

# Haiming Zhou

## Contact Information

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## Education

2015 Ph.D in Statistics, University of South Carolina. Advisor: Dr. Timothy Hanson.  
2012 M.S. in Mathematical Sciences, Clemson University.  
2009 B.S. in Statistics, University of Science and Technology of China.

## Academic Employment

2019 - present Assistant Professor and Director of the Statistical Consulting Center  
Department of Statistics and Actuarial Science, Northern Illinois University  
2015 - 2019 Assistant Professor  
Division of Statistics, Northern Illinois University  
2012 - 2015 Research and Teaching Assistant  
Department of Statistics, University of South Carolina  
2009 - 2012 Teaching Assistant  
Department of Mathematical Sciences, Clemson University

## Publications

1. **Zhou, H.**, Hanson, T., and Zhang, J. (2019). spBayesSurv: Fitting Bayesian spatial survival models using R. *Journal of Statistical Software*, accepted.
2. Zhang, J., Hanson, T., and **Zhou, H.** (2019). Bayes factors for choosing among six common survival models. *Lifetime Data Analysis*, 25(2): 361-379.
3. Liu, J., Liu, J., Frongillo, E., Boghossian, N., Cai, B., **Zhou, H.**, and Hazlett, L. (2019). Body mass index trajectories during the first year of life and their determining factors. *American Journal of Human Biology*, 31(1): e23188.
4. **Zhou, H.** and Huang, X. (2019). Bandwidth selection for nonparametric modal regression. *Communications in Statistics - Simulation and Computation*, 48(4): 968-984.
5. Hanson, T., **Zhou, H.**, and de Carvalho, V.I. (2018). Bayesian nonparametric spatially smoothed density estimation. In *New Frontiers of Biostatistics and Bioinformatics* (pp 87-105). Springer, Cham
6. **Zhou, H.** and Hanson, T. (2018). A unified framework for fitting Bayesian semiparametric models to arbitrarily censored survival data, including spatially-referenced data. *Journal of the American Statistical Association*, 113(522): 571-581.
7. Huang, X. and **Zhou, H.** (2017). An alternative local polynomial estimator for the error-in-variables problem. *Journal of Nonparametric Statistics*, 29(2): 301-325.

8. **Zhou, H.**, Hanson, T., and Zhang, J. (2017). Generalized accelerated failure time spatial frailty model for arbitrarily censored data. *Lifetime Data Analysis*, 23(3): 495-515.
9. **Zhou, H.** and Huang, X. (2016). Nonparametric modal regression in the presence of measurement error. *Electronic Journal of Statistics*, 10(2): 3579-3620.
10. Liu, J., Liu, S., **Zhou, H.**, Hanson, T., Yang, L., Chen, Z., and Zhou, M. (2016) Association of green tea consumption with mortality from all-cause, cardiovascular disease and cancer in a Chinese cohort of men. *European Journal of Epidemiology*, 31(9): 853-865.
11. **Zhou, H.**, Hanson, T., and Knapp, R. (2015). Marginal Bayesian nonparametric model for time to disease arrival of threatened amphibian populations. *Biometrics*, 71(4): 1101-1110.
12. **Zhou, H.**, Hanson, T., Jara, A., and Zhang, J. (2015). Modeling county level breast cancer survival data using a covariate-adjusted frailty proportional hazards model. *The Annals of Applied Statistics*, 9(1): 43-68.
13. **Zhou, H.** and Hanson, T. (2015). Bayesian spatial survival models. In *Nonparametric Bayesian Inference in Biostatistics* (pp 215-246). Springer International Publishing.
14. Park, Y.M., Sui, X., Liu, J., **Zhou, H.**, Kokkinos, P.F., Lavie, C.J., Hardin, J.W., and Blair, S.N. (2015). The effect of cardiorespiratory fitness on age-related lipids and lipoproteins. *Journal of the American College of Cardiology*, 65(19): 2091-2100.
15. Xu, G., Liu, J., Liu, S., **Zhou, H.**, Orekoya, O., Liu, J., Li, Y., Tang, J., Zhou, C., and Huang, J. (2015). The expanding burden of elevated blood pressure in China: evidence from Jiangxi province, 2007-2010. *Medicine*, 94(39): e1623.
16. Liu, J., Sui, X., Lavie, C.J., **Zhou, H.**, Park, Y.M., Cai, B., Liu, J., and Blair, S.N. (2014). Effects of cardiorespiratory fitness on blood pressure trajectory with aging in a cohort of healthy men. *Journal of the American College of Cardiology*, 64(12): 1245-1253.
17. Wang, D., **Zhou, H.**, and Kulasekera, K.B. (2013). A semi-local likelihood regression estimator of the proportion based on group testing data. *Journal of Nonparametric Statistics*, 25(1): 209-221.

### Articles under review

18. Huang, X. and **Zhou, H.** (2018). Conditional density estimation with covariate measurement error. *Electronic Journal of Statistics*, submitted.

### Professional Service

- Referee: National Science Foundation grant proposal review, *Journal of Statistical Software*, *Biometrics*, *Biostatistics*, *Bayesian Analysis*, *Statistics in Medicine*, *Lifetime Data Analysis*, *Computational Statistics and Data Analysis*, *Journal of Statistical Planning and Inference*, *Biometrical Journal*, *International Journal of Health Geographics*, *Australian & New Zealand Journal of Statistics*, *WIREs Computational Statistics*, *Journal of the American College of Cardiology*, *BMC Medical Informatics and Decision Making*, *PLOS ONE*, *Frontiers in Psychology*, *Spatial and Spatio-temporal Epidemiology*, *Far East Journal of Theoretical Statistics*, *International Journal of Statistics and Probability*
- Conference Committees/Organization/Chair:

- Chair, Contributed Session 1B. The 10th Conference on Bayesian Nonparametrics, 2015
- Chair, Contributed Session 108. The ICASA Applied Statistics Symposium, 2017.
- Chair, Invited Session 116. The ICASA Applied Statistics Symposium, 2017.

## Statistical Softwares

- `spBayesSurv`: Bayesian Modeling and Analysis of Spatially Correlated Survival Data. 2018
- `lpme`: Local Polynomial Estimators in Measurement Error Models. 2017

## Grants

- Bayesian Causal Mediation Analysis for Survival Data. Grant Source: University of South Carolina SPARC Graduate Research Grant Program. Amount: \$3,516. Status: funded. Effective Date: 5/1/2015-4/30/2016.
- A Unified Bayesian Framework for Fitting Continuously Stratified Semiparametric Survival Models (2017). Grant Source: Northern Illinois University Research & Artistry Awards. Status: not funded.
- Bayesian Semiparametric Survival Models with Continuous Stratification (2018). Grant Source: National Cancer Institute R03. Status: not funded.
- Mode regression for bounded data (2019). Grant Source: National Institutes of Health R21. Status: pending.

## Research Presentations

1. “Bayes Factors For Survival Model Selection.” The IISA International Conference on Statistics, Gainesville, FL, May 2018.
2. “Fitting Bayesian spatial survival models using R.” The ICASA Applied Statistics Symposium, Chicago, IL, June 2017.
3. “Bayesian semiparametric models for spatially correlated and arbitrarily censored data.” Latent Variables Conference, Columbia, SC, October 2016.
4. “Efficient methods for fitting Bayesian semiparametric models to partly interval-censored data”. Joint Statistical Meetings, Chicago, IL, August 2016.
5. “Bayesian causal mediation analysis for survival data” (poster). The 10th Conference on Bayesian Nonparametrics, Raleigh, NC, June 2015.
6. “Generalized accelerated failure time spatial frailty model” (poster). ENAR Spring Meeting, Miami, FL, March 2015.
7. “Marginal Bayesian nonparametric model for the time-to-infection of the mountain yellow-legged frog.” Joint Statistical Meetings, Boston, MA, August 2014.
8. “A spatial copula approach to fully Bayesian nonparametric survival analysis” (poster). SRCOS Summer Research Conference, Galveston, TX, June 2014.
9. “A spatial copula approach to fully Bayesian nonparametric survival analysis.” Research Seminar, Department of Statistics, University of South Carolina, April 2014.

10. "A spatial copula approach to fully Bayesian nonparametric survival analysis." (Best Senior Student Presentation Award). South Carolina Chapter of the ASA 44th Annual Meeting, Columbia, SC, March 2014.
11. "A covariate-adjusted frailty Cox model for clustered failure time data" (poster). SRCOS Summer Research Conference, Burns, TN, June 2013.
12. "A covariate-adjusted frailty Cox model for clustered failure time data." Research Seminar, Department of Statistics, University of South Carolina, April 2013.
13. "Generalized partial likelihood ratio test for partly linear Cox model." Research Seminar, Department of Statistics, University of South Carolina, October 2012.
14. "Generalized partial likelihood ratio test for partly linear Cox model" (poster). SRCOS Summer Research Conference, Jekyll Island, GA, June 2012.

### Professional Consulting

- Director of Statistical Consulting Center at Northern Illinois University, Summer 2017.
- Consulted for Junxiu Liu, M.D. on use of survival analysis to effects of cardiorespiratory fitness on blood pressure trajectory with aging. The work was published at *Journal of the American College of Cardiology*. 2013-2014.
- Made recommendations on statistical analyses for three clients' projects in the course of *Practicum in Statistical Consulting*. Spring 2014.
- Consulted for Richard Montanucci, Ph.D. on use of multivariate analysis to morphological variation in lizard populations. Spring 2012.

### Courses Taught

- *Statistical Learning* (Fall 2016, Fall 2017, Fall 2018).
- *Theory of Statistics* (Fall 2018).
- *Linear Models* (Spring 2017, Spring 2019).
- *Methods in Biostatistics* (Spring 2016, Spring 2019).
- *Categorical Data Analysis* (Fall, 2019)
- *Introduction to Probability Theory* (Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018).
- *Introduction to Mathematical Statistics* (Spring 2018).
- *Elementary Statistics* (Fall 2013, Fall 2014, Summer 2019).

### Department Service

Tuition Waiver Review Committee, August 2018 - May 2019

Chair of the Search Committee for the Assistant Professor position, August 2018 - May 2019

Chair of Colloquium Committee, August 2017 - present

Member of Advisory Council Committee, August 2018 - May 2019

Member of Awards Ceremony Committee, August 2016 - May 2018  
 Member of Grade Review Panel Committee, August 2016 - May 2018  
 Member of Colloquium Committee, August 2015 - present  
 Member of STAT Club Committee, August 2015 - May 2017  
 Chair of Library Committee, August 2015 - May 2016, August 2017 - May 2018 .

### Student Advisor/Committee Memberships

| Student          | Degree | Major            | Year | Advising role                      |
|------------------|--------|------------------|------|------------------------------------|
| Chien, Yu-Fang   | P.h.D. | Statistics       |      | Advisor                            |
| Shehadeh, M.     | P.h.D  | Statistics       |      | Dissertation proposal committee    |
| Akella, Akhil    | M.S.   | Computer Science |      | Masters thesis committee           |
| Syed, Mohammed   | M.S.   | Computer Science |      | Masters thesis committee           |
| Huang, Jie       | P.h.D  | Statistics       | 2019 | Co-advisor                         |
| Mueller, Carl    | M.S.   | Statistics       | 2019 | Advisor                            |
| McNeely, Kevin   | B.S.   | Statistics       | 2019 | Advisor of Honors Capstone Project |
| Chatterjee, Suvo | P.h.D  | Statistics       | 2019 | Dissertation proposal committee    |
| Kondamudi, Pavan | M.S.   | Computer Science | 2018 | Masters thesis committee           |
| Yang, Yasong     | P.h.D  | Statistics       | 2017 | Dissertation proposal committee    |
| Heermance, J.    | B.S.   | Statistics       | 2017 | Advisor of Honors Capstone Project |
| Liu, Y.          | M.S.   | Statistics       | 2017 | Advisor                            |
| Ekhator, E.E.    | M.S.   | Statistics       | 2017 | Masters thesis committee           |
| Alghzzy, M. A.   | M.S.   | Statistics       | 2017 | Masters thesis committee           |
| Skradski, N.     | M.S.   | Statistics       | 2016 | Masters thesis committee           |

### Professional Memberships

International Chinese Statistical Association, 2015-2018  
 American Statistical Association, 2013-2017  
 International Society for Bayesian Analysis, 2015-2016  
 International Biometric Society (ENAR), 2014-2015  
 Institute of Mathematical Statistics, 2014-2015

### Selected Honors and Awards

2015 James D. Lynch Research Award, University of South Carolina  
 2015 Travel Grant, Department of Statistics, University of South Carolina  
 2014 Travel Grant, Graduate School, University of South Carolina  
 2014 SC-ASA Best Senior Student Presentation Award  
 2013 NSF Travel Grant, SRCOS Summer Research Conference  
 2011 Clayton V. Aucoin Award for Outstanding Masters Student, Clemson University  
 2008 Outstanding Student Scholarship, University of Science and Technology of China