Ick Hoon Jin

CONTACT INFORMATION

421 Daewoo Hall, Yonsei University
50 Yonsei-ro, Seodaemun
Seoul, Rep. of Korea, 03722

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ACADEMIC APPOINTMENT

Yonsei University, Seoul, Republic of Korea.

Assistant Professor, Department of Applied Statistics, Sept. 2019 - .

University of Notre Dame, Notre Dame, Indiana.

Assistant Professor, Department of Applied and Computational Mathematics and Statistics, July 2015 - May 2019.

The Ohio State University Wexner Medical Center, Columbus, Ohio.

Research Scientist, Center for Biostatistics, September 2014 - June 2015.

The University of Texas MD Anderson Cancer Center, Houston, Texas.

Postdoctoral Fellow, Biostatistics, August 2011 - August 2014.
Mentor: Dr. Ying Yuan and Dr. Peter F. Thall

EDUCATION

Texas A&M University, College Station, Texas.

Ph.D., Statistics, August 2011.
Advisor: Dr. Faming Liang

Yonsei University, Seoul, Republic of Korea.

M.A., Applied Statistics, February 2006.
B.A., Applied Statistics, Business Administration, February 2004.

PUBLICATIONS

Students are underlined. * is the article what I am an corresponding author.

1. **Jin, I.H.** and Liang, F. (2013) Fitting social network models using varying truncation stochastic approximation MCMC algorithms. *Journal of Computational and Graphical Statistics*. Vol. 22. No. 4: pp. 927-952. **Selected JCGS highlights at the Interface 2012: Future of Statistical Computing.**

2. Liang, F. and **Jin, I.H.** (2013) A Monte Carlo Metropolis-Hasting algorithms for sampling from distributions with intractable normalizing constants. *Neural Computation*, Vol. 25. No. 8: pp. 2199-2234.

3. **Jin, I.H.**, Yuan, Y., and Liang, F. (2013) Bayesian analysis for exponential random graph models using the adaptive exchange sampler. *Statistics and Its Interface*, Vol. 6: pp. 559-576.

4. **Jin, I.H.** and Liang, F. (2014) Use of SAMC for Bayesian analysis of statistical models with intractable normalizing constants. *Computational Statistics and Data Analysis*. Vol. 71: pp. 402-416.

5. **Jin, I.H.**, Liu, S., Thall, P. F., and Yuan, Y. (2014) Using data augmentation to facilitate conduct of phase I/II clinical trials with delayed outcomes. *Journal of the American Statistical Association*. Vol. 109. No. 506: pp. 525-536.

6. **Jin, I.H.**, Huo, L., Yin, G., and Yuan, Y. (2015) Phase I trial design for drug combinations with Bayesian model averaging. *Pharmaceutical Statistics*, Vol. 14. No. 2: pp. 109-119.

7. Liang, F., **Jin, I.H.**, Song, Q, and J.S. Liu. (2016) An adaptive exchange algorithm for sampling from distribution with intractable normalizing constants. *Journal of the American Statistical Association*. Vol. 111. No. 513: pp. 377-393.

8. **Jin, I.H.**, Yuan, Y., and Bandyopadhyay, D. (2016) A Bayesian hierarchical spatial model for dental caries assessments using non-gaussian Markov random fields. *The Annals of Applied Statistics*. Vol. 10. No. 2: pp. 884-905.

9. Liu, H., **Jin, I.H.** and, Zhang, Z. (2018) Structural Equation Modeling of Social Networks: Specification, Estimation, and Applications. *Multivariate Behavioral Research*, Vol. 53. No. 5: pp.714-730. **Awarded Tanaka Award: Most Outstanding Article in Multivariate Behavioral Research Volume 53.**

10. **Jin, I.H.*** and Jeon, M. (2019) A doubly latent space joint model for local item and person dependence in item response analysis. *Psychometrika*, Vol. 84. No. 1: pp. 236-260.

11. Nam, J. H., Yun, J., **Jin, I.H.***, and Chung, D.* (2020) hubViz: A Novel Tool for Hub-centric Visualization. *Chemometrics and Intelligent Laboratory Systems*. Vol. 203. 104071.

12. Yun, J., Shin, M., **Jin, I.H.***, and Liang, F. (2020) Stochastic approximation Hamiltonian Monte Carlo. *Journal of Statistical Computation and Simulation*. Vol. 90. No. 17: pp. 3135-3156.

13. Che, C., **Jin, I.H.**, and Zhang, Z. (2021) Network Mediation Analysis Using Model-based Eigenvalue Decomposition. *Structural Equation Modeling*. Vol. 28. No. 1: pp. 148-161.

14. Liu, H., **Jin, I.H.**, Zhang, Z, and Yuan, Y. (2021) Social Network Mediation Analysis: Latent Space Approach. *Psychometrika*. Vol. 86. No. 1: pp. 272-298.

15. Jeon, M., **Jin, I.H.**, Schweinberger, M., and Baugh, S. (2021) Mapping unobserved item-respondent interactions: A latent space item response model with interaction map. *Psychometrika*. Vol. 86. No. 2: pp. 378-403.

16. Y. Zhang, S. Cao, C. Zhang, **Jin, I.H.**, and Zang, Y. (2021) A Bayesian Adaptive Phase I/II Clinical Trial Design with Late-onset Competing Risk Outcomes. *Biometrics*. Vol. 77. Issue. 3: pp. 796-808.

17. Park, J., **Jin, I.H.***, and Schweinberger, M. (2022) Bayesian Model Selection for High-Dimensional Ising Models, with Applications to Educational Data. *Computational Statistics and Data Analysis*. Vol. 125: Article 107325.

18. Park, J., Jeon, Y., Shin, M., Jeon, M., and **Jin, I.H.*** (2022) Bayesian Shrinkage for Functional Network Models, with Applications to Longitudinal Item Response Data. *Journal of Computational and Graphical Statistics*. In Press. ArXiv:2006.13698.

19. Liu, F., Eugenio, E., **Jin, I.H.**, and Bowen, C. M. (2022) Differentially Private Synthesis of Social Network Structure via Exponential Random Graph Model. *Journal of Survey Statistics and Methodology*. Accepted.

20. **Jin, I.H.**, Jeon, M., Schweinberger, M, and Lin, L. (2022) Hierarchical Network Item Response Modeling for Discovering Differences Between Innovation and Regular School Systems in Korea. Revision *Journal of Royal Statistical Society, Series C*. Accepted. ArXiv:1810.07876.

Submitted Manuscripts

1. D. Ko, M. Jeon, S. Lee, **Jin, I.H.***, and Park. H*. (2021) Hidden Structure of How Children Think about Themselves Differs from What Parents Think about Their Children. Revision Submitted to *Plos One*.

2. Jeon, Y., Chung, D., Park, J., and **Jin, I.H.*** (2021) Network-based Trajectory Topic Interaction Map for Text Mining of COVID-19 Biomedical Literature. Revision Submitted to *Annals of Applied Statistics*. ArXiv:2106.07374.

3. Park, J. Kang, S. and **Jin, I.H.** (2021) Control of Frequentist Type I Error Rates in Hierarchical Linear Models for Multiregional Clinical Trials Using a Bayesian Approach. Revision Submitted to *Journal of Biopharmaceutical Statistics*.

4. **Jin, I.H.***, Park, J., and Jeon, M. (2021) How social network influences human behavior: An integrated latent space approach. Revision Invited to *Psychometrika*. ArXiv:2109.05200.

5. D. Ko, Im, J., and **Jin, I.H.** (2021) Bayesian Nonparametric quantile regression with multiple proxy variables. Submitted to *Bayesian Analysis*. ArXiv:2112.12904

6. Park, J., Hu, W., **Jin, I.H.***, and Zang, Y. (2022) Bayesian adaptive phase I/II clinical trial design with competing risk model in personalized medicine. Submitted to *Biostatistics*. ArXiv:2203.06830

7. You, K., Kim, I., Jeon, M., and **Jin, I.H.*** (2022) Multiple Latent Spaces Comparisons Using the Topological Analysis. Submitted to *Journal of the American Statistical Association*.

8. Yun, J., Kim, H., Jeon, M., **Jin, I.H***. (2022) Analysis of Connection Times in Bipartite Network Data: Development of the Latent Space Accumulator Model with Applications to Assessment Data. Submitted to *Journal of the American Statistical Association*. ArXiv:2203.14306

9. Kim, H., Jeon, Y.J., Kim, H.C., **Jin, I.H.**, and Jung, S.J. (2022) Application of latent space item response model to clustering stressful life events and Beck Depression Inventory-II: Results from Korean epidemiological survey data. Submitted to *Psychological Medicine*.

10. Ko, D., Park, J., Park, J., Jeon, M., and **Jin, I.H.*** (2022) `LSIRM`: An R Package for a Latent Space Item Response Model with an Interaction Map.

11. **Jin, I.H.**, Liu, F., Eugenio, E., Kim, J., and Liu, S. (2018) Bayesian Hierarchical Spatial Model for Small Area Estimation with Non-ignorable Non-responses and Its Applications to the NHANES Dental Caries Assessments. ArXiv:1810.05297.

Refereed Conference Proceeding

1. Liu, F., Eugenio, E., **Jin, I.H**, Bowen, C. M. (2020) Differentially Private Generation of Social Networks via Exponential Random Graph Models, *Proceedings of 2020 IEEE 44th Annual Computers, Software, and Applications Conference (COMPSAC)*. pp. 1695-1700.

Unpublished Manuscript

1. Jin, I.H. and Liang, F. (2009) Bayesian analysis for exponential random graph models using the double Metropolis-Hastings sampler. *Technical Report 2009-097*. Institute for Applied Mathematics and Computer Science, Texas A&M University.

2. Brodersen, A., **Jin, I.H.**, Cheng, Y., and Jeon, M. (2021) Applying the Network Item Response Model to Student Assessment Data. ArXiv:2003.07657.

Editorial Service

- Associate Editor, Communications for Statistical Applications and Methods, 2017 -

Grant Proposal

- University of Notre Dame, Center for Informatics and Computational Sciences (2018 Seed Grant). "Incorporating Uncertainty in Plant Growth into Models of Coastal Sediment Accretion." Role: Co-PI, Funded, $32,000.

- Yonsei University, Research Grant for New Faculty. "Latent Space Rasch Model: Binary Item Response Matrix Using Network Modeling. 2019-2022. Role: PI, Funed, $25,200.

- Korean National Research Foundation. "Latent Space Generalized Linear Model and Its Applications." 2020-2024. Role: PI, Funded, $336,225.

Teaching

Texas A&M University, College Station, Texas USA

Lecturer

STAT 303: Statistical methods	**Summer 2009**
STAT 201: Elementary statistical inference	**Fall 2009**

STAT 201: Elementary statistical inference **Spring 2010**

Teaching Assistant

STAT 211: Principal of Statistics (Fall 2006 - Spring 2009)
STAT 630: Overview of Mathematical Statistics (Fall 2010, Spring 2011)
STAT 611: Theory of Inference (Spring 2011)
STAT 303: Statistical Methods (Summer 2011)

University of Notre Dame, Notre Dame, Indiana USA

Instructor

ACMS 40950: Topics in Statistics **Fall 2015, 2016**
ACMS 60886: Applied Bayesian Statistics II **Spring 2016, 2018**
ACMS 30540: Mathematical Statistics **Fall 2016**
ACMS 60888: Statistical Computing and Monte Carlo **Spring 2017, Fall 2018**
ACMS 30530: Introduction to Probability **Fall 2017**
ACMS 40878: Statistical Computing with R **Fall 2017, 2018, Spring 2019**

Yonsei University, Seoul, Republic of Korea

Instructor

STA 3126: Mathematical Statistics **Spring 2022**
STA 4117: Data Science 2 - Network Data Analysis **Spring 2020, Spring 2021**
STA 4118: Causal Inference **Fall 2019**
STA 6172: Statistical Computing for Data Science II **Fall 2019, Spring 2021**
STA 6800: Statistical Analysis of Network **Spring 2020**, **Fall 2021**
STA 6160: Bayesian Analysis **Fall 2020, 2021**
STA 6171: Statistical Computing for Data Science I **Fall 2020, Spring 2022**

Award

- Korean International Statistical Society Career Development Award, 2017.

- Tanaka Award: Most Outstanding Article in Multivariate Behavioral Research Volume 53.

Academic Committee

- Chair of Master's Committee

- Justin Luningham (2016; University of Notre Dame)
  - Current Position: Assistant Professor at University of North Texas.
- Alex Brodersen (2018; University of Notre Dame)
- Chang Che (2019; University of Notre Dame)
- Sunhee Park, Junyong Park, Suyoung Choi, Doyoung Song (2021; Yonsei University)

- Hyunjoo Kim, Junghwan Lee, Jiwon Lim (2022; Yonsei University)
- Seyeon Ok, Sangjun Eom, Eunyoung Ryu, Hyunyeong Kim, Suyeon Cho (Current; Yonsei University)

- Chair of Ph.D. Committee

- Haiyan Liu (2018; University of Notre Dame)
  - Co-advised with Zhiyong Johnny Zhang.
  - Current Position: Assistant Professor at University of California, Merced.
  - Topic: Structural Equation Modeling for Social Network.
- Kisung You (2021; University of Notre Dame)
  - Co-advised with Lizhen Lin
  - Current Position: Postdoctoral Research Fellow at Yale University
  - Topic: Topics in Geometric and Topological Data Analysis.
- Jina Park (Current; Yonsei University)
- Dongyoung Ko (Current; Yonsei University)
- Yeseul Jeon (Current; Yonsei University)
- Nayoon Kang (Current; Yonsei University)

Professional Memberships

- American Statistical Association
- Institute of Mathematical Statistics
- International Society of Bayesian Analysis
- International Network of Social Network Analysis
- Korean International Statistical Society
- Korean Statistical Society

Programming Languages

C, R, Matlab, Julia, LaTeX.