

# Sangwook Kang

## Curriculum Vitae

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### Education and Qualifications

- 2007 Ph.D. in Biostatistics Department of Biostatistics, University of North Carolina at Chapel Hill  
2001 B.S. in Statistics Department of Computer Science and Statistics, Seoul National University

### Academic Positions

- 2019/08 - **Visiting Associate Professor**, Department of Statistics,  
College of Liberal Arts and Sciences, University of Connecticut  
2017/03 - **Associate Professor**, Department of Applied Statistics,  
College of Business and Economics, Yonsei University  
2017/09 - **Associate Director**, Yonsei Institute of Data Science,  
College of Business and Economics, Yonsei University  
2013/09 - 2017/02 **Assistant Professor**, Department of Applied Statistics,  
College of Business and Economics, Yonsei University  
2010/08 - 2013/08 **Assistant Professor**, Department of Statistics,  
College of Arts and Sciences, University of Connecticut  
2007/08 - 2010/08 **Assistant Professor of Biostatistics**, Department of Epidemiology and Biostatistics,  
College of Public Health, University of Georgia

### External Grants

#### Ongoing

- 2017 - 2020 NRF-2017R1A2B4005818, Statistical Inference and Application of  
Semiparametric Quantile Residual Life Models, PI ₩248,130,000

#### Pending

#### Completed

- 2010 - 2012 NIH STTR [R41/42], New Technology for Proteomics and Glycomics,  
Co-I (PI: James Atwood) \$ 400,510  
2010 - 2014 1R01GM088731-01 (NIH), Using the Scientific Curriculum Vitae to  
Study the Effects of Targeted Interventions on Research Careers,  
PI at UConn (Subcontract from UGA) (PI: Monica Gaughan) \$ 496,771  
2012 - 2015 DMS-1209022 (NSF), Statistical Inferences, Computing, and Applications  
of Semiparametric Accelerated Failure Time Models, Co-PI (PI: Jun Yan) \$ 130,000  
2014 - 2017 NRF-2014R1A1A2055898, Efficient Statistical Inferences using Induced  
Smoothing for Fitting Semiparametric Accelerated Failure Time Models, PI ₩125,000,000

### Internal Grants

#### Completed

- 2013 - 2014 Yonsei Research Grant for New Faculty, PI ₩10,000,000  
2012 UConn Research Foundation Faculty Large Grant, PI \$ 19,379  
2010 UGA Research Foundation Faculty Research Grant, PI \$ 7,610

### Publications

## Refereed research papers

1. Lu, T., S. Kang, and H. Zhou (2020). Statistical Inference for Semiparametric Accelerated Failure Time Modeling under Multivariate Outcome-Dependent Sample Design. *Forthcoming*.
2. Caplan, D., Y. Li, W. Wang, S. Kang, L. Marchini, H. Cowen, and J. Yan (2019). Dental Restoration Longevity among Geriatric and Special Needs Patients. *JDR Clinical & Translational Research* **4**(1), 41–48.
3. Choi, S., S. Kang, and X. Huang (2018). Smoothed quantile regression analysis of competing risks. *Biometrical Journal* **60**(5), 934–946.
4. Kang, S. and K. Kim (2018). Accelerated Failure Time Models for Right Censored Failure Time Data. *Journal of the Korean Data & Information Science Society* **29**(6), 1365–1379.
5. Kim, S. H., S. Kang, and M.-K. Song (2018). Intensity of Care at the End of Life Among Older Adults in Korea. *Journal of palliative care* **33**(1), 47–52.
6. Kang, S. (2017). Fitting semiparametric accelerated failure time models for nested case-control data. *Journal of Statistical Computation and Simulation* **87**(4), 652–663.
7. Joeng, H.-K., M.-H. Chen, and S. Kang (2016). Proportional exponentiated link transformed hazards (ELTH) models for discrete time survival data with application. *Lifetime data analysis* **22**(1), 38–62.
8. Jung, J., O. Harel, and S. Kang (2016). Fitting additive hazards models for case-cohort studies: a multiple imputation approach. *Statistics in Medicine* **35**(17). sim.6588, 2975–2990.
9. Chiou, S., S. Kang, and J. Yan (2015). Rank-based estimating equations with general weight for accelerated failure time models: an induced smoothing approach. *Statistics in Medicine* **34**(9), 1495–1510.
10. Chiou, S. H., S. Kang\*, and J. Yan (2015). Semiparametric Accelerated Failure Time Modeling for Clustered Failure Times From Stratified Sampling. *Journal of the American Statistical Association* **110**(510), 621–629. eprint: <http://dx.doi.org/10.1080/01621459.2014.917978>.
11. Chiou, S. H., S. Kang, and J. Yan (July 2014a). Fast Accelerated Failure Time Modeling for Case-cohort Data. *Statistics and Computing* **24**(4), 559–568.
12. Chiou, S. H., S. Kang, and J. Yan (Nov. 2014b). Fitting Accelerated Failure Time Models in Routine Survival Analysis with R Package aftgee. *Journal of Statistical Software* **61**(11).
13. Chiou, S., S. Kang, J. Kim, and J. Yan (Oct. 2014). Marginal semiparametric multivariate accelerated failure time model with generalized estimating equations. *Lifetime Data Analysis* **20**(4), 599–618.
14. Ryan, J., R. Andrews, M. B. Barry, S. Kang, A. Iskandar, P. Mehla, and R. Ganeshan (2014). Preventability of 30-day readmissions for heart failure patients before and after a quality improvement initiative. *American Journal of Medical Quality* **29**(3), 220–226.
15. Kang, S., J. Cai, and L. Chambless (2013). Marginal additive hazards model for case-cohort studies with multiple disease outcomes: an application to the Atherosclerosis Risk in Communities (ARIC) study. *Biostatistics* **14**(1), 28–41.
16. Ryan, J., S. Kang, S. Dolacky, J. Ingrassia, and R. Ganeshan (2013). Change in Readmissions and Follow-up Visits as Part of a Heart Failure Readmission Quality Improvement Initiative. *The American Journal of Medicine* **126**(11), 989–994.
17. Shook, B. A., D. H. Manz, J. J. Peters, S. Kang, and J. C. Conover (2012). Spatiotemporal changes to the subventricular zone stem cell pool through aging. *The Journal of Neuroscience* **32**(20), 6947–6956.
18. Yoon, Y. J., C. Park, E. Hofmeister, and S. Kang (2012). Group variable selection in cardiopulmonary cerebral resuscitation data for veterinary patients. *Journal of Applied Statistics* **39**(7), 1605–1621.
19. Kang, S. and J. Cai (2010). Asymptotic results for fitting marginal hazard models from stratified case-cohort studies with multiple disease outcomes. *Journal of the Korean Statistical Society* **39**(3), 371–385.
20. Hofmeister, E. H., B. M. Brainard, C. M. Egger, and S. Kang (2009). Prognostic indicators for dogs and cats with cardiopulmonary arrest treated by cardiopulmonary cerebral resuscitation at a university teaching hospital. *Journal of the American Veterinary Medical Association* **235**(1), 50–57.
21. Kang, S. and J. Cai (2009a). Marginal Hazards Model for Case-cohort Studies with Multiple Disease Outcomes. *Biometrika* **96**(4), 887–901.
22. Kang, S. and J. Cai (2009b). Marginal Hazards Regression for Retrospective Studies within Cohort with Possibly Correlated Failure Time Data. *Biometrics* **65**, 405–414.
23. Caplan, D., J. Chasen, E. Krall, J. Cai, S. Kang, R. Garcia, S. Offenbacher, and J. Beck (2006). Lesions of endodontic origin and risk of coronary heart disease. *Journal of dental research* **85**(11), 996–1000.

## Other publications

1. Hofmeister, E. H., B. M. Brainard, Egger, and S. Kang (2013). Additional variables identified as significant return of spontaneous circulation in cardiac arrest and resuscitation. *Journal of the American Veterinary Medical Association* **243**(4), 480.

## Book chapters

1. Dey, D. and J. Yan (2015). "Extreme Value Modeling and Risk Analysis: Methods and Applications". In: Chapman and Hall/CRC. Chap. 24, pp. 493–504.

## Awards and Recognitions

- 2015 Excellence in Teaching, Yonsei University, Seoul, Korea  
 2015 Chohun Research Award, College of Commerce and Economics, Yonsei University, Korea  
 2010 Kupper Dissertation Publication Award, Department of Biostatistics, UNC-CH  
 2001 Fryer Award, Department of Biostatistics, UNC-CH  
 1999, 2000 Tuition Scholarship, Department of Statistics, Seoul National University, Korea

## Invited Talks

- Department of Statistics, University of Connecticut, Storrs, CT, USA, Feb 2020.
- 12th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2019), University of London, London, UK, Dec 2019.
- IASC-ARS 25th Anniversary Conference & CASC 2nd Annual Conference, Beijing Conference Center, Beijing, China, Nov 2018.
- 2018 ICSA China Conference, Shangri-La Hotel, Qingdao, China, July 2018
- The 27th Southern Taiwan Statistics Conference, National Cheng Kung University, Tainan, Taiwan, June 2018
- The 2nd International Conference on Econometrics and Statistics, The City University of Hong Kong, Hong Kong, June 2018.
- ENAR 2018 Spring Meeting, Atlanta, GA, USA, Mar 2018.
- 2018 SNU International Statistics Workshop, Seoul National University, Seoul, Korea, Jan 2018.
- IASC-ARS NZSA 2017 Spring Meeting, The University of Auckland, Auckland, New Zealand, Dec 2017.
- Institute of Health and Environment, Seoul National University, Seoul, Korea, Jun 2017.
- Survival Analysis Section, Semi-annual Korean Statistical Society Meeting, Sookmyung University, Seoul, Korea, May 2017.
- Department of Statistics, Inha University, Incheon, Korea, Apr 2017.
- The 31st NESS (New England Statistical Symposium), University of Connecticut, Storrs, MA, USA, Apr 2017.
- The 10th ICSA International Conference on Global Growth of Modern Statistics in the 21st Century, Shanghai Jiao Tong University, Shanghai, China, Dec 2016.
- Joint Conference by Korean National Institute of Food and Drug Safety Evaluation, Korea Society for Clinical Development, and International Biometric Society - Korea Region, Seoul, Korea, Dec 2016.
- Department of Statistics, Hankook University of Foreign Studies, Yongin, Korea, Nov 2016.
- Applied Statistics Section, Semi-annual Korean Statistical Society Meeting, Statistics Training Institute, Daejeon, Korea, Nov 2016.

- Department of Statistics, Pusan National University, Korea, Feb 2016.
- Department of Information Statistics, Korea National Open University, Korea, Nov 2015.
- Statistical Computing Section, Semi-annual Korean Statistical Society Meeting, Hankook University of Foreign Studies, Korea, Oct 2015.
- Statistical Computing Asia 2015, Academia Sinica, Taiwan, July 2015.
- Department of Applied Statistics, Chung-ang University, Korea, Feb 2015.
- The 2014 Annual Meeting of CIPS (The Chinese Institute of Probability and Statistics), National Dong Hwa University, Taiwan, Jun 2014.
- Sixth International Statistics Forum, Renmin University, China, May 2014.
- Department of Applied Statistics, Konkuk University, Korea, May 2014.
- Biometric Section, National Cancer Center, Ilsan, Korea, Dec 2013.
- Tri-School Conference, Ewha Woman's University, Korea, Nov 2013.
- Semi-annual Biotatistics Section Meeting of the Korean Statistical Society, Seoul National University, Korea, Nov 2013.
- Biostatistics Section, Semi-annual Korean Statistical Meeting, Dongguk University, Korea, Nov 2013.
- Biostatistics Section, Asan Medical Center, Korea, Oct 2013.
- Joint Meeting of the IASC Satellite Conference for the 59th ISI WSC and the 8th Asian Regional Section of the IASC, Yonsei University, Korea, Aug 2013.
- Department of Statistics, Colorado State University, Fort Collins, CO, USA, Apr 2013.
- Department of Mathematics & Statistics, University of Vermont, Burlington, VT, USA, Apr 2013.
- Department of Mathematics & Statistics, University of Massachusetts, Amherst, MA, USA, Oct 2012.
- Department of Epidemiology & Population Health, Albert Einstein College of Medicine, NY, USA, Sep 2012.
- Department of Statistics, Sungkyunkwan University, Korea, Jun 2012.
- ICSA (International Chinese Statistical Association) Applied Statistics Symposium, Boston, MA, USA, Jun 2012.
- The 26th NESS (New England Statistical Symposium), Boston University, Boston, MA, USA, Apr 2012.
- Department of Biostatistics, Yonsei University, Seoul, Korea, Jun 2011.
- Department of Applied Statistics, Yonsei University, Seoul, Korea, Jun 2011.
- Center for Statistical Sciences, Brown University, Providence, RI, USA, Feb 2011.
- International Chinese Statistical Association (ICSA) Applied Statistics Symposium, San Francisco, CA, USA, Jun 2009.
- Department of Statistics, Hankook University of Foreign Studies, Seoul, Korea, Jun 2009.
- Department of Statistics, Inha University, Incheon, Korea, Jun 2009.
- Department of Mathematics and Statistics, Texas-Tech University, Lubbock, TX, USA, Apr 2009.
- Department of Statistics, University of Georgia, Athens, GA, USA, Mar 2008.
- Institute of Bioinformatics, University of Georgia, Athens, GA, USA, Sep 2008.

## Teaching

### Yonsei University

Survival Analysis (STAT 3108)	3-credit undergraduate level	Fall 2013 - 2018
Analysis of Longitudinal Data (STAT 6660)	3-credit graduate level	Fall 2018
Sampling Theory (STAT 3123)	3-credit undergraduate level	Spring 2014 - 2019
Reliability and Survival Analysis I (STAT 6220)	3-credit graduate level	Spring 2014 - 2019
Analysis of Incomplete Data (STAT 6620)	3-credit graduate level	Fall 2014/2017
Linear Model (STAT 6110)	3-credit graduate level	Fall 2014 - 2016
Buisness Statistics (MBA 6101)	1.5-credit MBA course	Spring 2016/2018
Uncertainty, Data & Decision Making (MBS 6108)	3-credit graduate level	Fall 2015/2017
Multivariate Analysis of Big Data (GSE 5043)	1.5-credit graduate level	Spring 2015

### University of Connecticut

Design of Experiments (STAT 3515/5515)	3-credit (under)graduate level	Spring 2013
Introduction to Biostatistics (STAT 4625/5625)	3-credit (under)graduate level	Fall 2011/2012, Spring 2012
Survival Analysis (STAT5645)	3-credit graduate level	Spring 2011

### University of Connecticut Health Center

Topics in Intermediate Biostatistics (PUBH 5434)	3-credit graduate level	Fall 2011, 2012
Applied Regression Analysis (PUBH 5497)	3-credit graduate level	Fall 2010

### University of Georgia

Biostatistics for Public Health Sciences (BIOS 2010)	3-credit undergraduate level	Fall 2009, Spring 2010
Introductory Biostatistics II (BIOS 7020)	3-credit graduate level	Spring 2008, Spring 2009
Research Data Management & Computing (BIOS 7400)	3-credit graduate level	Fall 2008/2009, Spring 2010
Biostatistical Applications for Pharmaceutical and Biotechnology Industries	3-credit online course	Summer 2010

## Professional Memberships

- 2004 - Member, American Statistical Association
- 2005 - Member, International Biometric Society
- 2005 - Member, Korean Statistical Society

## Services

### Editorial

- 2016 - 2017 Managing Editor, Communications for Statistical Methods and Applications
- 2016 - Associate Editor, Communications for Statistical Methods and Applications
- 2018 - Associate Editor, Journal of the Korean Statistical Society

### Korean Statistical Society

- 2018 - Editor, Bulletin of the Korean Statistical Society

### International Biometric Society

- 2016 - 2017 Treasurer, International Biometric Society, Korea Region

### Journal Reviews

#### Statistical Journals

Annals of Applied Statistics; Biometrics; Biostatistics; Communications in Statistics - Simulation & Computation; Communications for Statistical Applications and Methods; Computational Statistics & Data Analysis; Computational Statistics; Lifetime Data Analysis; Japanese Journal of Statistics & Data Science; Journal of Applied Statistics; Journal of the Korean Statistical Society; Journal of Sta-

tistical Computation & Simulation; Korean Journal of Applied Statistics; Statistica Sinica; Statistics in Bioscience, Statistics in Medicine

Statistical Reviewers for

American Journal of Epidemiology, Epidemiologic Perspective & Innovations, PLOS ONE