with Machine Learning: Causal Inference with Possibly Invalid Instrumental Variables."*, March 2022

11. Department seminar (virtual), Department of Biostatistics & Medical Informatics, at the University of Wisconsin-Madison, *"Decorrelated Local Linear Estimator: Inference for Non-linear Effects in High-dimensional Additive Models."*, Feb 2022

12. Lab seminar (virtual) led by Tianxi Cai, The Chan School of Public Health, Harvard University, *"Transfer Learning with Multi-source Data: High-dimensional Inference for Group Distributionally Robust Models."*, Jan 2022

13. Invited speaker (virtual), CMStatistics, *"Inference for Case Probability in High-dimensional Logistic Regression."*, Dec 2021

14. Invited speaker (virtual), JSM 2021, Seattle, USA, *"Inference for High-dimensional Maximin Effects in Heterogeneous Regression Models Using a Sampling Approach."* Aug 2021

15. Invited speaker (virtual), The First International Conference on Statistics and Related Fields, Luxembourg, *"Inference for High-dimensional Maximin Effects in Heterogeneous Regression Models Using a Sampling Approach."* , July 2021

16. Lab seminar (virtual) led by Tianxi Cai, The Chan School of Public Health, Harvard University, *"Maximin Effect and Distributional Robustness: A Review and New Advances"*, June 2021

17. Department seminar (virtual), Department of Statistics, East China Normal University, Shanghai, China, *"Inference for High-dimensional Maximin Effects in Heterogeneous Regression Models Using a Sampling Approach."*, May 2021

18. Center for Causal Inference Seminar (virtual), University of Pennsylvania, USA, *"Post-selection Problems for Causal Inference with Invalid Instruments: A Solution Using Searching and Sampling."*, May 2021

19. Department Seminar (virtual), Department of Economics, Chinese University of Hong Kong, Hong Kong, China, *"Post-selection Problems for Causal Inference with Invalid Instruments: A Solution Using Searching and Sampling."*, April 2021

20. Department Seminar (virtual), Department of Statistics, Hong Kong University, Hong Kong, China, *"Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding."*, April 2021

21. Department Seminar (virtual), Medical School, University of Exeter, Exeter, UK, *"Inference for Non-linear Treatment Effects with Control Function Methods"*, Feb 2021

22. Invited talk (virtual), CMStatistics 2020, London, UK, *"Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding."*, Dec 2020

23. Department seminar (virtual), Department of Statistics, Cornell University, USA *"Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding."*, Oct 2020

24. Invited talk (virtual), JSM 2020, Philadelphia, USA, *"Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding and Measurement Errors."*, Aug 2020

25. Invited participant (virtual), Mathematical and Statistical Challenges in Uncertainty Quantification, Cambridge, UK, July 2020

26. Department seminar (virtual), Department of Statistics, UC Davis, USA, *"Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding and Measurement Errors."*, May 2020

27. Center for Causal Inference Seminar (virtual), University of Pennsylvania, USA, *"Doubly Debiased Lasso: High-Dimensional Inference under Hidden Confounding and Measurement Errors."*, May 2020

28. Biostatistics reading group (virtual, led by Jinbo Chen), University of Pennsylvania, USA, *"Group Inference in High Dimensions with Applications to Hierarchical Testing."*, May 2020

29. Department seminar, Department of Statistics, East China Normal University, Shanghai, China, *"Group Inference in High Dimensions with Applications to Hierarchical Testing"*, Dec 2019

30. Invited talk, 11th ICSA International Conference, Hangzhou, China, *"Group Inference in High Dimensions with Applications to Hierarchical Testing"*, Dec 2019

31. Invited talk, International Statistical Conference in Memory of Professor Sik-Yum Lee, Hong Kong, China, *"Group Inference in High Dimensions with Applications to Hierarchical Testing"*, Dec 2019

32. Causal reading group (led by James Robins), School of Public Health, Harvard University *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, Sep. 2019

33. Department seminar, Department of Statistics, East China Normal University, Shanghai, China, *"Individualized Treatment Selection: A Hypothesis Testing Approach In High-dimensional Models"*, June. 2019

34. Invited talk, 2019 Hangzhou Data Science Conference, Hangzhou, China, *"Local Inference in High-dimensional Sparse Additive Modeling"*, May. 2019

35. Department seminar, School of Data Science, City University of Hong Kong, Hong Kong, China, *"Individualized Treatment Selection: A Hypothesis Testing Approach In High-dimensional Models"*, May. 2019

36. Department seminar, ISOM, HKUST, Hong Kong, China, *"Local Inference in High-dimensional Sparse Additive Modeling"*, May. 2019

37. Department seminar, Department of Statistics, University of Virginia, USA, *"Local Inference in High-dimensional Sparse Additive Modeling"*, March. 2019

38. Invited talk, 2019 ICSA Data Science Conference, Xishuangbanna, Yunnan, China. *"Individualized Treatment Selection: A Hypothesis Testing Approach In High-dimensional Models"*, Jan. 2019

39. Young Research Session, Memorial Workshop for Lawrence D. Brown, University of Pennsylvania, USA. *"Individualized Treatment Selection: A Hypothesis Testing Approach In High-dimensional Models"*, Nov. 2018

40. Department seminar, Seminar for Statistics, Department of Mathematics, ETH, Swiss, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, Nov. 2018

41. Department seminar, Department of Mathematics, NJIT, USA, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, Nov. 2018

42. Department seminar, ORFE, Princeton, USA, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, Oct. 2018

43. Department seminar, ISOM, HKUST, Hong Kong, China, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, July. 2018

44. Department seminar, Department of Statistics, Naikai University, China, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, July. 2018

45. Invited talk, IMS Asia Pacific Rim Meeting, Singapore, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, June. 2018

46. Invited talk, Hong Kong EcoStat Conference, Hong Kong, China, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, June. 2018

47. Invited talk, ICSA Symposium 2018, New Brunswick, USA, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, June. 2018

48. Invited talk, Purdue Symposium on Statistics, USA, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, June. 2018

49. Invited talk, 2018 Hangzhou Data Science Conference, Hangzhou, China, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, May. 2018

50. Invited talk, Lorentz Center, Leiden University, Netherlands, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, Apr. 2018

51. Department seminar, Department of Statistics, Columbia University, *"Semi-supervised Inference for Explained Variance in High-dimensional Linear Regression and Its Applications"*, Apr. 2018

52. Invited talk, Statistical Foundations of Uncertainty Quantification for Inverse Problem, Cambridge, *"Inference for Functionals in High-dimensional Linear Models"*, June. 2017

53. Seminar, Center for Statistical Methods in Big Data, University of Pennsylvania, *"Inference with High-dimensional Covariates and Possibly Invalid Instruments"*, Apr. 2017

54. Seminar, Institute of Data science, Fox Business School, Temple University, *"Inference for High Dimensional Linear Models: Fundamental Limits and Algorithms"*, Feb. 2017

55. Department seminar, Department of Biostatistics, UC Berkeley, *"Inference for High Dimensional Linear Models: Fundamental Limits and Algorithms"*, Feb. 2017

56. Department seminar, Department of Statistics, Rutgers, *"Inference for High Dimensional Linear Models: Fundamental Limits and Algorithms"*, Feb. 2017

57. Department seminar, Department of Statistics, University of Michigan, *"Inference for High Dimensional Linear Models: Fundamental Limits and Algorithms"*, Jan. 2017

58. Department seminar, Department of Statistics, University of Minnesota, *"Inference for High Dimensional Linear Models: Fundamental Limits and Algorithms"*, Jan. 2017

59. Department seminar, Department of Statistics, UIUC, *"Inference for High Dimensional Linear Models: Fundamental Limits and Algorithms"*, Jan. 2017

60. Department seminar, DPMMS, University of Cambridge, *"Inference for High Dimensional Linear Regression: Fundamental Limits and Algorithms"*, Jan. 2017

61. Department seminar, Department of Statistics, UC Santa Barbara, *"Inference for High Dimensional Linear Models: Fundamental Limits and Algorithms"*, Jan. 2017

62. Invited talk, Mathematical Meeting in Statistics, Fréjus, France, *"Optimal Estimation of Genetic Correlation in High-dimensional Linear Models"*, Dec. 2016

63. Econometrics Lunch, Department of Economics, University of Pennsylvania, *"Confidence Intervals for Treatment Effects in High-Dimensional Linear Models"*, Nov. 2016

OTHER TALKS

1. Topic contributed talk, Joint Statistical Meetings, Baltimore, USA, *"Optimal Estimation of Co-Heritability in High-Dimensional Linear Models"*, Aug. 2017

2. Contributed talk, Joint Statistical Meetings, Chicago, USA, *"Accuracy Assessment for High-dimensional Linear Regression"*, Aug. 2016

3. Contributed talk, Eastern North American Region, Austin, USA, *"Confidence Intervals for High-Dimensional Linear Regression: Minimax Rates and Adaptivity"*, Mar. 2016

4. Poster presentation, John W. Tukey Conference, Princeton University, *"Confidence Intervals for High-Dimensional Linear Regression: Minimax Rates and Adaptivity"*, Sept. 2015

5. Contributed talk, Joint Statistical Meetings, Seattle, USA, *"Distance Matrix Estimation from Noisy Observation of Low Rank Position Matrix"*, Aug. 2015

6. Contributed talk, Joint Statistical Meetings, Boston, USA, *"Instrumental Variable Approach for Mediation Analysis of Count Model"*, Aug. 2014

7. Topic Contributed talk, Joint Statistical Meetings, Montreal, Canada, *" Instrumental Variable Approach for Mediation Analysis of Zero-Inflated Count Model"*, Aug. 2013

8. Poster presentation, Atlantic Causal Inference Conference, Harvard University, *"Control Function Instrumental Variable Estimation of Nonlinear Causal Effect Models"*, May. 2013

MEMBERSHIPS

- American Statistical Association
- Institute of Mathematical Statistics
- International Chinese Statistical Association
- The Econometric Society