

Wei Zheng

Professor
Dept of Business Analytics and Statistics
University of Tennessee
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- POSITION
- ◇ Professor, University of Tennessee, 2025 - Present
 - ◇ Associate Professor (with Tenure), University of Tennessee, 2020 - 2025
 - ◇ Associate Professor (without Tenure), University of Tennessee, 2017 - 2020
 - ◇ Assistant Professor, Indiana University-Purdue University Indianapolis, 2011 - 2017
- EDUCATION
- ◇ Ph.D., Statistics, University of Illinois, Chicago, Fall 2006 - Spring 2011
 - ◇ B.S., Statistics, Zhejiang University, China, Fall 2001 - Spring 2005
- PROFESSIONAL SERVICES
- ◇ Associate Editor, *Statistics Sinica*, 2023–Present.
 - ◇ Associate Editor, *Journal of Statistical Planning and Inference*, 2022–Present.
 - ◇ Associate Editor, *Metrika*, 2017– Present.
 - ◇ Organizer (with Robert Mee), Conference on Design and Analysis of Experiment, 2019.
 - ◇ Scientific Program Committee (with Angela Dean and John Stufken), International Conference on Design of Experiments, 2022.
 - ◇ Steering Committee (with other 4 rotating members), Conference on Design and Analysis of Experiment, 2020–2030.
- RESEARCH INTERESTS
- Design of Experiments and its interface with machine learning, artificial intelligence, big data, and casual inference.
- PUBLICATIONS
1. Zhou, Z., Mee, R., Hamers, H., and Zheng, W. (2025+) Fast Approximation of Shapley Values through Fractional Factorial Designs. *Journal of the American Statistical Association*.
 2. Zhang, X., Lin, D., and Zheng, W. (2025+) Construction of Maximin Distance Latin Hypercube Designs via Good Lattice Point Sets. *Statistica Sinica*
 3. Yang, L., Zhou, Y., Fu, H., Liu, M., and Zheng, W. (2024) Estimating the Shapley values using order-of-addition experimental designs. *Journal of the American Statistical Association*. **119** 2294–2304

4. Kong, X., Zhang, X., and Zheng, W. (2023) Circular designs for total effects under interference models. *Journal of Statistical Planning and Inference.* **227** 146–161.
5. Kong, X., Fu, J., and Zheng, W. (2023) Optimal non-circular designs for total effects under interference models *Stat* e601.
6. Kong, X., Fu, J., and Zheng, W. (2023) Optimal non-circular designs for interference models. *Stat* e575.
7. Hao, S., Yang, M., and Zheng, W. (2023) Algorithm-Based Optimal and Efficient Exact Experimental Designs for Crossover and Interference Models. *The New England Journal of Statistics in Data Science*
8. Kong, X., Zheng, W. and Ai, M. (2023) Support points for distribution recovering. *Journal of Statistical Planning and Inference.* **224** 69–83.
9. Kong, X., Wang, X., and Zheng, W. (2023) Asymptotic distributions of a new type of design based incomplete U-statistics. *Stat* **12**. 1–13. e543.
10. Yi, S., Zhou, Y., Zheng, W. (2022) Optimal designs for mean–covariance models with missing observations. *Journal of Statistical Planning and Inference* **219** 85–97.
11. Hedayat, A. S. and Zheng, W. (2022) Some notes on types of symmetry for crossover designs *Mindful Topics on Risk Analysis and Design of Experiments - Selected contributions from ICRA8, Vienna 2019*
12. Kong, X., Yuang, M., and Zheng, W. (2021) Approximate and exact designs for total effects. *Annals of Statistics* **49** 1594–1625.
13. Kong, X. and Zheng, W. (2021) Design based incomplete U-statistics. *Statistica Sinica* **31** 1593–1618.
14. Zhu, J., Pan, W., Zheng, W. and Wang, X. (2021) Ball: An R package for detecting distribution difference and association in metric spaces. *Journal of Statistical Software* **97** 1–31.
15. Hedayat, A. S., Xu, H. and Zheng, W. (2020) Optimal blocks designs with two dimensional interference. *Journal of the American Statistical Association* **115** 1812–1821.
16. Wang, X., Yang, M. and Zheng W. (2019). Optimal designs for nonlinear models with random block effects. *Statistica Sinica* **29** 283–302.
17. Zheng, W., Ai, M. and Li, K. (2017). Identification of universally optimal circular designs for the interference model. *Annals of Statistics* **45** 1462–1487.
18. Zhong, X., Cao, J., Jin, Y. and Zheng, W. (2017). On Empirical Likelihood Option Pricing. *The Journal of Risk* **19** 41–53.
19. Zheng, W., Jin, Y. and Zhang, G. (2016) Recursive estimation of TAVC through prewhitening. *Statistics and Probability Letters* **114** 30-37.
20. Li, K., Zheng, W. and Ai, M. (2015). Optimal designs for the proportional interference model. *Annals of Statistics* **43** 1596–1616.
21. Zheng, W. (2015) Universally optimal designs for two interference models. *Annals of Statistics* **43** 501-518.

22. Zhang, G., Christensen, F. and Zheng, W. (2015) Nonparametric regression estimators in complex surveys. *Journal of Statistical Computation and Simulation* **85** 1026–1034.
23. Zheng, W. (2013). Optimal crossover designs for the proportional model. *Annals of Statistics* **41** 2218–2235.
24. Zheng, W. (2013). Universally optimal crossover designs under subject dropout. *Annals of Statistics* **41** 63–90.
25. Wu, W.-B., Huang, Y., and Zheng, W. (2010). Covariances estimation for long-memory process. *Advances in Applied Probability* **42** 137–157.
26. Hedayat, A.S. and Zheng, W. (2010). Totally balanced test-control incomplete crossover designs and their statistical applications. *Contemporary Mathematics* **531** 43–58.
27. Hedayat, A.S. and Zheng, W. (2010). Optimal and efficient crossover designs for test-control study when subject effects are random. *Journal of the American Statistical Association* **105** 1581–1592.

MANUSCRIPTS

1. Liu, Y., Zheng, W. and Bowers, M. Effects of analytics academic programs on local analytics job market. submitted to *MIS Quarterly*
2. He, L., Zheng, W., and Yue. R. Optimal designs for active controlled dose-response models with asymmetric errors. submitted to *Statistics in Medicine*
3. Zheng, W. Tian, T., and Wang, X. Optimal design of sampling survey for efficient parameter estimation. To be submitted to *IEEE Transactions on Knowledge and Data Engineering*
4. Zhang. X. and Zheng, W. Thompson Sampling for dose finding experiments. To be submitted to *Biometrika*
5. Zhang, X., Gao, L., and Zheng, W. Thompson Sampling with discrete prior. To be submitted to *Journal of Machine Learning Research*
6. Zhou, Z., Mee. R., Zhou Y., and Zheng, W. Bayesian analysis of Shapley Values approximations. To be submitted to *Journal of American Statistical Association*

GRANTS

- ◇ National Science Foundation, DMS–1612978: From approximate to exact designs with applications to big data. 2016–2019. (DMS-1830864 after transferring from IUPUI to UTK)

PHD STUDENTS

- ◇ Heng Xu, 2017, Indiana University-Purdue University Indianapolis (IUPUI). Position: Principal Biostatistician, Nektar Therapeutics.

VISITING
SCHOLARS

- ◇ Liushan Zou, 12/2024-06/2025, PhD student, Nankai University.
- ◇ Zheng Zhou, 12/2022-12/2023, PhD student, Nankai University.
- ◇ Xueru Zhang, 09/2020–08/2022, PhD student, Nankai University.
- ◇ Xianshun Kong, 09/2018–05/2020, Assistant Professor, Beijing Institute of Technology.

OTHER SERVICES

- ◇ Member of Faculty Senate Council, University of Tennessee, 2023-present
- ◇ Member of Undergraduate research Advisory Council, University of Tennessee, 2023-present
- ◇ Member of Faculty Research Council, Haslam College of Business, University of Tennessee, 2019 – 2023.
- ◇ Member of PhD Committee: Linnan Li (Math, IUPUI), 2015; Shan Wang (Math, IUPUI), 2015; Dave Desimone (Chemical Engineering, UTK), 2019; Jinha Lee (RHTM, UTK), 2020; Cai John (DSE, UTK), 2022.
- ◇ Melton Scholar (UTK) supervision: Kenny Miller, 2019–2020.
- ◇ Review Panel, National Science Foundation, 2017.
- ◇ Session Organizer, EcoSta 2013, Aug. 01–03, Tokyo Japan.
- ◇ Session Organizer, CMStatistics 2020, December 19-21, London, UK.
- ◇ Session Organizer, EcoSta 2019, June 25–27, Taichung, Taiwan.
- ◇ Session Organizer, NESS 2019, May 15–17, Hartford, CT.
- ◇ Session Organizer, ICSA Applied Statistics Symposium 2016, June 12?June 15.
- ◇ Referee, NESS student paper competition, 2019.

INVITED TALKS

- ◇ *The 7th International Conference on Econometrics and Statistics*, Beijing, China, July 2024
- ◇ *The Design and Analysis of Experiments Conference*, Blacksburg, VA, May 2024
- ◇ *Conference on Experimental Design and Analysis*, Taipei, Taiwan, Dec 2023.
- ◇ *The 6th International Conference on Econometrics and Statistics*, Tokyo, Japan, Aug. 2023
- ◇ *ICSA 2023 China Conference*, Chengdu, China, July 2023.
- ◇ *6th International Conference on Design of Experiments (ICODOE 2022)*, Memphis, TN, May 2023.
- ◇ *The 15th International Conference of the ERCIM WG on Computational and Methodological Statistics*, Dec. 2022.
- ◇ *The 35th New England Statistics Symposium*, May 2022.
- ◇ *Seminar at Indiana University Purdue University Indianapolis*, Nov. 2021

- ◇ *The 4th International Conference on Econometrics and Statistics*, June 2021
- ◇ *International Indian Statistical Association Conference*, May 2021
- ◇ *Online seminar, University of New Mexico*, Sept 2020.
- ◇ *The 12th International Conference of the ERCIM WG on Computational and Methodological Statistics*, London, UK, Dec 2019.
- ◇ *International Conference on Statistical Distributions and Applications*, Grand Rapids, MI, Oct 2019.
- ◇ *Seminar, Chinese Academy of Sciences*, Beijing, July 2019.
- ◇ *ICSA China Conference*, Tianjin, July 2019.
- ◇ *ICSA Applied Statistics Symposium*, Raleigh, June 2019.
- ◇ *The 3rd International Conference on Econometrics and Statistics*, Taichung, Taiwan, June 2019.
- ◇ *33rd New England Statistics Symposium*, Hartford, May 2019.
- ◇ *5th International Conference on Design of Experiments*, Memphis, May 2019.
- ◇ *Conference on Experimental Design and Analysis*, Hsinchu, Taiwan, Dec 2018.
- ◇ *International Conference on Advances in Interdisciplinary Statistics and Combinatorics*, Greensboro, Oct 2018
- ◇ *The Ninth Workshop on simulation*, Barcelona, Spain, July 2018.
- ◇ *The 2nd International Conference on Econometrics and Statistics*, Hong Kong, June 2018.
- ◇ *Nankai University*, Tianjin, China, June 2018.
- ◇ *Shanghai Normal University*, Shanghai, China, June 2018.
- ◇ *Design of Experiments: New Challenges*, Marseilles, France, May 2018.
- ◇ *The third IASSL International Conference*, Colombo, Sri Lanka, Dec 2017.
- ◇ *The Design and Analysis of Experiments (DAE 2017) Conference*, Los Angeles, Oct. 2017
- ◇ *1st International Conference on Big Data in Biological and Medical Science*. Xi'an, China. July 2017.
- ◇ *IMS-China*. Nanning, China. June 2017.
- ◇ *15th Workshop on Quality Improvement Methods*. Dortmund, Germany. June 2017.
- ◇ *University of Illinois*, Chicago, IL, Feb 2017
- ◇ *Conference on Experimental Design and Analysis*. Taipei, Taiwan, Dec. 2016.
- ◇ *The tenth cross-strait symposiums on probability and statistics*. Chengdu, China, Aug. 2016.

- ◇ *Dept. of Mathematics, Sun Yat-Sen University, Guangzhou, China, July 2016.*
- ◇ *School of Statistics, Shanxi University of Finance and Economics, Taiyuan, China, June 2016.*
- ◇ *Dept. of Mathematics, Zhejiang University, Hangzhou, China, June 2016.*
- ◇ *School of Statistics, Nankai University, Tianjin, China, June 2016.*
- ◇ *Designed Experiments: Recent Advances in Methods and Applications, Sydney, Australia, Decemeber 2015.*
- ◇ *2015 IMS-China International Conference on Statistics and Probability, Yunnan, China, July 2015.*
- ◇ *Michigan State University, East Lansing, MI, January 2015*
- ◇ *University of Illinois, Chicago, IL, October 2014*
- ◇ *International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, NC, October 2014*
- ◇ *Peking University, Beijing, China, July 2014*
- ◇ *Sun Yat-Sen University, Guangzhou, China, July 2014*
- ◇ *Conference on Experimental Design and Analysis, Taipei, Taiwan, July 2014*
- ◇ *The 3rd Institute of Mathematical Statistics Asia Pacific Rim Meeting, Taipei, Taiwan, July 2014*
- ◇ *13th Workshop on Quality Improvement Methods, Dortmund, Germany, June 2014*
- ◇ *IMS-China Conference, Chengdu, China, July 2013*
- ◇ *University of Illinois at Urbana-Champaign (UIUC), March 2013*
- ◇ *Applied Statistical Symposium, Boston, MA, June 2012*
- ◇ *Biostatistics, Indiana Univ.-Purdue Univ., Indianapolis, IN, March 2012*
- ◇ *International Conference on Design of Experiments, Memphis, TN, May 2011*
- ◇ *University of Hong Kong, HK, June 2010*
- ◇ *DePaul University, Chicago, IL, Feb. 2010*
- ◇ *Illinois Institute of Technology, Chicago, IL, Jan. 2010*

REFeree

Journal of the American Statistical Association, Annals of Statistics, Biometrika, Statistica Sinica, Technometrics, Journal of Statistical Planning and Inference, Journal of Statistical Computation and Simulation, etc.

TEACHING
EXPERIENCES

University of Tennessee

Stat 251, Probability and Statistics for Engineering Science

BAS 479, Capstone for Business Analytics

BAS 471, Statistical Methods

Stat 553, Design of Experiments

Stat 564, Statistical Inference

Stat 563, Probability and Mathematical Statistics

Indiana University-Purdue University Indianapolis

Stat 350, Introduction to Statistics

Stat 416/516, Basic Probability and Applications

Stat 514, Designs of Experiments

Stat 522, Sampling and Survey Techniques

Stat 598, Independent Study