JAE KWANG KIM

Department of Statistics, Iowa State University, Ames, IA, 50011, U.S.A.
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EDUCATION

2000 **PhD, Iowa State University, Ames, Iowa.**
Department of Statistics

1993 **MS, Seoul National University, Seoul, Korea.**
Department of Statistics

1991 **BS, Seoul National University, Seoul, Korea.**
Department of Computer Science and Statistics

EMPLOYMENT HISTORY

Aug. 2012 - present **Professor, Iowa State University, U.S.A.**

Sep. 2016 - Aug. 2018 **Professor, KAIST, South Korea (joint appointment with ISU)**

Sep. 2010 - Aug. 2013 **Director, Center for Survey Statistics and Methodology, Iowa State University, U.S.A.**

Aug. 2008 - Aug. 2012 **Associate Professor, Iowa State University, U.S.A.**

Mar. 2007 - Jul. 2008 **Associate Professor, Yonsei University, Korea**

Mar. 2004 - Feb. 2007 **Assistant Professor, Yonsei University, Korea**

Mar. 2002 - Feb. 2004 **Assistant Professor, Hankuk University of FS, Korea**

Jun. 2000 - Feb. 2002 **Senior Statistician, Westat**

Sep. 1999 - May. 2000 **Mathematical Statistician, Bureau of the Census**

1995-Aug. 1999 **Research Assistant, Statistical Laboratory, Iowa State University**

1993 - 1994 **Military Service, Korea**

AWARDS

2023 **Brain Pool** from National Research Foundation of Korea, Korea.

2021 **Outstanding Research Award** from College of Liberal Arts and Sciences, Iowa State University.

2020 **Fellow** for Institute of Mathematical Statistics.

2020 **LAS Dean's Professor** from College of Liberal Arts and Sciences, Iowa State University.

2016 **Ken Foreman lecturer** from Australian Bureau of Statistics

2015 **Gertude M. Cox Award** from Washington Statistical Society and RTI International.

2014 **Mid-Career Research Award** from College of Liberal Arts and Sciences, Iowa State University.

2013 **Brain Pool** from Korean-American Scientist and Engineers Association, Korea.

2012 **Fellow** for American Statistical Association.

2010 **ESRC-SSRC Visiting Scholars fund** from Economic and Social Research Council, U.K.

2006 **Yonsei Research Award** from Yonsei University, Korea.

2004 **Young Research Award** from The Korean Statistical Society.

2001 **Special Achievement Award** from The U.S. Bureau of Census.

1999 **Bryant Scholarship Award** for outstanding graduate work on survey sampling from The American Statistical Association.

GRANTS and CONTRACTS

1. "Developing statistical tools for data integration and data fusion for finite population inference," National Science Foundation, (PI: Kim), 8/15/2023–8/14/2026, $375,000.

2. "Elements: Development of Assumption-Free Parallel Data Curing Service for Robust Machine Learning and Statistical Predictions," National Science Foundation, (PI: Cho, Co-PI: Kim), 9/1/2019-8/31/2023, $592,386.

3. Innovations in statistical methodology for complex surveys, National Science Foundation, (PI: Kim, Co-PI: Berg), 8/15/2017-7/31/2021, $430,000.

4. Statistical and survey methods support for the National Resources inventory, USDA Natural Resources Conservation Service. PI: Z. Zhu, Co-PIs: J. K. Kim, C. L. Yu., E. Berg,

7/1/23 – 6/30/24	$ 3,500,000
7/1/22 – 6/30/23	$ 3,500,000
7/1/21 – 6/30/22	$ 3,500,000
7/1/20 – 6/30/21	$ 3,000,000
7/1/19 – 6/30/20	$ 3,000,000
7/1/18 – 6/30/19	$ 3,000,000
7/1/17 – 6/30/18	$ 3,000,000
7/1/16 – 6/30/17	$ 3,000,000
7/1/15 – 6/30/16	$ 3,000,000
7/1/14 – 6/30/15	$ 3,100,000
7/1/13 – 6/30/14	$ 2,550,000
7/1/12 – 6/30/13	$ 3,100,000
7/1/11 – 6/30/12	$ 2,550,000
5/1/10 – 7/31/11	$ 2,550,000
3/1/09 – 4/30/10	$ 2,550,000
2/1/08 – 3/31/09	$ 2,450,000

5. ASA/NSF/Census Fellowship, "Survey Integration: Combining information from multiple sources", $179,959, 2016-2018.

6. CANSSI Collaborative Research Team Project (PI: D. Haziza, Co-PI: J.F. Beaumont, J.M. Brick, H. Cardot, J. Chen, C. Goga, J.K. Kim, W. Lu, C. Wu), "Statistical Inference for complex surveys with missing observations", $200,000, 2015-2018.

7. Food and Agriculture Organization of the United Nations (PI: Z. Zhu, Co-PI: J.K. Kim and E. Berg), Improvement of the collection and management of data from administrative sources". $225,000, 2014-2016.

8. Fractional imputation for incomplete data analysis, National Science Foundation, PI: Kim. 8/1/13-7/31/16, $249,997.

9. New approaches for area frame development, area sample design, and geospatial data collection, USDA-NASS. PI: J.K. Kim, Co-PIs: C. L. Yu., Z. Zhu, 3/1/2011 - 9/30/2015, $ 962,800.

10. Statistical and survey methodological support for the Conservation Effects Assessment Project, USDA Natural Resources Conservation Service. PI: S. M. Nusser, Co-PIs: J-K. Kim, C. L. Yu, Z. Zhu, E. Berg. 9/18/13-9/17/15, $300,000.

11. Evaluating the impact of statewide BMI screening initiative in elementary schools, National Institute of Health (R21). PI: G. Welk, Co-PIs: M. Ihmels, J.K. Kim, Jul. 2011 - Jun. 2013, $ 399,533.

12. SAIPE variance improvement project : Phase Two, U.S. Bureau of Census. PI: J.K. Kim, Co-PI: W.A. Fuller, June. 2005 - Aug. 2006 $ 270,000.

13. Professional Service Contract on "Asymptotic properties of the nonresponse weighting adjustments estimator using estimated response propensity scores", Sep. 2004 - Aug. 2005, U. S. National Center for Health Statistics, $24,500.

14. SAIPE variance improvement project, U.S. Bureau of Census. PI: J.K. Kim, Co-PI: W.A. Fuller, June. 2003 - Aug. 2004 $ 100,000.

15. Co-investigator for the research project on variance estimation after imputation, U. S. National Center for Educational Statistics (with W. A. Fuller, G. Kalton, and J. M. Brick), Sep. 2000 - Feb. 2002 $ 400,000.

OTHER EXPERIENCES

Sep. 2021 - Mar. 2022: Consultant for small area estimation (SAE) methodology development, United Nations FPA.

Sep. 2018 - Aug. 2019: PI for the project "Efficient Sampling design for quality control", Samsung Electronics.

Sep. 2018 - Dec. 2018: PI for the project "A data-scientific Approach to estimation of FMC-to-door time," sponsored by the Korean Society of Cardiology.'

Sep. 2017 - Dec. 2017: PI for "Estimation of child mortality of women and children from the respondent driven sample in South Syria", sponsored by MEDAIR.

May. 2016 - Dec. 2016: Consultant for Dual frame estimates of indicators for Feed the Future (FEF) Zone of Influence (ZOI) and Food for Peace (FFP) project implementation area in Guatemala and Nepal, Food and Nutrition Technical Assistance III Project (FANTA), USAID.

Sep. 2015 - Dec. 2015: Consultant for NTTO Variance Project, CIC Research, Inc.

Jun. 2015: Census Summer Fellow, U.S. Census Bureau.

Apr. 2014 - Jun. 2014: SMART survey for election prediction for the 6th local election in Korea, JTBC.

Aug. 2012- Dec. 2012: Analysis of Mixed mode surveys, Statistical Research Institute, Statistics Korea, PI, J.K. Kim.

Aug. 2011: Census Summer Fellow, U.S. Census Bureau.

Feb. 2011 - Aug. 2011: Small area estimation for Korean household income and expenditure survey, Statistical Research Institute, Statistics Korea, PI: J.K. Kim.

Dec. 2010 - April 2011: Sampling design and propensity weighting for on-line panel survey, Korean Broadcasting Service, PI. K. Hahn and Co-PI: J.K. Kim.

Mar. 2010 - Oct. 2010 Principal investigator for the small area research project for the income and poverty estimates, Mexico.

Mar. 2009 - Oct. 2009 Principal investigator for the calibration weighting project for the ENIGH survey, Mexico.

Sep. 2007 - Dec. 2007 Principal investigator for the weighting project for the panel sample of Korean Retirement and Income Study, National Pension Research Institute, Korea.

Apr. 2007 - Nov. 2007 Principal investigator for the imputation project for Korean Labor and Income Dynamics Panel Survey, Korean Labor Institute, Korea

Mar. 2007 - Dec. 2007 Principal investigator for the imputation project for Korean Business and Establishment Survey, Korean National Statistical Office, Korea

Sep. 2006 - Dec. 2006 Principal investigator for the sampling design project for Survey of IT use in Business Establishments, National IT industry promotion agency, Korea

Jan. 2004 - Dec. 2006 Served as a member of advisory board for national election exit poll surveys, Korean Broadcast Service, Korea.

Apr. 2004 - Nov. 2004   Co-investigator for small area estimation project on the national household income and expenditure survey, Korean National Statistical Office, Korea.

Mar. 2003 - Feb. 2004   Co-investigator for the weighting adjustment project on the national household income and expenditure survey, Korean National Statistical Office, Korea

June. 2002 - Dec. 2003   Co-investigator for the sampling design and estimation project for the monthly index of real estate, KB bank, Korea

PUBLICATIONS

<u>Book:</u>

Kim, J.K. (2018). "Survey Sampling" (in Korean), Second Edition, Korean Freedom Academy, Seoul, Korea.

Kim, J.K. and Shao, J. (2021). "Statistical Methods for Handling Incomplete Data, 2nd Edition", Chapman & Hall / CRC.

Articles in refereed journals:

[105] M. Uehara, D. Lee, and J.K. Kim (2023). "Semiparametric regression model with nonignorable nonresponse", *Scandinavian Journal of Statistics*, https://doi.org/10.1111/sjos.12652

[104] Y. Yang, Y. Kwon, J.K. Kim, and I. Cho (2023). "Ultra Data-Oriented Parallel Fractional Hot-Deck Imputation with Efficient Linearized Variance Estimation" *IEEE transactions on Knowledge and Data Engineering*, 10.1109/TKDE.2023.3249567

[103] Gao, C., Yang, S., and Kim, J.K. (2023). "Soft calibration for correcting selection bias under mixed-effects models," *Biometrika*, https://doi.org/10.1093/biomet/asad016

[102] Wang, H. and Kim, J.K. (2023). "Statistical inference using regularized M-estimation in the reproducing kernel Hilbert space for handling missing data", *Annals of the Institute of Statistical Mathematics*, https://doi.org/10.1007/s10463-023-00872-8

[101] J.K. Kim and K. Morikawa (2023). "An empirical likelihood approach to reduce selection bias in voluntary samples" (with discussion), *Calcutta Statistical Association Bulletin*, in press.

[100] J.K. Kim, Z. Wang, and J.N.K. Rao (2023). "Hypotheses Testing from Complex Survey Data Using Bootstrap Weights: A Unified Approach," *Journal of the American Statistical Association*, https://doi.org/10.1080/01621459.2023.2183130

[99] Kim, J.K. and Wang, H. (2023). "A note on weight smoothing in survey sampling," *Survey Methodology*, 12-001-X, Vol. 49, No. 1. Paper available at http://www.statcan.gc.ca/pub/12-001-x/2023001/article/00005-eng.htm.

[98] Wang, Z., Kim, H.J. and Kim, J.K. (2023). "Survey data integration for regression analysis using model calibration", *Survey Methodology*, Statistics Canada, Catalogue No. 12-001-X, Vol. 49, 89–115.

[97] Wang, Z., and Kim, J.K. (2022). Comments on "Statistical inference with non-probability survey samples". Survey Methodology, Statistics Canada, Catalogue No. 12-001-X, Vol. 48, No. 2.

[96] Wang, H. and Kim, J.K. (2022) "Maximum sampled conditional likelihood for informative subsampling," *Journal of Machine Learning Research*, **23**, 1–50.

[95] Gao, C., Thompson, K.J., Yang, S., and Kim, J.K. (2022). "Nearest neighbor ratio imputation with incomplete multinomial outcome in survey sampling", *Journal of the Royal Statistical Society: Series A* **185**, 1903–1930.

[94] Wang, Z., Peng, L., and Kim, J.K. (2022). "Bootstrap inference for the finite population

mean under complex sampling designs," *Journal of the Royal Statistical Society: Series B*, **84**, 1150–1174.

[93] Kim, J.K. (2022). A gentle introduction to data integration in survey sampling, The survey statistician, 85, 19—29.

[92] Kim, S., Kim, J. K, and Ahn, K. W. (2022). "A calibrated Bayesian method for the stratified proportional hazards model with missing covariates", Lifetime Data Analysis, **28**, 169–193.

[91] Kim, J.K., Rao, J.N.K., and Kwon, Y (2022). "Analysis of clustered survey data based on two-stage informative sampling and associated two-level models," *Journal of the Royal Statistical Society: Series A*, **185**, 1522–1540.

[90] Lee, D., Zhang, L-C., and Kim, J.K. (2022). "Maximum entropy classification for record linkage," *Survey Methodology*, **48**, 1–23.

[89] Lee, D and Kim, J.K. (2022). "Semiparametric imputation using Conditional Gaussian mixture models under item nonresponse", *Biometrics*, **78**, 227–237.

[88] Y. Yang, I.H. Cho, and J.K. Kim (2022). "Parallel Fractional Hot Deck Imputation and Variance Estimation for Big Incomplete Data Curing," *IEEE transactions on Knowledge and Data Engineering*, **34**, p3912–3926.

[87] S. Sugasawa and J.K. Kim (2022). "An approximate Bayesian approach to regression estimation with many auxiliary variables", *Statistica Sinica*, **32**, 1-22.

[86] S. Chen, S. Yang, and J.K. Kim (2022). "Nonparametric Mass Imputation for Data Integration", *Journal of Survey Statistics and Methodology*, **10**, 1–24.

[85] H. Sang , J.K. Kim, and D. Lee (2022). "Semiparametric fractional imputation using Gaussian mixture models for handling multivariate missing data", *Journal of the American Statistical Association*, **117**, 654–663.

[84] K. Morikawa and J.K. Kim (2021). "Semiparametric Optimal Estimation With Nonignorable Nonresponse Data", *Annals of Statistics*, **49**, 2991–3014.

[83] G. Goh and J.K. Kim (2021). "Accounting for model uncertainty in multiple imputation under informative sampling," *Scandinavian Journal of Statistics*, **48**, 930–949. .

[82] J.K. Kim, S. Park, Y. Chen and C. Wu (2021). "Combining Non-probability and Probability Survey Samples Through Mass Imputation," *Journal of the Royal Statistical Society: Series A*, **184**, 941–963.

[81] S. Yang, J.K. Kim, and Y. Hwang (2021). "Integration of survey data and big observa-

tional data for finite population inference using mass imputation", *Survey Methodology*, **49**, 793–807.

[80] H. Sang and J.K. Kim (2021). "An approximate Bayesian inference using propensity score estimation under unit nonresponse", *Canadian Journal of Statistics*, **49**, 793–807.

[79] J.K. Kim and S. Tam (2021). "Data integration by combining big data and survey sample data for finite population inference", *International Statistical Review*, **89**, 382–401.

[78] S. Yang and J.K. Kim (2020). "Statistical Data Integration in Survey Sampling: A review", *Japanese Journal of Statistics and Data Science* **3**, 625–650.

[77] Berg, E. and Kim, J.K. (2020). "An approximate best prediction approach to small area estimation for sheet and rill erosion under informative sampling," *Annals of Applied Statistics*, **15**, 102–125.

[76] S. Yang, J.K. Kim, and R. Song (2020). "Doubly Robust Inference when Combining Probability and Non-probability Samples with High-dimensional Data", *Journal of the Royal Statistical Society: Series B* **82**, 445-465.

[75] S. Yang and J.K. Kim (2020). "Predictive mean matching imputation in survey sampling", *Scandinavian Journal of Statistics* **47**, 839-861.

[74] J.K. Kim, S. Park, and K. Kim (2019). "A note on propensity score weighting method using paradata in survey sampling," *Survey Methodology*, **45**, 451–463.

[73] S. Park and J.K. Kim (2019). "Mass imputation for two-phase sampling", *Journal of the Korean Statistical Society*, **48**, 578–592.

[72] D. Lee, J.K. Kim, and C. Skinner (2019). "Within-cluster resampling for multilevel models under informative cluster size", *Biometrika* **106**, 965–972.

[71] S. Yang and J.K. Kim (2019). "Nearest neighbor imputation for general parameter estimation in survey sampling," Advances in Econometrics (Volume 39) — *The Econometrics of Complex Survey Data: Theory and Applications*, 209-234.

[70] J.K. Kim and Z. Wang (2019). "Sampling techniques for big data analysis in finite population inference," *International Statistical Review,* **87**, S177-S191.

[69] S. Tam and J.K. Kim (2018). "Big data, selection bias, and Ethics - An official statistician's perspective", *Statistical Journal of the IAOS*, **34**, 577-588.

[68] K. Morikawa and J.K. Kim (2018). "A note on the equivalence of two semiparametric estimation methods for nonignorable nonresponse," *Statistics and Probability Letters* **140**, 1-6.

[67] J.K. Kim, Z. Wang, Z. Zhu, and N. Cruze (2018). "Combining survey and non-survey big data for improved sub-area prediction using a multi-level model", *Journal of Agricultural, Biological, and Environmental Statistics*, **23**, 175–189

[66] Y. Hwang, S. Lu, and J.K. Kim (2018). "Bottom-up estimation and top-down prediction in multilevel models: Solar Energy Prediction combining information from multiple sources", *Annals of Applied Statistics*, **12**, 2096-2120.

[65] W. Yu, J.K. Kim, and T. Park (2018). "Estimation of Area Under the Curve (AUC) under nonignorable verification bias", *Statistica Sinica*, **28**, 2149-2166 .

[64] Z. Wang, J.K. Kim, and S. Yang. (2018). "An approximate Bayesian inference under informative sampling," *Biometrika*, **105**, 91–102.

[63] Y. Kwon, J.K. Kim, M.C. Paik, and H. Kim (2018). A robust calibration-assisted method for linear mixed effects model under cluster-specific nonignorable missingness. *Statistica Sinica*, **28**, 1907-1928.

[62] S. Park and J.K. Kim (2018). "Analysis of inaccurate data using mixture measurement error models", *Journal of the Korean Statistical Society,* **47**, 1–12.

[61] S. Park, J.K. Kim, and D. Stukel (2017). "A measurement error model for survey data integration: combining information from two surveys", *Metron*, **75**, 345–357.

[60] K. Morikawa, J.K. Kim, and Y. Kano (2017). "Semiparametric maximum likelihood estimation under nonignorable nonresponse," *Canadian Journal of Statistics*, **45**, 393-409.

[59] S. Yang and J.K. Kim (2017). Discussion of "Dissecting multiple imputation from a multi-phase inference perspective: what happens when god's, imputer's and analyst's models are uncongenial?" by Xie and Meng, *Statistica Sinica*, **27**, 1485-1594.

[58] S. Chen and J.K. Kim. (2017). "Semiparametric fractional imputation using empirical likelihood in survey sampling", *Statistical Theory and Related Fields*, **1**, 69–81.

[57] J.K. Kim, S. Park, and Y. Lee (2017). "Statistical inference using generalized linear mixed models under informative cluster sampling," *Canadian Journal of Statistics,* **45**, 479–497.

[56] J. Im, E. Ahn, N. Beck, J.K. Kim, and T. Park (2017). Correlation estimation with singly truncated bivariate data. *Statistics in Medicine*, **36**, 1977–1988.

[55] Y. Xu, J.K. Kim, and Y. Li. (2017). "Semiparametric estimation for measurement error models with validation data", *Canadian Journal of Statistics*, **45**, 185–201.

[54] J.K. Kim and S. Yang. (2017). "A note on multiple imputation under informative sam-

pling", *Biometrika*, **104**, 221–228.

[53] Yang, S. and J.K. Kim (2017). "A semiparametric inference to regression analysis with missing covariates in survey data", *Statistica Sinica*, **27**, 261–285.

[52] D. Da Silva, C. Skinner, and J.K. Kim. (2016). "Using Binary Paradata to Correct for Measurement Error in Survey Data Analysis." *Journal of the American Statistical Association*, **111**, 526–537.

[51] E. Berg, J.K. Kim, and C. J. Skinner. (2016). "Imputation under informative sampling", *Journal of the Survey Statistics and Methodology*, **4**, 436–462.

[50] S. Yang and J.K. Kim. (2016). "Fractional imputation in survey sampling: A comparative review", *Statistical Science*, **31**, 415–432.

[49] S. Park, J.K. Kim, and S. Park. (2016). "An imputation approach for handling mixed mode surveys", *Annals of Applied Statistics*, **10**, 1063-1085.

[48] M.A. Hidiroglou, J.K. Kim, and C.O. Nambeu. (2016). "A note on regression estimation using estimated totals". *Survey Methodology*, **42**, 121-135.

[47] J.K. Kim, Y. Kwon, and M.H.C. Paik. (2016). "Calibrated propensity score method for survey nonresponse in cluster sampling", *Biometrika*, **103**, 461-473.

[46] J.K. Kim, E, Berg, and T. Park. (2016). "Statistical matching using fractional imputation". *Survey Methodology*, **42**, 19–40.

[45] S. Yang and J.K. Kim (2016). "A Note on Multiple Imputation for Method of Moments Estimation", *Biometrika*, **103**, 244 – 251.

[44] M. Riddles, J.K. Kim, and J. Im (2016) "Propensity score adjustment for nonignorable nonresponse." *Journal of Survey Statistics and Methodology*, **4**, 215-245.

[43] S. Yang and J.K. Kim (2016). "Likelihood-based inference with missing data under missing-at-random", *Scandinavian Journal of Statistics*, **43**, 436–454.

[42] K.L. Peyer, G. Welk, L. Bailey-Davis, S. Yang, J.K. Kim (2015). "Factors associated with parent concern for child weight and parenting behaviors", *Childhood Obesity*, **11**, 269-274.

[41] Kim, J.K., Park, S. and Kim, S. (2015). "Small area estimation combining information from several sources", *Survey Methodology*, **41**, 21-36 .

[40] Kim, J.K. and Yang, S. (2014). "Fractional hot deck imputation for robust inference under item nonresponse in survey sampling", *Survey Methodology*, **40**, 211-230.

[39] Chen, S. and Kim, J.K. (2014). "Two-phase sampling for propensity score estimation in self-selected samples", *Annals of Applied Statistics*, **8**, 1492-1515.

[38] Kim, J.K. and Im, J. (2014). "Propensity score weighting adjustment with several follow-ups", *Biometrika* **101**, 439-448.

[37] Wang, S., Shao, J. and Kim, J.K. (2014). "An instrument variable approach for identification and estimation with Nonignorable Nonresponse," *Statistica Sinica* **24**, 1097-1116.

[36] Chen, S. and Kim, J.K. (2014). "Semi-parametric inference with a functional-form empirical likelihood," *Journal of the Korean Statistical Society* **43**, 201-214.

[35] S. Park and J.K. Kim. (2014). "Instrumental-variable calibration estimation in survey sampling", *Statistica Sinica* **24**, 1001-1015.

[34] Kim, J.K. and Haziza, D. (2014). "Doubly robust inference with missing data in survey sampling," *Statistica Sinica* **24**, 375–394.

[33] Chen, S. and Kim, J.K. (2014). "Population empirical likelihood for nonparametric inference in survey sampling," *Statistica Sinica* **24**, 335–355.

[32] S. Yang, J.K. Kim, and D.W. Shin. (2013). "Imputation methods for quantile estimation under missing at random", *Statistics and Its Interface* **6**, 369–377.

[31] S. Yang, J.K. Kim, and Z. Zhu. (2013). "Parametric fractional imputation for mixed models with nonignorable missing data", *Statistics and Its Interface* **6**, 339–347.

[30] Kim, J.K. and Skinner, C.J. (2013). "Weighting in survey analysis under informative sampling," *Biometrika* **100**, 385-398.

[29] Kim, J.K. and Wu, C. (2013). "A unified approach to replication variance estimation for complex surveys," *Survey Methodology* **39**, 91-120.

[28] Kim, J.K. and Riddles, M. (2012). "Some theory for propensity scoring adjustment estimator," *Survey Methodology* **38**, 157-165.

[27] Kim, J.K. and Hong, M. (2012). "An imputation approach to statistical inference with coarse data," *Canadian Journal of Statistics* **40**, 604-618.

[26] Zhou, M. and Kim, J.K. (2012). "An efficient method of estimation for longitudinal surveys with monotone missing data," *Biometrika* **99**, 631-648.

[25] Kim, J.K. and Shin, D.W. (2012). "The factoring likelihood method for non-monotone missing data," *Journal of the Korean Statistical Society* **41** 375–386.

[24] Kim, J.Y. and Kim, J.K. (2012). "Fractional imputation for nonignorable missing data," *Journal of Korean Statistical Society* **41**, 291–303.

[23] Kim, J.K. and Rao, J.N.K. (2012). "Combining data from two independent surveys: a model-assisted approach," *Biometrika* **99**, 85–100.

[22] Kim, J.K., Fuller, W.A., and Bell, W.R. (2011). "Variance Estimation for Nearest Neighbor Imputation for U.S. Census Long Form Data," *Annals of Applied Statistics* **5**, 824–842.

[21] Kim, J.K. and Yu, C.L. (2011). "Replication variance estimation under two-phase sampling," *Survey Methodology*, **37**, 67–74.

[20] Kim, J.K. and Yu, C.Y. (2011). "A semi-parametric estimation of mean functionals with non-ignorable missing data," *Journal of the American Statistical Association*, **106**, 157–165.

[19] Kim, J.K. (2011). "Parametric fractional imputation for missing data analysis," *Biometrika*, **98**, 119–132.

[18] Kim, J.K. (2010). "Calibration estimation using exponential tilting in sample surveys," *Survey Methodology*, **36**, 145–155.

[17] Kim, J.K. and Park, M. (2010). "Calibration estimation in survey sampling," *International Statistical Review*, **78**, 21–39.

[16] Kim, J.K. and Rao, J.N.K. (2009). "Unified approach to linearization variance estimation from survey data after imputation for item nonresponse," *Biometrika*, **96**, 917-932.

[15] Kim, J.K. (2009). "Calibration estimation using empirical likelihood in survey sampling," *Statistica Sinica,* **19**, 145-158.

[14] Kim, J.K. (2007). "Regression fractional hot deck imputation," *Journal of the Korean Statistical Society*, vol 36, 423-434.

[13] Kim, J.K. and Kim, J.J. (2007). "Nonresponse weighting adjustment using estimated response probability," *Canadian Journal of Statistics*, **35**, 501-514.

[12] Kim, J.K., Navarro, A., and Fuller, W.A. (2006). "Replicate variance estimation after multi-phase stratified sampling," *Journal of the American Statistical Association*, **101**, 312-320.

[11] Kim, J.K. and Park, H.A. (2006). "Imputation using response probability," *Canadian Journal of Statistics*, **34**, 171-182.

[10] Kim, J.K., Brick, M.J., Fuller, W.A., and Kalton, G. (2006). "On the bias of the multiple imputation variance estimator in survey sampling," *Journal of the Royal Statistical Society:*

Series B, **68**, 509-521.

[9] Fuller, W.A. and Kim, J.K. (2005). "Hot deck imputation for the response model," *Survey Methodology*, **31**, 139-149.

[8] Kim, J.K. (2004). "Extension of factoring likelihood approach to non-monotone missing data", *Journal of the Korean Statistical Society,* **33**, 401-410.

[7] Kim, J.K. (2004). "Finite sample properties of multiple imputation estimators," *The Annals of Statistics*, **32**, 766-783.

[6] Brick, J.M., Kalton, G., and Kim, J.K. (2004). "Variance estimation with hot deck imputation using a model," *Survey Methodology*, **30**, 57-66.

[5] Kim, J.K. and Fuller, W.A. (2004). "Fractional hot deck imputation," *Biometrika*, **91**, 559-578.

[4] Kim, J.K. and Sitter, R.R. (2003). "Efficient variance estimation for two-phase sampling," *Statistica Sinica*, **13**, 641-653.

[3] Kim, J.K. and Kim, Y. (2003). "Inference after stochastic regression imputation under response model," *Journal of the Korean Statistical Society*, **32**, 103-119.

[2] Kim, J.K. (2002). "A note on approximate Bayesian bootstrap imputation," *Biometrika*, **89**, 470-477.

[1] Kim, J.K. (2001). "Variance estimation after imputation," *Survey Methodology*, **27**, 75-83.

Conference (Refereed)

Y. Kwon and J.K. Kim (2023). "Ensemble Fractional Imputation for Incomplete Categorical Data with a Graphical Model," ICML workshop.

H. Jeong, J.K. Kim, and H. Peiris (2023). "Case Study: Data Integration for Drivers Telematics with Selection Biases," ICML workshop.

M. Uehara, T. Matsuda, and J.K. Kim (2020). "Imputation estimators for unnormalized models with missing data", AISTATS.

Wang, H. and Kim, J.K. (2020). "Variance estimation after Kernel Ridge regression imputation under item nonresponse", ICML workshop.

Submitted Papers:

Wang, H. and Kim, J.K. "Information projection approach to propensity score estimation for handling missing data," submitted to *Annals of the Institute of Statistical Mathematics*.

H. Jeong, H. Peiris, and J.K. Kim ""Integration of Traditional and Telematics data for Efficient Insurance Claims Prediction" submitted to *ASTIN Bulletin*.

H. Wang, J.K. Kim, J. Han, and Y. Lee. "Triply robust estimation under missing at random," submitted to *Biometrics*.

Morikawa, K., Kim, J.K. and Terada, Y. (2023). Semiparametric adaptive estimation under informative sampling," submitted to *Annals of Statistics*.

Wang, Z., S. Yang, and Kim, J.K. "Multiple bias calibration for adjusting selection bias of voluntary samples using data integration," submitted to *Journal of Official Statistics*.

PRESENTATIONS

Invited Talks:

Kim, J.K. and Y. Kwon (2023). "Reproducing kernel method for data integration," Annual meeting of Statistical Society in Canada, Carleton University, Ottawa.

Wang, Z., S. Yang, and Kim, J.K. (2023). "Multiple bias calibration for adjusting selection bias of voluntary samples using data integration," IISA conference, Denver.

Kim, J.K. and Cho, S. (2022). "Multiple bias calibration for handling selection bias in voluntary samples," Joint Statistical Meetings, Washington DC.

Kim, J.K. and Cho, S. (2022). "A new propensity score weighting framework for handling selection bias in voluntary samples", the 7th Italinan Conference on Survey Methodology in University of Perugia. (Keynote talk)

Wang, H. and Kim, J.K. (2022). "Information projection approach to propensity score estimation for handling missing data," BIRS workshop on Emerging Challenges for Statistics and Data Sciences: Complex Data with Missingness, Measurement Errors, and High Dimensionality.

Kim, J.K., Hang Kim, and Zhoneglei Wang (2021). "Survey data integration for regression analysis using model calibration" ISI WSC, Invited Paper Session.

Wang, H. and Kim, J.K. (2021). "Propensity score estimation using density ratio model under item nonresponse," 30th SKAD conference in Poland, Keynote talk; Colloquium talk at University of Georgia.

S. Yang and J.K. Kim (2020). "Statistical Data Integration in Survey Sampling: A review," Japanese Joint Statistical Meetings.

M. Uehara and J.K. Kim (2020). "Semiparametric response model with nonignorable non-response", Joint Statistical Meetings.

J.K. Kim (2019). "Survey Data Integration: Past, Present, and Future", 9th Statistics Korea Methodology Symposium, Daejeon, Korea. (Keynote Speech)

J.K. Kim (2019). "Semiparametric estimation under nonignorable nonresponse," ISI World Statistics Congress, Kuala Lumpur, Malaysia.

J.K. Kim, S. Park, Y. Chen, and C. Wu (2019). "Combining Non-probability and Probability Survey Samples Through Mass Imputation," Joint Statistical Meetings, Denver.

S. Yang, J.K. Kim, and R. Song (2019). "Doubly robust inference when combining probability and non-probability samples with high-dimensional data," Conference on Current Trends in Survey Statistics 2019, NUS, Singapore.

J.K. Kim (2018). "Methodology on Integrating the Big Data and Survey Data," IWISM 2018, Statistics Korea.

M. Uehara and J.K. Kim (2018). "Semiparametric propensity score model with nonignorable nonresponse," Joint Statistical Meetings, Vancouver, Canada.

H. Sang and J.K. Kim (2018). "Semiparametric fractional imputation using Gaussian mixture models," CANSSI workshop, Montreal, Canada

J.K. Kim (2018). "Survey Data Integration", one-day short course at Statistics Canada methodology symposium, Ottawa, Canada.

Z. Wang, J.K. Kim, and S. Yang (2018). Approximate Bayesian inference under informative sampling, SAE conference, Shanghai, China.

J.K. Kim and J.N.K. Rao (2017). "Hypothesis testing from complex survey data using bootstrap weights," World Statistical Conference (ISI meeting), Moroco.

J.K. Kim, S. Park, and D. Stukel (2017). "A measurement error model approach to survey data integration: combining information from two surveys," SAE conference, Paris.

J.K. Kim (2017). "Fractional imputation for dummies", Joint Statistical Meetings.

J.K. Kim and Z. Wang (2017). "Some sampling techniques for big data analysis", Contemporary theory and practice of survey sampling: A celebration of research contributions of J.N.K. Rao, School of mathematics and statistics, Yunnan University, Kunming, China.

J.K. Kim and Y. Shu (2016). "A note on multiple imputation under complex sampling", the 10-th ICSA international conference, Shanghai, China.

J.K. Kim (2016). "Some recent topics on informative sampling", Australian Statistical Conference, Canberra, Australia. (Keynote Talk).

J.K. Kim (2016). "Statistical inference with cluster data under informative sampling", Joint Statistical Meetings, Chicago.

J.K. Kim (2016). "Statistical Matching using fractional imputation", ICES-V, Geneva.

J.K. Kim (2016). "Multiple imputation for handling missing data under informative sampling", Department of Applied and Computational Mathematics and Statistics, University of Notre Dame.

J.K. Kim (2016). "Some recent topics on informative sampling", Department of Statistics, University of British Columbia, Vancouver, Canada; Department of Statistics, University of Wisconsin, Madison.

J.K. Kim (2016). "Bottom-up estimation and top-down prediction in multilevel models: Solar Energy Prediction combining information from multiple sources", Inaugural Ross-Royall Symposium, Department of Biostatistics, Johns Hopkins University; Department of Statistics, University of Georgia; Department of Statistics, Purdue University.

J.K. Kim (2015). "Welcome to the world of non-ignorable nonresponse: Review of the existing methods", NISS Workshop on Data Not Missing At Random, Washington DC. (Keynote Talk)

J.K. Kim (2015). "Fractional Imputation for Missing Survey Data", CANSSI Workshop, Montreal, Canada.

S. Yang and J.K. Kim (2015). "Fractional imputation in survey sampling: A comparative review", JSM, Seattle.

J.K. Kim, Z. Wang, Z. Zhu, N. Cruz (2015). "Hierarchical area level model approach to small area estimation incorporating auxiliary information", First Latin American ISI satellite meeting on small area estimation, Santiago.

J. Im, J.K. Kim, and W.A. Fuller. (2015). "Two-phase stratified sampling for multivariate fractional hot deck imputation", ENAR conference, Miami.

Kim, J.K. and Fuller, W.A. (2014). "Fractional hot deck imputation for multivariate missing data in survey sampling," NISS Workshop on Analyzing Complex Survey Data with Missing Item Values, Washington DC.

Kim, J.K., J. Im, and J. Kim (2014). "2014 Korean local election prediction using small area estimation techniques and mixed-mode survey sampling," Workshop on Recent Advances in Survey Sampling in honor of Prasad's retirement, Banff, Canada.

Kim, J.K. and E. Berg (2014). "Statistical matching using fractional imputation," ACS-IMS joint conference, Sydney, Australia.

S. Yang and J.K. Kim (2014). "Likelihood-based inference with missing data under missing-at-random," ICSA-KISS symposium, Portland.

Park, S., Kim, J.K., and S. Park (2013). " An imputation approach for handling mixed-mode surveys", Joint Statistical Meetings, Montreal, Canada.

Kim, J.K. and Riddles, M. (2013). "Propensity score adjustment method for nonignorable nonresponse", National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD; Department of Biostatistics, Columbia University, New York; Graybill conference, Colorado State University, Fort Collins, CO; Texas A&M University, TX.

Kim, J.K. and Fuller, W.A. "Fractional hot deck imputation for multivariate missing data in survey sampling," Statistical Society of Canada annual meeting (2012), Guelph, Canada; ISI World Statistics Congress (2013), Hong Kong; Korean Statistical Meeting (2013), Seoul, Korea.

Kim, J.K. and Chen, S. (2012). "Two-phase sampling approach for propensity score estimation in voluntary sampling," Field Symposium in honor of J.N.K. Rao's 75th birthday, Carleton University, Ottawa, Canada.

Kim, J.K. and Zhou, M. (2012). "An efficient method of estimation for longitudinal surveys with monotone missing data," Department of Statistics, London School of Economics and Political Science, London, U.K.

Kim, J.K. (2011). "Propensity weighting for voluntary internet surveys: KBS panel survey example," The 3rd international workshop on internet survey methods, Statistics Korea, Daejon, Korea.

Rao, J.N.K. and Kim, J.K. (2011). "Impact of Wayne Fuller's contributions to sample survey theory and practice," Joint Statistical Meetings, Miami, FL.

Kim, J.K. (2011) "GMM estimation combining information from several sources," National Agricultural Statistical Service, U.S. Department of Agriculture, Washington DC.

Kim, J.K. (2011) "A model-assisted approach to combining data from two independent surveys," U.S. Bureau of the Census, Washington DC.

Kim, J.K. (2010) "Calibration estimation using exponential tilting in sample surveys," U.S.

Bureau of the Census, Washington DC.

Kim, J.K. (2010) "An hybrid approach to small area estimation," El Colegio de Mexico, Mexico City, Mexico.

Kim, J.K. and Haziza, D. (2010) "Doubly robust inference with missing data in survey sampling," Joint Statistical Meetings, Vancouver, Canada.

Kim, J.K. (2010) "Exponential tilting models for missing data analysis," Statistics department seminar, Iowa State University.

Kim, J.K. (2009) "Calibration estimation using estimated importance sampling and exponential tilting," Spring Research Conference, Vancouver, Canada.

Kim, J.K. and Yu, C.L. (2009). "Fractional imputation for non-ignorable missing data," ISU conference for celebrating 75 years of statistics at Iowa State, Ames, Iowa.

Kim, J.K. "Parametric fractional imputation for missing data analysis," University of British Columbia (2009), Vancouver, Canada; Korean Advanced Institute for Science and Technology (2010), Deajon, Korea; University of Nevada (2011), Las Vegas; Southampton University, Southampton, U.K..

Kim, J.K. and Fuller, W.A. (2008). "Parametric fractional imputation for multivariate missing data," Joint Statistical Meetings (2008), Denver, Colorado.

Kim, J.K. (2007). "Calibration estimation using empirical likelihood in survey sampling," Canadian Joint Statistical Meetings, St. Johns, Canada.

Kim, J.K. and Fuller, W.A. (2007). "Analysis of missing data using fractional imputation," Statistics Canada, Ottawa, Canada.

Kim, J.K. (2007). "Improved variance estimation for poverty and income statistics derived from the Census 2000 long form," Bureau of the Census, Washington DC.

Kim, J.K. (2007). "Linearization variance estimation after imputation," Iowa State University, Ames, Iowa.

Kim, J.K. (2006). "Fractional hot deck imputation for multivariate missing data," Japanese Joint Statistical Meetings, Sendai City, Japan.

Kim, J.K. (2006). "Variance estimation for empirical likelihood calibration estimators," Joint Statistical Meetings, Seattle, Washington.

Kim, J.K. (2006). "Regression fractional hot deck imputation," University of Maryland, College Park, Maryland.

Kim, J.K. (2005). "Partitioning likelihood method in the analysis of non-monotone missing data," Korean Statistical Meeting, Seoul, Korea.

Kim, J.K. (2005). "Variance estimation for fractional hot deck imputation with application to the Census 2000 long form data," Bureau of the Census, Washington DC.

Invited Lectures (outside ISU):

Kim J.K. Short course on "Survey Data Integration", Statistics Canada methodology symposium (2018), Australian Bureau of Statistics (2018), the 7th Italinan Conference on Survey Methodology in University of Perugia (2022), WSC-ISI meeting (2023).

Kim, J.K. Short course on "Statistical Methods for Handling Missing Data", Radiation Effects Research Foundation (2013), Hiroshima, Japan; Seoul National University (2013), Seoul, Korea; Weseda University (2014), Tokyo, Japan; Kyungpook National University (2014), Daegu, Korea.

Kim, J.K. and Fuller. Short course on "Advanced Survey Sampling", Joint Statistical Meetings (2011), Miami, FL; Joint Statistical Meetings (2013), Montreal, Canada; Joint Statistical Meetings (2016), Chicago.

Kim, J.K. (2010). Short course on "Estimation with Survey Sample Data", Statistics Korea, Daejon, Korea.

Other Presentations (after joining at ISU):

Kim, J.K. and Im, J. (2012). "Propensity score weighting adjustment with several follow-ups", San Diego, Joint Statistical Meetings.

Kim, J.K. (2011). "Propensity weighting for voluntary internet survey: Korean panel survey example," Survey Working Group seminar, Department of Statistics, Iowa State University.

Riddles, M. and Kim, J.K. (2011). "Propensity score adjustment for nonignorable nonresponse", Joint Statistical Meetings, Miami, FL.

Chen, S. and Kim, J.K. (2011). "Population empirical likelihood for nonparametric inference in survey sampling," ICSA conference, New York, NY.

Kim, J.K. and Fuller, W.A. (2010). "Fractional imputation with multivariate missing data in survey sampling," Statistics Canada Symposium, Ottawa, Canada.

Kim, J.K. (2010). "A hybrid approach to small area estimation," Survey Working Group seminar, Department of Statistics, Iowa State University.

Zhou, M. and Kim, J.K. (2010). "An efficient method of estimation for longitudinal surveys with monotone missing data," Joint Statistical Meetings, Vancouver, BC, Canada.

Chen, S. and Kim, J.K. (2010). "Use of empirical likelihood method for missing data analysis," Joint Statistical Meetings, Vancouver, BC, Canada.

Kim, J.K. and Riddles, M. (2010). "Some theory for propensity score adjustment estimator", Joint Statistical Meetings, Vancouver, BC. Canada.

Kim, J.K. and Yu, C.L. (2009). "Fractional imputation for non-ignorable missing data", Joint Statistical Meetings, Washington DC.

Kim, J.K. (2008). "An imputation approach to handling coarse data in survey sampling," Survey Working Group seminar, Department of Statistics, Iowa State University.

TEACHING (after joining at ISU)

Spring, 2009: Survey sampling theory and practice (STAT 521)

Fall, 2009: Advanced survey sampling (STAT 621)

Fall, 2010: Topics in applied survey sampling (STAT 522)

Fall, 2011: Advanced survey sampling (STAT 621)

Fall, 2012: Topics in applied survey sampling (STAT 522)

Fall 2016: Introduction to Probability and Statistics (taught at KAIST)

Fall 2017: Topics in Applied Statistics (taught at KAIST)

Fall 2018: Mathematical Statistics (taught at KAIST)

Spring 2019: Research topics in applied statistics (taught at KAIST)

Spring 2020: Introduction to Survey Sampling (STAT 421)

Spring, 2013, Fall 2014, Fall 2021: Survey sampling theory and practice (STAT 521)

Spring, 2015, Spring 2016, Spring 2017, Spring 2023: Advanced survey sampling (STAT 621)

Fall 2015, Spring 2018, Fall 2020, Fall 2022: Missing data analysis (Stat 522, 590B, Stat 523x)

GRADUATE STUDENT EDUCATION

Major Professor

Ji-young Kim, Ph.D. 2008 (from Yonsei University, Current position unknown.)

Ming Zhou, Ph.D., May 2011. (Currently employed at Bristol-Myers Squibb)

Sixia Chen, Ph.D., May 2013. (Assistant Professor, University of Oklahoma).

Minsun Kim Riddles, Ph.D., Summer 2013. (Currently employed at Westat).

Shu Yang, Ph.D., May 2014, co-directed with Z. Zhu. (Associate Professor, North Carolina State Univ.)

Stephanie Zimmer, Ph.D., December 2014, co-directed with S. Nusser. (Current position: RTI)

Jongho Im, Ph.D., May 2015. (Current position: Assistant Profesor, Yonsei University).

Seho Park, May 2018. (Current position: Research Assistant Professor, Indiana University)

Hejain Sang, May 2018. (Current position: Data scientist, Google)

Zhonglei Wang, August 2018. (Current position: Assistant professor, Xieman University)

Danhyang Lee, August 2019. (Current position: Assistant professor, University of Alabama)

Hengfang Wang, May 2021. (Current position: Assistant professor, Fujian Normal University)

Yanghyeon Cho, August 2023, co-directed with E. Berg.

Current PhD level Students: Caleb Leedy, Yonghyun Kwon, Yanghyeon Cho.

Master students: Mauricio Lila (2015), Rosy Oh (2016).

POS committee

PhD: Minhui Paik (2009), Emily Berg (2010), Jun Li (2012), Yuhang Xu (2016), Santiago Acerenza (2021).

MS: Yu-Yi Hsu, Yinan Fang.

Outside ISU: Ivan Carrillo Garcia (2009, University of Waterloo), Sangah Jung (2013, Yonsei University), Seunghwan Park (2013, Seoul National University), Kosuke Morikawa (2017, Osaka University), Jeongseop Han (2021, Seoul National University).

PROFESSIONAL SERVICE: External (after joining at ISU)

<u>Associate Editor</u>

Australian & New Zealand Journal of Statistics (2008 - 2013)

Journal of Korean Statistical Society (2012 - 2018)

Canadian Journal of Statistics (2016 - 2018)

Statistica Sinica (2012 - 2021)

Sankhya (2017 - 2021)

Survey Methodology (2012 -)

Annals of Applied Statistics (2013 -)

Annals of the Institute of Statistical Mathematics (2018-)

Journal of the Royal Statistical Society: Series A (2022-)

Electronic Journal of Statistics (2022-)

Scandinavian Journal of Statistics (2022-)

<u>Professional Society:</u>

President, Korean International Statistical Society (KISS), 2023-2024.

Vice president, Korean International Statistical Society (KISS), 2010-2015.

<u>Committees and Programs:</u>

Have organized NISS workshop on "Data Not Missing At Random" as the chair of the organizing committee (2015).

Have organized an invited session "Celebrating Wayne Fuller's 80-th birthday" at the Joint Statistical Meetings (2011).

Have organized an invited session "Celebrating J.N.K. Rao's 75-th birthday" at the Joint Statistical Meetings (2012), jointly with Changbao Wu.

Have organized a topic contributed session "Recent advances in the analysis of non-ignorable missing data" at the Joint Statistical Meetings (2013).

Have organized an invited session "Recent advances in the analysis of mixed-mode survey data" at the Joint Statistical Meetings (2013).

Have organized an invited session "Model-assisted approaches to combining information from different surveys (Survey data integration)" at the 59th World Statistics Congress Hong Kong (25 – 30 August 2013).

Local Organization Committee for the 7th International workshop on Total Survey Errors.

PROFESSIONAL SERVICE: Iowa State University

Departmental Service:

Served as a member of admissions committee (2009-2014, 2020-), graduate committee (2009-2012), and library committee (2009-2011), faculty search committee (2014, 2021), Promotion and Tenure committee (2014-2016), Honors and Awards committee (2019-2022; chair).

Other Service:

Served as a faculty advisor for Korean Student Association at ISU (2009-2013).