

# Wei Zheng

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EDUCATION      Ph.D., Statistics, University of Illinois, Chicago, Fall 2006 - Summer 2011  
B.S., Statistics, Zhejiang University, China, Fall 2001 - Spring 2005

POSITION      ◇ Assistant Professor, Indiana University-Purdue University Indianapolis,  
2011 - Present  
◇ Teaching/Research Assistant, University of Illinois at Chicago (UIC),  
2006 - 2011

HONORS AND  
AWARDS      ◇ National Science Foundation, DMS-1612978: From approximate to exact  
designs with applications to big data. 2016-2019.  
◇ Purdue Research Foundation (PRF) International Travel Grant, 2013,  
2014, 2015  
◇ Overseas Conference Fund Award from OVPIA, 2013, 2015  
◇ Dean's Scholar Award (University Fellowship), UIC, 2009 - 2010

RESEARCH  
INTERESTS      ◇ Major: Experimental Designs  
◇ Minor: Big Data, Machine Learning, Empirical Likelihood, Time Series

PUBLICATIONS      1. Zheng, W., Ai, M. and Li, K. (2016). Identification of universally optimal  
circular designs for the interference model. *Annals of Statistics* To appear.  
2. Zhong, X., Cao, J., Jin, Y. and Zheng, W. (2016). On the Empirical Likeli-  
hood Option Pricing. *The Journal of Risk* To appear.  
3. Zheng, W., Jin, Y. and Zhang, G. (2016) Recursive estimation of TAVC  
through prewhitening. *Statistics and Probability Letters* **114** 30-37.  
4. Li, K., Zheng, W. and Ai, M. (2015). Optimal designs for the proportional  
interference model. *Annals of Statistics* **43** 1596-1616.  
5. Zheng, W. (2015) Universally optimal designs for two interference models.  
*Annals of Statistics* **43** 501-518.  
6. Zheng, W. (2013). Optimal crossover designs for the proportional model.  
*Annals of Statistics*. **41** 2218-2235.  
7. Zheng, W. (2013). Universally optimal crossover designs under subject  
dropout. *Annals of Statistics* **41** 63-90.  
8. Zhang, G., Christensen, F. and Zheng, W. (2013) Nonparametric regres-  
sion estimators in complex surveys. *Journal of Statistical Computation and  
Simulation* **85** 1026-1034.

9. 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.
10. Wu, W.-B., Huang, Y., and Zheng, W. (2010). Covariances estimation for long-memory process. *Advances in Applied Probability* **42** 137–157.
11. Hedayat, A.S. and Zheng, W. (2010). Totally balanced test-control incomplete crossover designs and their statistical applications. *Contemporary Mathematics* **531** 43–58.

MANUSCRIPTS

Submitted

1. Zheng, W. Informative subsampling of large database for statistical inferences.
2. Hedayat, A. S. and Zheng, W. Pseudo symmetric designs for crossover and related studies.
3. Tan, F., Lin, Q., Zheng, W. and Peng, H. A jackknife empirical likelihood approach to goodness of fit u-statistics testing with side information.
4. Yang, M., Wang, X. and Zheng W. Optimal designs for nonlinear model with correlated data.

In Progress

1. Zheng, W. and Wang, J. A geometric view point of the support vector machine with application to big data.
2. Hedayat, A. S. and Zheng, W. Universally optimal crossover designs with self and mixed carryover effects.
3. Zheng, W. and Yuan, M. Optimal designs for estimating total effects in the interference model.
4. Zheng, W. Optimal crossover designs at the presence of high order carryover effects.
5. Zheng, W. and Xu, H. Optimal blocks designs with two dimensional interference.
6. Zheng, W. and Xu, H. Optimal crossover designs with random subject effects and subject dropout.

PRESENTATIONS

Invited Talks

- ◇ Fast SVM algorithms scalable for big data. *ISI World Statistics Congress*. Marrakech, Morocco. July 2017.
- ◇ Fast SVM algorithms scalable for big data. *Conference on Experimental Design and Analysis*. Taipei, Taiwan, Dec. 2016.

- ◇ Informative sampling of large database for statistical inferences. *The tenth cross-strait symposiums on probability and statistics*. Chengdu, China, Aug. 2016.
- ◇ Informative sampling of large database for statistical inferences. *Dept. of Mathematics, Sun Yat-Sen University*, Guangzhou, China, July 2016.
- ◇ Informative sampling of large database for statistical inferences. *School of Statistics, Shanxi University of Finance and Economics*, Taiyuan, China, June 2016.
- ◇ Informative sampling of large database for statistical inferences. *Dept. of Mathematics, Zhejiang University*, Hangzhou, China, June 2016.
- ◇ Informative sampling of large database for statistical inferences. *School of Statistics, Nankai University*, Tianjin, China, June 2016.
- ◇ Universally Optimal Circular Designs for the Interference Model. *Designed Experiments: Recent Advances in Methods and Applications*, Sydney, Australia, Decemeber 2015.
- ◇ Universally Optimal Circular Designs for the Interference Model. *2015 IMS-China International Conference on Statistics and Probability*, Yunnan, China, July 2015.
- ◇ Universally optimal designs for two interference models. *Michigan State University*, East Lansing, MI, Janurary 2015
- ◇ Universally optimal designs for two interference models. *University of Illinois*, Chicago, IL, October 2014
- ◇ Universally optimal designs for two interference models. *International Conference on Advances in Interdisciplinary Statistics and Combinatorics*, Greensboro, NC, October 2014
- ◇ Universally optimal designs for two interference models. *Peking University*, Beijing, China, July 2014
- ◇ Universally optimal designs for two interference models. *Sun Yat-Sen University*, Guangzhou, China, July 2014
- ◇ Universally optimal designs for two interference models. *Conference on Experimental Design and Analysis*, Taipei, Taiwan, July 2014
- ◇ Optimal crossover designs for the proportional model. *The 3rd Institute of Mathematical Statistics Asia Pacific Rim Meeting*, Taipei, Taiwan, July 2014
- ◇ Optimal crossover designs for the proportional model. *13th Workshop on Quality Improvement Methods*, Dortmund, Germany, June 2014
- ◇ Optimality of Kushner's design for a nonlinear model. *IMS-China Conference*, Chengdu, China, July 2013
- ◇ Universally Optimal Crossover Designs under Subject Dropout, *University of Illinois at Urbana-Champaign (UIUC)*, March 2013
- ◇ Universally optimal crossover designs under subject dropout. *Applied Statistical Symposium*, Boston, MA, June 2012

- ◇ Optimal and efficient crossover designs for test-control study when subject effects are random. *Biostatistics, Indiana Univ.-Purdue Univ.*, Indianapolis, IN, March 2012
- ◇ Optimal and efficient crossover designs for test-control study when subject effects are random. *International Conference on Design of Experiments*, Memphis, TN, May 2011
- ◇ Optimal and efficient crossover designs for test-control study when subject effects are random. *University of Hong Kong*, HK, June 2010
- ◇ Optimal and efficient crossover designs for test-control study when subject effects are random. *DePaul University*, Chicago, IL, Feb. 2010
- ◇ Covariances estimation for long-memory process. *Illinois Institute of Technology*, Chicago, IL, Jan. 2010

### Contributed

- ◇ Poster, Universally optimal crossover designs under subject dropout. *Design and Analysis of Experiments Conference*, Athens, GA, Oct. 2012
- ◇ Speaker, Universally optimal crossover designs under subject dropout. *Joint Statistical Meeting, San Diego*, CA, July 2012
- ◇ Speaker, Optimal and efficient crossover designs for test-control study when subject effects are random. *Joint Statistical Meeting*, Miami, FL, July 2011
- ◇ Poster, Optimal and efficient crossover designs for test-control study when subject effects are random. *Design and Analysis of Experiments Conference*, Columbia, Missouri, Oct. 2009

PHD STUDENTS    Heng Xu

REFEREE

Journal of the American Statistical Association (3)  
 Journal of Statistical Planning and Inference (12)  
 Special issue of a conference on Swarm Intelligence (1)  
 Journal of Statistical Computation and Simulation (1)  
 Journal of Biopharmaceutical Statistics (1)  
 Linear Algebra and its Applications (2)  
 Journal of Nonparametric Statistics (1)  
 Statistics and Probability Letters (4)  
 Communications in Statistics (2)  
 Osteoporosis International (1)  
 Annals of Statistics (1)  
 Statistica Sinica (2)  
 Bayesian Analysis (1)  
 Statistica Sinica (3)  
 Biometrika (1)  
 Metrika (1)

TEACHING  
EXPERIENCES

Indiana University-Purdue University Indianapolis

Stat 522, Sampling and Survey Techniques, Fall 2015  
Stat 416/516, Basic Probability and Applications, Fall 2015  
Stat 514, Designs of Experiments, Spring 2015  
Stat 350, Introduction to Statistics, Spring 2015  
Stat 522, Sampling and Survey Techniques, Fall 2014  
Stat 416/516, Basic Probability and Applications, Fall 2014  
Stat 514, Designs of Experiments, Spring 2014  
Stat 350, Introduction to Statistics, Spring 2014  
Stat 598, Independent Study, Spring 2014  
Stat 416/516, Basic Probability and Applications, Fall 2013  
Stat 350, Introduction to Statistics, Fall 2013  
Stat 598, Independent Study, Fall 2013  
Stat 514, Designs of Experiments, Spring 2013  
Stat 350, Introduction to Statistics, Spring 2013  
Stat 416/516, Basic Probability and Applications, Fall 2012  
Stat 514, Design of Experiments, Spring 2012  
Stat 416/516, Basic Probability and Applications, Fall 2011  
Stat 522, Sampling and Survey Techniques, Fall 2011

University of Illinois at Chicago

Instructor, Applied Probability Models I, Spring 2011  
Instructor, Introduction to Probability, Fall 2010  
Teaching Assistant, Applied Statistical Methods, Spring 2009  
Teaching Assistant, Introduction to Statistics, Fall 2008  
Teaching Assistant, Finite Mathematics for Business, Summer 2008  
Teaching Assistant, Mathematical Reasoning, Fall 2007  
Teaching Assistant, Intermediate Algebra, Spring 2007  
Teaching Assistant, Beginning Algebra, Fall 2006