



CENTER FOR STATISTICAL RESEARCH & METHODOLOGY

Research & Methodology Directorate
U.S. Bureau of the Census

Researcher Profiles

February 2026

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Serge Aleshin-Guendel

Research Mathematical Statistician



Contact Information

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Fields of Interest

- Bayesian Statistics
- Record Linkage
- Multiple-Systems Estimation
- Spatio-Temporal Statistics
- Human Rights, Child Mortality Estimation

Education

- Ph.D., Biostatistics, University of Washington, 2022
- B.S., Mathematics, Boston College, 2017
- B.A., Computer Science, Boston College, 2017

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2023-Present
- Postdoctoral Associate, Duke University, 2022-2023

Selected Publications

- Aleshin-Guendel, S. and Steorts, R. In Press. "Monitoring Convergence Diagnostics for Entity Resolution," *Annual Review of Statistics and Its Applications*.
- Aleshin-Guendel, S., Sadinle, M., and Wakefield, J. In Press. "The Central Role of the Identifying Assumption in Population Size Estimation" (with discussion), *Biometrics*.
- Aleshin-Guendel, S. and Sadinle, M. In Press. "Multifile Partitioning for Record Linkage and Duplicate Detection", *Journal of the American Statistical Association*.
- Msemburi M, Karlinsky A, Knutson V, Aleshin-Guendel S, Chatterji S, and Wakefield J. 2023. "The WHO Estimates of Excess Mortality Associated with the COVID-19 Pandemic." *Nature*, 613 (7942), 130-137.
- Kuntson, V., Aleshin-Guendel, S., Karlinsky, A., Msemburi, W., and Wakefield, J. 2023. "Estimating Global and Country-Specific Excess Mortality During the COVID-19 Pandemic", *Annals of Applied Statistics*, 17(2), 1353-1374.
- Aleshin-Guendel, S., Lange, J., Goodman, P., Weiss, N., and Etzioni, R. (2021). "A Latent Disease Model to Reduce Detection Bias in Cancer Risk Prediction Studies," *Evaluation & the Health Professions*, 44 (1), 42-49.

Approved on: January 1, 2024

Emanuel Ben-David

Research Mathematical Statistician

Contact Information

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Fields of Interest

- Graphical & Causal Methods
- Record Linkage
- Statistical and Machine Learning
- Bayesian Statistics






Education

- Ph.D., Statistics, Indiana University, 2008
- M.S., Mathematics, Indiana University, 2004



Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2015-Present
- Term Assistant Professor, Adjunct, Department of Statistics, Columbia University, 2012-Present
- Postdoctoral Research Associate, Department of Statistics, Stanford University, 2010-2012
- Postdoctoral Fellow, Statistical & Applied Mathematical Sciences Institute (SAMSI), 2008-2009

Professional Associations

- [The American Statistical Association](#) 
- [American Association for Public Opinion Research](#) 
- [Institute of Mathematical Statistics](#) 

Selected Publications

- Wang, Z., Ben-David, E., and Slawski, M. 2023. “Regularization for Shuffled Data Problems via Exponential Family Priors on the Permutation Group.” (Proceedings of the 26th International Conference on Artificial Intelligence and Statistics), *Proceedings of Machine Learning Research*, Volume 206, pgs 2939-2959. <https://proceedings.mlr.press/v206/wang23a>.
- Wang, Z., Ben-David, E., Diao, G., & Slawski, M. In Press. “Estimation in Exponential Family Regression Based on Linked Data Contaminated by Mismatch Error,” *Statistics and Its Interface*.
- Wang, Z., Ben-David, E., Diao, G., and Slawski, M. 2022. “Regression with Linked Datasets Subject to Linkage Error,” *Wiley Interdisciplinary Reviews: Computational Statistics*, 14(4), DOI: 10.1002/wics.1570
- Slawski, Martin, Guoqing Diao, and Emanuel Ben-David. 2021. "[A Pseudo-Likelihood Approach to Linear Regression with Partially Shuffled Data.](#)"  *Journal of Computational and Graphical Statistics*, DOI:10.1080/10618600.2020.1870482 .
- Slawski, M., Ben-David, E., and Li, P. 2020. “Two-Stage Approach to Multivariate Linear Regression with Sparsely Mismatched Data,” *Journal of Machine Learning Research*, 21, 1-42.
- Ben-David, E. and Rajaratnam, B. 2020. “On the Letac-Massam Conjecture and Existence of High Dimensional Bayes Estimators for Graphical Models,” *Electronic Journal of Statistics*, Volume 14, Number 1 (2020), 580-604.

- Slawski, M. and Emanuel Ben-David. 2019. "[Linear Regression with Sparsely Permuted Data.](#)" [↗](#)*Electronic Journal of Statistics*, Vol 13, No. 1, 1-36. [DOI:10.1214/18-EJS1498](#) [↗](#).
- Ben-David, Emanuel. 2015. "[Sharp lower and upper bounds for the Gaussian rank of a graph.](#)" [↗](#)*Journal of Multivariate Analysis*, 207-218. [DOI:https://doi.org/10.1016/j.jmva.2015.03.004](#) [↗](#).
- Ben-David, Emanuel, B. Rajaratnam, Tianxi Li, and H. Massam. 2014. "[High dimensional Bayesian inference for Gaussian directed acyclic graph models.](#)" [↗](#)*Unpublished*.
- Ben-David, Emanuel and B. Rajaratnam. 2012. "[Positive Definite Completion Problems for Bayesian Networks.](#)" [↗](#)*SIAM Journal on Matrix Analysis and Applications*, Vol 33, No 2, 617-638. [DOI:https://doi.org/10.1137/110861051](#) [↗](#).
- Ben-David, Emanuel. 2013. "[Maximal Invariant Statistics for Lorentz Wishart Models.](#)" [↗](#)*Journal of Geometry and Physics*, Vol 69, 31-39.
- Ben-David, Emanuel. 2010. "Some Hypothesis Tests for Wishart Models." *Contemporary Mathematics, American Mathematical Society (AMS)*, Vol 516, 326-345.
- Ben-David, Emanuel. 2008. "Maximal Invariants over Symmetric Cones." *Ph.D. Thesis, Indiana University*, ISBN: 978-0549-91998-8, ProQuest LLC.

Approved on: January 1, 2024

Sixia Chen

ASA/NSF/Census Research Fellow



Contact Information

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Fields of Interest

- Survey Sampling
- Missing Data Analysis
- Empirical Likelihood
- Nonparametric and Semiparametric Methods
- Statistical Disclosure Control
- Causal Inference
- Big Data and Machine Learning
- Biostatistics
- Health Topics (Measurement error models for nutrition intake and physical activity; Native American health disparities; tobacco research; cancer prevention and control)

Education

- Ph.D., Statistics. Iowa State University, 2012
- B.A., Mathematics, Fudan University (China), 2007

Professional Experience

- ASA/NSF/CENSUS Research Fellow. U.S. Bureau of the Census, June 2024 - May 2026
- Associate Professor, Statistics, University of Oklahoma Health Sciences Center, 2022- Present
- Assistant Professor, Statistics, University of Oklahoma Health Sciences Center, 2015 - 2022
- Full Member (2022 – Present) and Associate Member (2020 - 2021), Stephenson Cancer Center, University of Oklahoma Health Sciences Center
- Senior Statistician, Westat, 2012 – 2015

Professional Associations

- Invited summer at census scholar, US Census Bureau, 2023
- Provost's Teaching Award - Early Career Faculty, University of Oklahoma Health Sciences Center, 2023
- Invited member of Educators for Excellence, University of Oklahoma Health Sciences Center, 2023
- Elected Member, International Statistical Institute, 2022
- Outstanding Chapter Service Award, American Statistical Association, 2022
- Provost's Research Award-Junior Faculty, University of Oklahoma Health Sciences Center, 2022
- Hudson College of Public Health Faculty Board Award for Outstanding Teaching, 2020
- Graybill Conference Student Travel Award in Colorado State University, 2013
- SRMS Student Travel Award, Survey Research Methods Section, American Statistical Association, 2012

Selected Publications

Statistical/Biostatistical Methodological Research

- Chen, S., Wang, Y., and Zhao, Y. 2024 In Press. "Bayesian Jackknife Empirical Likelihood Based Inference for Missing Data and Causal Inference Problems," *The Canadian Journal of Statistics*.
- Chen, S. and Xu C. 2024 In Press. "Predictive mean matching imputation procedure based on machine learning models for complex survey data," *Journal of Data Science*.
- Chen, S. and Haziza, D. 2023. "Doubly and multiply robust procedures for missing survey data," *The Survey Statistician* (Invited Submission), 88, 75-85
- Xu, Z., Yan, S., Wu, C., Duan, Q., Chen, S., and Li, Y. 2023. "Next-Generation Sequencing Data-Based Association Testing of a Group of Genetic Markers for Complex Responses Using a Generalized Linear Model Framework," *Mathematics*, 11(11), 2560.
- Chen, S., Woodruff, A., Campbell, J., Vesely, S., Xu, Z., and Snider, C. 2023. "Combining probability and nonprobability samples by using multivariate mass imputation approaches," *Stats*, 6(2), 617-625.
- Chen, S., Haziza, D., and Michal, V. 2024 In Press. "Efficient multiply robust procedures in the presence of influential units," *Canadian Journal of Statistics*.
- Xu, Z., Yan, S., Yuan, S., Wu, C., Chen, S., Guo, Z., Li, Y. 2023. "Efficient Two-Stage Analysis for Complex Trait Association with Arbitrary Depth Sequencing Data," *Stats*, 6, 468-481. <https://doi.org/10.3390/stats6010029>.
- Pan, S. and Chen, S. 2023. "Empirical Comparison of Imputation Methods for Multivariate Missing Data in Public Health," *International Journal of Environmental Research and Public Health*, Special Issue on "Innovative Statistical Analysis in Public Health," (Invited submission), 20(2), 1524
- Lee, D., Zhang, L. C., and Chen, S. 2023. "Robust quasi-randomisation-based estimation with ensemble learning for missing data," *Scandinavian Journal of Statistics*, 50(3), 1263-1278.
- Chen, S. and Haziza, D. 2023. "A unified framework of multiply robust estimation approaches for handling incomplete data," *Computational Statistics and Data Analysis*, 179, 107646
- Gochanour, B. Chen, S., Beebe, L., and Haziza, D. 2023. "A semiparametric multiply robust multiple imputation method for causal inference." *Metrika*, 86(5), 517-542
- Gochanour, B., Chen, S., and Beebe, L. 2022. "Multiply robust Bayesian procedures for causal inference problems." *Communications in Statistics - Simulation and Computation*, 1-14
- Chen, S. and Haziza, D. 2023. "General purpose multiply robust data integration procedures for handling nonprobability samples," *Scandinavian Journal of Statistics*, 50(2), 697-724
- Chen, S., Haziza, D., and Mashreghi, Z. 2022. "A comparison of existing bootstrap algorithms for multi-stage sampling designs," *Stats* (Invited submission), *Special Issue "Re-sampling Methods for Statistical Inference of the 2020s"*, 5(2), 521-537.
- Chen, S. and Xu, C. 2023. "Handling high dimensional data with missing values by modern machine learning techniques," *Journal of Applied Statistics*, 50(3), 786-804
- Chen, S., Yang, S., and Kim, J.K. 2022. "Nonparametric mass imputation for data integration," *Journal of Survey Statistics and Methodology*, 10(1), 1-24.
- Haziza, D., Chen, S., and Gao, Y. 2022. "Targeting key survey variables at the nonresponse treatment stage," *Journal of Survey Statistics and Methodology*, 10(1), 25-49.
- Chen, S., Haziza, D., and Stubblefield, A. 2021. "A note on multiply robust predictive mean matching imputation with complex survey data," *Survey Methodology*, 47, 215-222.
- Chen, S., Zhao, Y., and Wang, Y. 2021. "Sample empirical likelihood estimator for scrambled responses under complex survey design," *Survey Methodology*, 47, 59-74.
- Chen, S. and Haziza, D. 2021. "A review of multiply robust estimation with missing data," Invited submission of Springer Book Chapter of *Modern Statistical Methods for Health Research*, 103-118.
- Chen, S., Stubblefield, A., and Stoner, J. 2021. "Oversampling of minority populations through dual-frame surveys," *Journal of Survey Statistics and Methodology*, 9(3), 626-649.
- Chen, S., Haziza, D., and Mashreghi, Z. 2021. "Multiply robust bootstrap variance estimation in the presence of singly imputed survey data," *Journal of Survey Statistics and Methodology*, 9(4), 810-832.

- Chen, S. and Zhao, Y.D. 2019. “Quantile regression analysis with complex survey data under informative sampling,” *Journal of Survey Statistics and Methodology*, 7, 157-174. (R code available at <https://github.com/yandzhao/Quantile-Regression-of-Survey-Data>)
- Chen, S. and Haziza, D. 2019). “Recent Developments in Dealing with Item Non-response in Surveys: A Critical Review,” *International Statistical Review (Invited Submission)*, 87, 192-218.
- Chen, S., Haziza, D., Leger, C., and Mashreghi, Z. 2019. “Pseudo-population bootstrap methods for imputed survey data,” *Biometrika*, 106, 369-384.
- Chen, S. and Haziza, D. 2019. “On the nonparametric multiple imputation with multiply robustness,” *Statistica Sinica*, 29, 2035-2053.
- Chen, S. and Haziza, D. 2018. “Jackknife empirical likelihood method for multiply robust estimation with missing data,” *Computational Statistics and Data Analysis*, 127, 258-268.
- Chen, S. and Haziza, D. 2017. “Multiply robust imputation procedures for zero-inflated distribution in surveys,” Invited submission at *METRON*, 75, 333–343.
- Chen, S. and Kim, J.K. 2017. “Semiparametric fractional imputation using empirical likelihood in survey sampling,” *Statistical Theory and Related Fields*, 1, 69-81.
- Chen, S. and Rust, K. 2017. “An extension of the model-based justification of Kish’s formula for design effects to two and three-stage designs with stratification,” *Journal of Survey Statistics and Methodology*, 5, 111-130.
- Chen, S. and Haziza, D. 2017. “Multiply robust imputation procedures for the treatment of item nonresponse in surveys,” *Biometrika*, 104, 439-453.
- Chen, S. and Kalton, G. 2015. “Geographic oversampling for race/ethnicity using data from the 2010 U.S. population census,” *Journal of Survey Statistics and Methodology*, 3, 543-565.
- Chen, S. and Kim, J.K. 2014. “Two-phase sampling for propensity score estimation in self-selected samples,” *The Annals of Applied Statistics*, 3, 1492-1515.
- Chen, S. and Kim, J.K. 2014. “Population empirical likelihood for nonparametric inference in survey sampling,” *Statistica Sinica*, 24, 335-355.
- Chen, S. and Kim, J.K. 2014. “Semi-parametric inference with a functional-form empirical likelihood,” *Journal of Korean Statistical Society*, 43, 201-214.
- Zhong, P.S. and Chen, S. 2014. “Jackknife empirical likelihood inference with regression imputation and survey data,” *Journal of Multivariate Analysis*, 129, 193-205.
- Xiong, B. and Chen, S. 2014. “Estimating gravity equation models in the presence of sample selection and heteroscedasticity,” *Applied Economics*, 46, 2993-3003.
- Chen, S. 2013. “A unified theory on empirical likelihood methods for missing data,” *Statistics and Its Interface*, 6, 325-338.

Health Collaborative Research:

- Sedani, E., Frank-Pearce, S.G., Chen, S., Peck, J.D., Chou, A.F., Campbell, J.E., and Beebe, L.A. In Press. “Impact of Quitline Services on Tobacco Cessation, Accounting for Selection Bias: An Application of Modern Epidemiological Methods,” *American Journal of Epidemiology*.
- Kendzor, D. E., Businelle, M. S., Frank-Pearce, S. G., Waring, J. J.C., Chen, S., Hebert, E. T., Swartz, M. D., Alexander, A. C., Sifat, M. S., Boozary, L. K., Wetter, D. W. In Press. “Small financial incentives for smoking cessation among socioeconomically disadvantaged adults: A randomized controlled trial,” *JAMA Network Open*.
- James, S.A., Chen, S., Dang, J., Hall, S., Campbell J.E., Chen, M.S., Doescher, M.P. In Press. “Changes in alcohol consumption and binge drinking during the COVID-19 pandemic among American Indians residing in California and Oklahoma,” *The American Journal of Drug and Alcohol Abuse*.
- Dang, J., Chen, S., Hall, S., Campbell, J., Chen, M., and Doescher, M.. In Press. “The Impact of COVID-19 on Planned and Postponed Cancer Screenings Among American Indians Residing in California and Oklahoma,” *Public Health Reports*
- Pan, S., Chen, S., Fretts, A., Ali, T. In Press. “Associations of Pedometer-Measured Ambulatory Activity with Incidence of Atherosclerotic Cardiovascular Diseases: Strong Heart Family Study,” *Preventive Medicine*.

- Dang, J., Chen, S., Hall, S., Campbell, J.E., Chen, M.S., Doescher, M.P.. In Press. “Tobacco and Marijuana Use during the COVID-19 Pandemic Lockdown Among American Indians Residing in California and Oklahoma,” *Tobacco Induced Diseases*.
- Wang, C, Liu, Y. L, Calle P, Li, X. W, Liu, R. H, Zhang, Q. H, Yang, F, Fung, K. M, Conner, A. K, Chen, S, Pan, C. L, Tang, Q. G. 2023. “Enhancing Epidural Needle Guidance using a Polarization-Sensitive Optical Coherence Tomography Probe with Convolutional Neural Networks,” *Journal of Biophotonics*, e202300330.
- Chen, S., James, S.A., Hall, S., Dang, J., Campbell, J.E., Chen, M.S., Doescher, M.P. 2023. “Avoidance of Medical Care Among American Indians with a History of Cancer During the during the Corona Virus (COVID-19) Pandemic” *Frontiers in Public Health*, 11, 1265071.
- Noyd, D.H., Chen, S., Bailey, A., Janitz, A., Baker, A., Beasley, W., Etzold, N., Kendrick, D., Kibbe, W., Oeffinger, K. In Press. “Informatics Tools to Implement Late Cardiovascular Risk Prediction Modeling for Population Management of High-Risk Childhood Cancer Survivors,” *Pediatric Blood & Cancer*.
- Comiford, A.L., Chen, S., and Blair, A. In Press. “Investigating Tobacco Product Use Behavior among Students attending High Schools within the Cherokee Nation Reservation,” *Journal of Community Health*.
- Shi, H.H., Chen, S., Propester, L., Valenzuela, J., Gernsback, J., Desai, V., Balsara, K., Zieles, K., Jea, A.. In Press. “The Influence of the Living Pareto Chart and Data Transparency on Patient Outcomes in Neurosurgery,” *Journal of Neurosurgery Pediatrics*.
- Sedani, A.E., Chen, S., Beetch, J.E., Dao, H.D.N., Martinez, S.A., and Campbell, J.E. 2022. “Inequalities in tobacco retailer compliance violations across the state of Oklahoma,” 2015-2019. *Journal of Community Health*, 47, 658-665.
- Nicholson, C., Beattie, L., Beattie, M., Razzaghi, T., and **Chen, S.** 2022. “A machine learning and clustering-based approach for county-level COVID-19 analysis,” *PLOS ONE*, 17(4): e026755.
- McVeigh, L., Anokwute, M., Mendenhall, S.K., Chen, S., and Jea, A. 2022. “Spinal Column Shortening for Tethered Cord Syndrome: A Systematic Review and Individual Patient Data Meta-analysis,” *Journal of Neurosurgery: Pediatrics*, 29(6), 624–633.
- Wu, H., Rhoades, D.A., Chen, S., Slief, M., Guy, C.A., Warren, A., Brown, B. 2022. “Disparities in hospitalized chronic obstructive pulmonary disease exacerbations among American Indians and non-Hispanic Whites,” *Chronic Obstructive Pulmonary Diseases: Journal of the COPD Foundation*, 9(2), 122-134.
- Cohn, A. and Chen, S. 2022. “Age groups differences in the prevalence and popularity of individual tobacco product use in young adult and adult marijuana and tobacco co-users and tobacco-only users: Findings from Wave 4 of the population assessment of tobacco and health study,” *Drug and Alcohol Dependence*, 233:109278.
- O’Neal, C., Schroeder, L., Wells, A., Chen, S., McCoy, T., Glenn, C., Conner, A. 2021. “Patient Outcomes in Disorders of Consciousness Following Transcranial Magnetic Stimulation: A Systematic Review and Meta-Analysis of Individual Patient Data,” *Frontiers in Neurology*, 12:694970. doi: 10.3389/fneur.2021.694970. PMID: 34475848; PMCID: PMC8407074.
- Arrese, N., Cooper, M., White, A., Chen, S., DeLeon, S. 2021. “Creating a Tool to Evaluate Interpretive Services on a Hospital System Level,” *Journal of Immigrant and Minority Health*, 23(5):1116-1120.
- Wu, H., Rhoades, D., Chen, S., and Brown, B. 2021. “Native American Patients with Chronic Obstructive Pulmonary Disease Exacerbations in a Tertiary Academic Medical Center – A Pilot Study,” *International Journal of Chronic Obstructive Pulmonary Disease*, 16:1163-1170.
- Rozich, N. S., Lewis, S., Chen, S., Stewart, K. E., Dooley, W. C., Fischer, L. E., and Morris, K. T. 2021. “Women survive longer than men undergoing cytoreductive surgery and HIPEC for appendiceal cancer,” *PLOS ONE*, 16(4), e0250726.
- Gaines, H., Jones, K., Lim, J., Medhi, N., Chen, S., and Scofield, R. H. 2021. “Effect of CFTR modulator therapy on cystic fibrosis-related diabetes,” *Journal of Diabetes and Its Complications*, 35(6):107845, <https://doi.org/10.1016/j.jdiacomp.2020.107845>.
- Lander, D., Fagan, T., Chen, S., and Archer, A. 2020. “Survey of Oklahoma Dental Professionals on detecting/reporting child abuse and neglect,” *The Journal of the Oklahoma Dental Association*.
- Clevenger, V., Jeffries, L., Effen, S., Chen, S., Arnold, S. 2020. “School-Based Physical Therapy Services: A Model to Predict the Gap between Ideal and Actual Embedded Services,” *Pediatric Physical Therapy*, 32, 98-105 (The paper has been selected to win Jeanne Hughes Award. This award is given to the paper identified as the best

paper published in the journal as a result of work completed while the first author is enrolled in an educational program).

- Finneran, D., Heilmann, J., Moyle, M., and Chen, S. 2020. “An examination of cultural-linguistic influences on PPVT-4 performance in African American and Hispanic preschoolers from low-income communities,” *Clinical Linguistics & Phonetics*, 34(3): 242-255.
- Lora, K., Branscum, P., Chen, S., and Wakefield, D. 2019. “Home food environment factors associated with Hispanic preschoolers’ intake of fruits and vegetables,” *Family and Community Health*, 42(4), 261-270.
- Syed, T., Bashir, M., Farooqui, S., Chen, S., Nusrat, S., Fazili, J. and Chen, A. 2019. “Treatment Outcomes of Hepatitis C Infected Patients in Specialty Clinic vs. Primary Care Physician Clinic – A Comparative Analysis,” *Gastroenterology Research and Practice*, 10, 1-7.
- Varshney, R., Murphy, B., Woolington, S., Ghafoory, S., Chen, S., Robison, T., and Ahamed, J. 2019. “Inactivation of platelet-derived TGF- β 1 attenuates aortic stenosis progression in a robust murine model,” *Blood Advances*, 3, 777-788.
- Nusrat, S., Syed, T., Nusrat, S., Chen, S., Chen, W. J. and Bielefeldt, K. 2018. “Assessment of pharmaceutical company and device manufacturer payments to gastroenterologists and their participation in clinical practice guideline panels,” *JAMA Network*, 1(8):e186343. doi: 10.1001/jamanetworkopen.2018.6343.
- James, M., Elise, S., Chen, S., Bruce, C., Sarah, K., Amira, O. and Damon, V. 2019. “The RICO Verdict and Corrective Statements: Catalysts for Policy Change?” *Tobacco Regulatory Science*, 5, 206-228.
- Vidrine, D., Frank-Pearce, S., Vidrine, J., Tahay, P., Marani, S., Chen, S., Yuan, Y., Cantor, S. and Prokhorov, A. 2019. “Efficacy of Mobile Phone-Delivered Smoking Cessation Interventions for Socioeconomically Disadvantaged Individuals, A Randomized Clinical Trial,” *JAMA Internal Medicine*, 179(2), 167-174.
- Logan, S., Owen, D., Chen, S., Chen, W. J., Ungvari, Z., Farley, J., Csiszar, A., Sharpe, A., Loos, M., Koopmans, B., Richardson, A., and Sonntag, W. E. 2018. “Simultaneous assessment of cognitive function, circadian rhythm, and spontaneous activity in aging mice,” *Geroscience*, 40(2), 123-137.
- Bashir, M. H., Madhoun, M. F., Kanagala, R., Chen, S., Nusrat, S. and Fazili, J. 2017. “Impact of sustained virologic response on short-term clinical outcomes in patients with chronic hepatitis C-related cirrhosis,” *European Journal of Gastroenterology*, 30(3), 296-301.
- Arriens, C., Chen, S., Karp, D.R., Saxena, R., Sambandam K., Chakravarty, E., James, J.A., and Merrill, J.T. 2017, “Prognostic Significance of Repeat Biopsy in Lupus Nephritis: Histopathologic Worsening and a Short Time between Biopsies is Associated with Significantly Increased risk for End Stage Renal Disease and Death,” *Clinical Immunology*, 185, 3-9.
- Burks, J., Conner, A., Briggs, R., Chen, S., Bonney, P., Glenn, C., Cheema, A., Gross, N., and Mapstone, T. 2017. “Risk of Failure in Pediatric Ventriculo-Peritoneal Shunts Placed After Abdominal Surgery,” *Journal of Neurosurgery: Pediatrics*, 19, 571-577.
- Purkale, B., Mold, J., and Chen, S. 2016. “Encouraging patient-centered care by including quality-of-life questions on pre-encounter forms,” *Annals of Family Medicine*. 14, 221-226.

Approved on: July 17, 2024

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Fields of Interest

- Bayesian Statistics
- Small Area Estimation
- Likelihood Inference
- Survey Sampling

Education

- Ph.D., Statistics, University of Florida, 1990
- M.S., Statistics, University of Calcutta, Kolkata, India, 1985
- B.S., Statistics, Ramakrishna Mission R. College, Narendrapur, Kolkata, India, 1983

Professional Experience

- Principal Researcher, Research Mathematical Statistician, U.S. Census Bureau, 2011-Present
- Professor, Statistics, University of Georgia, 2001-Present
- Fellow, The Institute of Mathematical Statistics, 2009
- Distinguished Alumnus Award, Department of Statistics, University of Florida, 2007
- Fellow, The American Statistical Association, 2006
- Elected Member, International Statistical Institute, 1999

Selected Publications

- Datta, G.S. and Li, J. In Press. "A Quasi-Bayesian Approach to Small Area Estimation Using Spatial Models," *Calcutta Statistical Association Bulletin*.
- Datta, G.S., Lee, J., and Li, J. In Press. "Pseudo-Bayesian Small Area Estimation," *Journal of Survey Statistics and Methodology*.
- Ghosh, M., Kubokawa, T., and Datta, G. 2020. "Density Prediction and the Stein Phenomenon," *Sankhya, A*, 82, 330-352.
- Goyal, S., Datta, G., and Mandal, A. 2020. "A Hierarchical Bayes Unit-Level Small Area Estimation Model for Normal Mixture Populations," *Sankhya, B*.
- Datta, Gauri, J.N.K. Rao, and M. Torabi. In Press. "Small Area Estimation with Multiple Covariates Measured with Errors: A Linear Regression Approach of Combining Two Surveys." *Journal of Multivariate Analysis*.
- Chakraborty, A., Gauri Datta, and A. Mandal. In Press. "Robust Hierarchical Bayes Small Area Estimation for Nested Error Regression Model." *International Statistical Review*.
- Datta, Gauri, A. Delaigle, P. Hall, and L. Wang. In Press. "[Semi-parametric Prediction Intervals in Small Areas when Auxiliary Data are Measured with Error.](#)" *Statistica Sinica*.
- Brown, D. A., Gauri Datta, and N. Lazar. In Press. "[A Bayesian Generalized CAR Model for Correlated Signal Detection.](#)" *Statistica Sinica*.
- Datta, Gauri and A. Mandal. In Press. "Small Area Estimation with Uncertain Random Effects." *Journal of the American Statistical Association*, 110.

- Chung, H.C., Gauri Datta, and Jerry Maples. 2019. "Estimation of Median Incomes of the American States: Bayesian Estimation of Means of Subpopulations." in *S. Bandyopadhyay and M. Dutta (Eds.), Opportunities and Challenges in Development Essays in Honor of Sarnila Banerjee, Springer Nature*.
- Bell, William R., H.C. Chung, Gauri Datta, and Carolina Franco. 2019. "Measurement Error in Small Area Estimation: Functional Versus Structural Versus Naive Models." *Survey Methodology*, 45, 61-80.
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Fields of Interest

- Causal Inference
- Adaptive Design and Response Propensity Models
- Small Area Estimation
- Health Statistics
- Bayesian Statistics

Education

- MPH (Biostatistics), State University of New York (SUNY) at Buffalo, New York, 2014
- M.S. Statistics, George Mason University, Fairfax, Virginia, 2009
- B.S. Applied Math, Statistics and Economics, SUNY at Stony Brook, New York, 2005

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2008-Present
- Data Analyst, Research Institute on Addictions, SUNY Buffalo, 2005-2007

Professional Associations

- American Statistical Association
- American Public Health Association (APHA)

Selected Publications

- Kang, J., Morris, D.S., Joyce, P., and Dompfeh, I. In Press. “On Calibrated Inverse Probability Weighting and Generalized Boosting Propensity Score Models for Mean Estimation with Incomplete Survey Data,” *Wiley Interdisciplinary Reviews (WIREs) Computational Statistics*.
- Liu, B., Dompfeh, I., and Hartman, A.M. 2021. “Small Area Estimation of Smoke-Free Workplace Policies and Home Rules in U.S. Counties,” *Journal of Nicotine and Tobacco Research*.
- Dompfeh, Isaac and Liu, Benmei. Final Estimates of Small Area Estimates for Tobacco Use and Policies for 2014/15 data released at National Cancer Institute’s website: <https://sae.cancer.gov/tus-cps/>
- Dompfeh, Isaac and Liu, Benmei. 2018. “Small Area Estimation for Measures related to Tobacco Use and Policies using Tobacco Use Supplement to Current Population Surveys.” Concurrent session D-1, Hierarchical Bayes Small Area Estimation for Domains Defined by Demography, Geography, or Industry, Federal Committee on Statistical Methodology (FCSM) 2018. https://nces.ed.gov/FCSM/pdf/D_1LiuBFCSM2018.pdf

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Fields of Interest

- Econometrics
- Data Science
- Multilevel Models
- Resampling and Computer Intensive Methods

Education

- Ph.D., Statistics, University of Michigan, 2019
- M.A., Statistics, University of Michigan, 2015
- B.A., Sociology, University of California, Irvine, 2011
- B.A., Quantitative Economics, University of California, Irvine, 2011

Professional Experience

- Research Mathematical Statistician (Census Bureau Postdoctoral Fellow), U.S. Census Bureau, 2020-Present

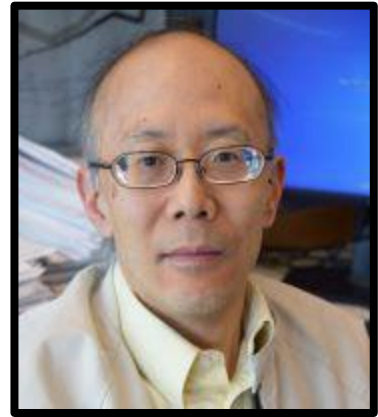
Selected Publications

- Slud, E., Hall, A., and Franco, C. In Press. "Small Area Estimates for Voting Rights Act Section 203(b) Coverage Determinations," *Calcutta Statistical Association Bulletin*.
- Hall, Adam. 2019. "Unified Price Indices for Spatial Comparisons." *Ph.D. Dissertation*, University of Michigan, Ann Arbor.

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Fields of Interest

- Survey Research Methods
- Record Linkage
- Missing Data
- Estimation

Education

- Ph.D., Applied Statistics, University of California, Riverside, 1988
- M.S., Statistics, University of California, Riverside, 1984
- B.S., Statistics, University of California, Riverside, 1983

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 1988-Present

Selected Publications

- Cantwell, P. and Michael Ikeda. 2003. "Handling Missing Data in the 2000 Accuracy and Coverage and Evaluation Survey." *Survey Methodology*, 29, No. 3, 139-153.
- Ikeda, Michael and R. Petroni. 1996. "Handling of Missing Data in the 1995 Integrated Coverage Measurement Sample." *Proceedings of the Section on Survey Research Methods of the American Statistical Association*, 563-568.
- Ernst, L. and Michael Ikeda. 1995. "A Reduced-Size Transportation Algorithm for Maximizing the Overlap Between Surveys." *Survey Methodology*, 21, 147-157.
- Ikeda, Michael. 1993. "Comparison of Alternative Family Weighting Methods for the National Health Interview Survey." *Proceedings of the Section on Survey Research Methods of the American Statistical Association*, 770-775.
- Strauss, D. and Michael Ikeda. 1990. "Pseudolikelihood Estimation for Social Networks." *Journal of the American Statistical Association*, 85, 204-212.

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Fields of Interest

- Small Area Estimation
- Models for Longitudinal Binary Outcome Data
- Analysis of Time-Dependent Covariates

Education

- Ph.D., Statistics, Arizona State University, 2018
- M.S., Statistics, Arizona State University, 2014
- B.S., Mathematics, Arizona State University, 2012








Professional Experience

- Research Mathematical Statistician, U.S. Bureau of the Census, 2018-Present

Professional Associations

- [American Statistical Association](#) 

Selected Publications

- Janicki, R., Holan, S. H., Irimata, K. M., Livsey, J., and Raim, A. In Press. "Spatial Change of Support Models for Differentially Private Decennial Census Counts of Persons by Detailed Race and Ethnicity," *Journal of Statistical Theory and Practice*.
- Irimata, Kyle, Jennifer Broatch, and Jeffrey R. Wilson. 2019. "[Partitioned GMM Logistic Regression Models for Longitudinal Data.](#)"  *Statistics in Medicine*, [DOI:10.1002/sim.8099](#) .
- Irimata, Kyle and Jeffrey R. Wilson. 2017. "[Identifying Intraclass Correlation Necessitating Hierarchical Modeling.](#)"  *Journal of Applied Statistics*, 4-5 (4), 626-641.. [DOI:10.1080/02664763.2017.1288203](#) .
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- Lalonde, Trent L., Anh Q. Nguyen, Jianqiong Yin, Kyle Irimata, and Jeffrey R. Wilson. 2013. "[Modeling Binary Outcomes with Time-Dependent Covariates.](#)"   *Journal of Data Science*, 11, 715-738.

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Fields of Interest

- Small Area Estimation
- Estimating Functions
- Model Misspecification

Education

- Ph.D., Mathematical Statistics, University of Maryland, College Park, 2009
- B.A., Mathematics, Economics, Brandeis University, 2001

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2009-Present

Selected Publications

- Parker, P., Holan, S.H., and Janicki, R. 2023. "Comparison of Unit Level Small Area Estimation Modeling Approaches for Survey Data Under Informative Sampling," *Journal of Survey Statistics and Methodology*, Vol 11, No. 4, 858-872.
- Parker, P., Holan, S.H., and Janicki, R. 2023. "A Comprehensive Overview of Unit Level Modeling of Survey Data for Small Area Estimation Under Informative Sampling," *Journal of Survey Statistics and Methodology*, Vol 11, No. 4, 829-857.
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- Parker, P. A., Holan, S. H., and Janicki, R. In Press. "Bayesian Unit-Level Modeling of Count Data under Informative Sampling Designs," *Stat.*
- Parker, P.A., Holan, S.H., and Janicki, R. 2022. "Computationally Efficient Bayesian Unit-Level Models for Non-Gaussian Data Under Informative Sampling," *The Annals of Applied Statistics*, Vol 16, No. 2, 887-904.
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- Janicki, Ryan and A. Vesper. 2017. "[Benchmarking Techniques for Reconciling Small Area Models at Distinct Geographic Levels.](#)" *Statistical Methods and Applications*.
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- Janicki, Ryan. 2009. "Statistical Inference Based on Estimating Functions in Exact and Misspecified Models." *Ph.D. Thesis*, University of Maryland, College Park.

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Fields of Interest

- Small Area Methods
- Spatial Statistics
- Sampling
- Bayesian Methods and Applications

Education

- Ph.D., Statistics, University of Connecticut, 2009
- B.S., Mathematics (Statistics Option), University of Massachusetts at Lowell, 2004

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2009-Present
- Mathematical Statistician (Intern), U.S. Census Bureau, 2008
- Graduate Assistant, University of Connecticut, 2004-2009

Selected Publications

- Kang, J., Morris, D.S., Joyce, P., and Dompok, I. In Press. "On Calibrated Inverse Probability Weighting and Generalized Boosting Propensity Score Models for Mean Estimation with Incomplete Survey Data," *Wiley Interdisciplinary Reviews (WIREs) Computational Statistics*.
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- Joyce, Patrick M. and D. Malec. 2009. "[Population Estimation Using Tract Level Geography and Spatial Information.](#)" [Research Report Series, \(Statistics #2009-03\)](#), Center for Statistical Research and Methodology, U.S. Census Bureau, Washington, D.C.

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Fields of Interest

- Causal inference with observational modeling
- Missing data analysis
- Machine learning methods
- Calibration techniques

Education

- PhD, Statistics, The Pennsylvania State University, 2007

Professional Experience

- Principal Researcher/Mathematical Statistician, U.S. Census Bureau, 2022-Present
- Senior Researcher/Mathematical Statistician, U.S. Census Bureau, 2019- 2022
- Statistics Team Lead, U.S. Centers for Disease Control and Prevention, 2015-2019
- Assistant Professor, Northwestern University, 2008-2015
- Research Associate, The Pennsylvania State University, 2007-2008

Selected Publications

- Kang, J., Morris, D.S., Joyce, P., and Dompheh, I. In Press. “On Calibrated Inverse Probability Weighting and Generalized Boosting Propensity Score Models for Mean Estimation with Incomplete Survey Data,” *Wiley Interdisciplinary Reviews (WIREs) Computational Statistics*.
- Joseph Kang, Yulei He, Jaeyoung Hong, Precious Esie, and Kyle T Bernstein. 2019. “Causal Inference of Latent Classes in Complex Survey Data with the Estimating Equation Framework.” *Statistics in Medicine*, 39(3), 207–219.
- Lei Liu, Cheng Zheng, and Joseph Kang. 2018. “Exploring Causality Mechanism in the Joint Analysis of Longitudinal and Survival Data.” *Statistics in Medicine*, 37(26), 3733–3744.
- Joseph Kang, Jaeyoung Hong, Precious Esie, Kyle T Bernstein, and Sevgi Aral. 2017. “An Illustration of Errors in Using the P Value to Indicate Clinical Significance or Epidemiological Importance of a Study Finding.” *Sexually Transmitted Diseases*, 44(8), 495.
- Joseph Kang, Wendy Chan, Mi-Ok Kim, and Peter M Steiner. 2016. “Practice of Causal Inference with the Propensity of Being Zero or One: Assessing the Effect of Arbitrary Cutoffs of Propensity Scores.” *Communications for Statistical Applications and Methods*, 23(1), 1.
- Joseph Kang, Christina Czart Ciecierski, Emily L Malin, Allison J Carroll, Marian Gidea, Lynette L Craft, Bonnie Spring, and Brian Hitsman. 2014. “A Latent Class Analysis of Cancer Risk Behaviors Among U.S. College Students.” *Preventive Medicine*, 64, 121–125.
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- Xiaogang Su, Joseph Kang, Juanjuan Fan, Richard A Levine, and Xin Yan. 2012. “Facilitating Score and Causal Inference Trees for Large Observational Studies.” *Journal of Machine Learning Research*, 13, 2955.

- Joseph Kang, Xiaogang Su, Brian Hitsman, Kiang Liu, and Donald Lloyd-Jones. 2012. “Tree-Structured Analysis of Treatment Effects with Large Observational Data.” *Journal of Applied Statistics*, 39(3), 513–529.
- Joseph L Schafer and Joseph Kang. 2008. “Average Causal Effects from Nonrandomized Studies: A Practical Guide and Simulated Example.” *Psychological Methods*, 13(4), 279.
- Joseph Kang and Joseph L Schafer. 2007. “Demystifying double robustness: A Comparison of Alternative Strategies for Estimating a Population Mean from Incomplete Data.” *Statistical Science*, 523–539.

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Fields of Interest

- Resampling and Computer Intensive Methods
- Financial Statistics and Econometrics
- Spatial and Environmental Statistics
- Asymptotic Expansions

Education

- Ph.D., Statistics, Michigan State University, 1989
- M.Stat, Statistics, Indian Statistical Institute, Calcutta, India, 1986
- B.Stat, Statistics, Indian Statistical Institute, Calcutta, India, 1984

Professional Experience

- Principal Researcher, U.S. Census Bureau, 2016-Present
- Distinguished Professor of Statistics, NC State University, 2014-Present
- Honorary Visiting Professorship, London School of Economics, U.K., 2013-2016
- Professor, Department of Statistics, NC State University, 2012-2014
- Professor, Department of Statistics, Department of Mathematics (Courtesy), Texas A&M University, 2006-2012
- Professor, Department of Statistics, Iowa State University, 1989-2006

Professional Associations

- [Elected Member, International Statistical Institute, 2005](#) ↗
- [Fellow, American Statistical Association, 2002](#) ↗
- [Fellow, Institute of Mathematical Statistics, 2001](#) ↗

Selected Publications

- McElroy, T., Ghosh, D., and Lahiri, S. 2023. "Quadratic Prediction of Time Series via Autocumulants," *Sankhya A*, published online.
- Lahiri, Soumendra N. and P.M. Robinson. 2016. "Central Limit Theorems for Long Range Dependent Spatial Linear Processes." *Bernoulli* *bf*, 22, 345-375.
- Akritas, M., Soumendra N. Lahiri, and D. Politis. 2015. *Proceedings of the First Conference of the International Society of Nonparametric Statistics*. Springer-Verlag, Inc: New York.
- Gregory, K., R.J. Carroll, V. Baladandayuthapani, and Soumendra N. Lahiri. 2015. "A Two Sample Test for Equality of Means in High Dimension." *Journal of the American Statistical Association*, 110, 837-849.
- Chatterjee, A., S. Gupta, and Soumendra N. Lahiri. 2015. "On the Residual Empirical Process Based on the ALASSO in High Dimensions and Its Functional Oracle Property." *Journal of Econometrics*, 186, 317-324.
- Staicu, A.M., Soumendra N. Lahiri, and R.J. Carroll. 2015. "Significance Tests for Functional Data with Complex Dependence Structure." *Journal of Statistical Planning and Inference*, 156, 1-13.

- Gregory, K., Soumendra N. Lahiri, and D. Nordman. 2015. "A Smooth Block Bootstrap for Statistical Functionals and Time Series." *Journal of Time Series Analysis*, 36, 442-461.
- Bandopadhyay, S., Soumendra N. Lahiri, and D. Nordman. 2015. "A Frequency Domain Empirical Likelihood Method for Irregularly Spaced Spatial Data." *Annals of Statistics*, 43, 519-545.
- Chatterjee, A. and Soumendra N. Lahiri. 2015. "Discussion of the paper: An Adaptive Resampling Test for Detecting the Presence of Significant Predictors by I.W. McKeague and M. Qian." *Journal of the American Statistical Association*, 110, 1434-1438.
- DasGupta, A., Soumendra N. Lahiri, and J. Stoyanov. 2014. "Sharp Fixed n Bounds and Asymptotic Expansions for the Mean and the Median of a Gaussian Sample Maximum, and Applications to Donoho-Jin Model." *Statistical Methodology (Kesar Singh Memorial Volume)*, 20, 40-62.
- Lahiri, Soumendra N., A. Schick, A. SenGupta, and T.N. Sriram. 2014. *Advances in Robust and Nonparametric Statistics--A Festschrift in honor of Hira L. Koul*. Springer-Verlag, Inc: New York.
- Nordman, D. and Soumendra N. Lahiri. 2014. "A Review of Empirical Likelihood Methods for Time Series." *Journal of Statistical Planning and Inference*, 155, 1-18.
- Nordman, D. and Soumendra N. Lahiri. 2014. "Convergence Rates of Empirical Block Length Selectors for Block Bootstrap." *Bernoulli*, 20, 958-978.
- Gupta, S. and Soumendra N. Lahiri. 2014. "Discussion of the paper: Estimation and Accuracy after Model Selection by B. Efron." *Journal of the American Statistical Association*, 109, 1013-1015.
- Kim, Y.M., Soumendra N. Lahiri, and D. Nordman. 2013. "A Progressive Block Empirical Likelihood For Time Series." *Journal of the American Statistical Association*, 108, 1506-1516.
- Rister, K. and Soumendra N. Lahiri. 2013. "Bootstrap Based Trans-Gaussian Kriging." *Statistical Modeling (Special Issue on the Proceedings of the 4th Lehman Symposium)*, 13, 509-539.
- Chatterjee, A. and Soumendra N. Lahiri. 2013. "Rates of Convergence of the Adaptive Lasso Estimators to the Oracle Distribution and Higher Order Refinements by the Bootstrap." *Annals of Statistics*, 41, 1232-1259.
- Nordman, D., H. Bunzel, and Soumendra N. Lahiri. 2013. "A Nonstandard Empirical Likelihood for Time Series." *Annals of Statistics*, 41, 3050-3073.
- Maitra, R., V. Melnykov, and Soumendra N. Lahiri. 2012. "Bootstrapping for Significance of Compact Clusters in Multi-dimensional Datasets." *Journal of the American Statistical Association*, 107, 378-392.
- Kaiser, M.S., Soumendra N. Lahiri, and D. Nordman. 2012. "A Goodness of Fit Test for Conditionally Specified Spatial Models and its Asymptotic Properties." *Annals of Statistics*, 40, 104-130.
- Nordman, D. and Soumendra N. Lahiri. 2012. "Block Bootstraps for Time Series with Fixed Regressors." *Journal of the American Statistical Association*, 107, 233-246.
- Kreiss, J-P and Soumendra N. Lahiri. 2012. "Bootstrap Methods for Time Series." In *Handbook of Statistics, Vol. 30*, ed. T. Subba Rao, S. Subba Rao, and C.R. Rao, 3-26.
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- Lahiri, Soumendra N., C. Spiegelman, J. Appiah, and L. Rilett. 2012. "Gap Bootstrap Methods for Massive Data Sets with an Application to Transportation Engineering." *Annals of Applied Statistics*, 6, 1552-1587.
- Lahiri, Soumendra N., X-L Nguyen, J. Yang, Z. Zhu, and P. Banerjee. 2012. "Wireless Sensor Networks: Statistical Issues and Challenges." *Journal of the Indian Statistical Association*, 50, 151-191.
- Athreya, K.B. and Soumendra N. Lahiri. 2006. *Measure Theory and Probability Theory*. Springer-Verlag, Inc: New York.
- Lahiri, Soumendra N. 2003. *Resampling Methods for Dependent Data*. Springer-Verlag, Inc: New York.

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Fields of Interest

- Small Area Estimation
- Random Effects Models
- Binary Responses
- Variance Estimation



Education

- Ph.D., Statistics, The Pennsylvania State University, 2002
- M.S., Statistics, The Pennsylvania State University, 1998
- B.S., Statistics and Computer Science (magna cum laude), University of Southwestern Louisiana, 1996

Professional Experience

- Principal Researcher, Research Mathematical Statistician, U.S. Census Bureau, 2002-Present

Professional Associations

- [American Statistical Association](#) 

Selected Publications

- Ghosh, T., Ghosh, M., Maples, J., and Tang, X. 2022. "Multivariate Global-Local Priors for Small Area Estimation," *STATS*, v5, 673-688. <https://www.mdpi.com/2571-905X/5/3/40/htm>.
- Janicki, R., Raim, A.M., Holan, S.H., and Maples, J. 2022. "Bayesian Nonparametric Multivariate Spatial Mixture Mixed Effects Models with Application to American Community Survey Special Tabulations," *The Annals of Applied Statistics*, Volume 16, Issue 1, 144-168.
- Maples, Jerry. In Press. "Improving Small Area Estimates of Disability: Combining the American Community Survey with the Survey of Income and Program Participation." *Journal of the Royal Statistical Society--Series A*.
- O-Hara, B., C. Medalia, and Jerry Maples. 2019. "Modeling a Bridge When Survey Questions Change: Evidence from the Current Population Survey Health Insurance Redesign." *Journal of Official Statistics*, Vol. 35, Issue 1, 189-202.
- Chung, H.C., Gauri Datta, and Jerry Maples. 2019. "Estimation of Median Incomes of the American States: Bayesian Estimation of Means of Subpopulations." in *S. Bandyopadhyay and M. Dutta (Eds.), Opportunities and Challenges in Development Essays in Honor of Sarnila Banerjee*, Springer Nature.
- Bell, William R., W.W. Basel, and Jerry Maples. 2016. "An Overview of the U.S. Census Bureau's Small Area Income and Poverty Estimates (SAIPE) Program." In *Analysis of Poverty Data by Small Area Methods*, ed. Ch. 15, Ed. Pratesi, M., London: Wiley.
- Maples, Jerry. 2012. "An Examination of the Relative Variance of Replicate Weight Variance Estimators of Ratios through First Order Expansions." *2012 Proceedings of the Joint Statistical Meetings (ASA Section on Survey Research Methods)*, Alexandria, VA, 4067-4077.

- Datta, Gauri, M. Ghosh, Rebecca Steorts, and Jerry Maples. 2010. "Bayesian Benchmarking with Applications to Small Area Estimation." *TEST*, doi: 1007/s11749-010-0218-y.
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- Malec, D. and Jerry Maples. 2008. "Small Area Random Effects Models for Capture/Recapture Methods with Applications to Estimating Coverage Error in the U.S. Decennial Census." *Statistics in Medicine*, 27, 4038-4056.
- Huang, E., D. Malec, Jerry Maples, and L. Weidman. 2006. "American Community Survey Variance Reduction of Small Area via Coverage Adjustment Using an Administrative Records Match." *Proceedings of the American Statistical Association*, 3150-3152.
- Maples, Jerry and William R. Bell. 2005. "Evaluation of School District Poverty Estimates: Predictive Models Using IRS Income Tax Data." *Proceedings of the American Statistical Association*, 1322-1329.
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Fields of Interest

- Theoretical and Applied Statistics

Education

- Ph.D., Statistics, Indian Statistical Institute, 1983
- M.S., Statistics, University of Kerala, India, 1978
- B.S., Mathematics, University of Kerala, India, 1976

Professional Experience

- Principal Researcher, Research Mathematical Statistician, U.S. Census Bureau, 2009-Present
- Professor, University of Maryland Baltimore County, 1985-Present
- Presidential Research Professor, University of Maryland Baltimore County, 2008-2011
- Fellow, American Statistical Association, 2001
- Fellow, Institute of Mathematical Statistics, 1998

Selected Publications

- Raim, A.M., Nichols, E., and Mathew, T. 2023. "A Statistical Comparison of Call Volume Uniformity Due to Mailing Strategy," *Journal of Official Statistics*, 39, 103-121.
- Raim, A.M., Mathew, T., Sellers, K. F., Ellis, R., and Meyers, M. 2023. "Design and Sample Size Determination for Experiments on Nonresponse Follow-up using a Sequential Regression Model," *Journal of Official Statistics*, 39(2), 173-202.
- Lucagbo, M., Mathew, T., and Young, D. 2023. "Rectangular Multivariate Normal Prediction Regions for Setting Reference Regions in Laboratory Medicine," *Journal of Biopharmaceutical Statistics*, 33(2), 191-209.
- Lucagbo, M. and Mathew, T. 2023. "Rectangular Tolerance Regions and Multivariate Normal Reference Regions in Laboratory Medicine," *Biometrical Journal*, 65(3).
- Arsham, A., Bebu, I., and Mathew, T. 2023. "Cost-Effectiveness Analysis Under Multiple Effectiveness Outcomes: A Probabilistic Approach," *Statistics in Medicine*, 42, 3936-3955.
- Rivas, A., Antoun, C., Feuer, S., Mathew, T., Nichols, E., Olmsted-Hawala, E. and Wang, L. 2022, "Comparison of Three Navigation Button Designs in Mobile Survey for Older Adults," *Survey Practice*, 15(1).
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Fields of Interest

- Generalized Linear (Mixed) Models
- Longitudinal Data Analysis
- Multivariate Statistics
- Missing Data Methods

Education

- Ph.D., Statistics, Cornell University, 2012
- M.S., Statistics, The George Washington University, 2007
- A.B., Economics, Princeton University, 2003

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2012-Present
- Adjunct Professor, Department of Statistics, George Washington University, 2013-Present

Selected Publications

- Morris, D.S. and Raim, A.M. 2023. "Comparing Trial and Variable Association in Contingency Table Data Using Multinomial Models for Clustered Data." *In Proceedings of the 37th International Workshop on Statistical Modelling*. Dortmund, Germany: Statistical Modelling Society, 536-542.
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- Morris, Darcy Steeg. 2016. "An Approach for Using Administrative Records to Reduce Contacts in the 2020 Census." *Statistical Journal of the International Association for Official Statistics*, 32(2); 177-188.
- Morris, Darcy Steeg. 2013. "A Semiparametric Approach for Multivariate Longitudinal Count Data." *Proceedings of the 28th International Workshop on Statistical Modeling*.
- Morris, Darcy Steeg. 2012. "Methods for Multivariate Longitudinal and Duration Models with Applications in Economics." *PhD Dissertation, Cornell University*.

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Fields of Interest

- Time Series and Seasonal Adjustment
- Bayesian Analysis
- Classification and Regression Tree
- Data Mining



Education

- Ph.D., Statistics, University of Pennsylvania, 2009
- M.S., Statistics, University of Pennsylvania, 2007
- B.A., Mathematics, University of Pennsylvania, 2002
- B.A., Economics, University of Pennsylvania, 2002

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2011-Present

Selected Publications

- Chen, B., McElroy, T., and Pang, O. 2022. "Assessing Residual Seasonality in the U.S. National Income and Product Accounts Aggregates," *Journal of Official Statistics, Volume 38, Issue 2, 399-428.*
- McElroy, T., Pang, O., and Sheldon, G. 2019. "Custom Epoch Estimation for Surveys," *Journal of Applied Statistics, 46, 638-663.*
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Fields of Interest

- Data Science
- Record Linkage
- Data Cleaning



Education

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- B.S., Mathematics, Northeastern University, 1988

Professional Experience

- Information Technology Specialist, U.S. Census Bureau, 1988-Present

Selected Publications

- Porter, E. H. and Winkler, W. E. 1997. [“Approximate string comparison and its effect on an advanced record linkage system”](#). U.S. Bureau of the Census, Research Report.
- Winkler, W. E., Yancey, W., Porter, E. H. . [“Fast record linkage of very large files in support of decennial and administrative records projects”](#). Proceedings of the Section on Survey Research Methods, American Statistical Association.
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Fields of Interest

- Finite Mixture Models
- Overdispersion Models for Categorical Data
- Statistical Computing
- High Performance Computing

Education

- Ph.D., Statistics, University of Maryland, Baltimore County, 2014
- M.S., Statistics, University of Maryland, Baltimore County, 2011
- M.S., Computer Science, University of Maryland, Baltimore County, 2007
- B.S., Computer Science, University of Maryland, Baltimore County, 2002

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2014-Present
- Software Engineer, Advertising.com / AOL, 2002-2008

Professional Associations

- [American Statistical Association](#) 

Selected Publications

- Raim, A.M., Nichols, E., and Mathew, T. 2023. "A Statistical Comparison of Call Volume Uniformity Due to Mailing Strategy," *Journal of Official Statistics*, 39, 103-121.
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Fields of Interest

- Time Series
- Nonparametric Bayesian Methods
- Biomedical Applications

Education

- Ph.D., Statistics, Iowa State University, 1999
- M.S., Statistics, Indian Statistical Institute, 1993
- B.S., Statistics, Indian Statistical Institute, 1991

Professional Experience

- Principal Researcher, Research Mathematical Statistician, U.S. Census Bureau, 2013-Present
- Professor, Statistics, University of Maryland Baltimore County, 2009-Present

Professional Associations

- [Fellow, American Statistical Association, 2017](#) 

Selected Publications

- McElroy, T., Roy, A., and Hore, G. 2023. "FLIP: a Utility Preserving Privacy Mechanism for Time Series," *Journal of Machine Learning Research*, 24, 1-29.
- Guin, A., Roy, A., and Sinha, B. 2022. "Bayesian Analysis of Multiply Imputed Synthetic Data under the Multiple Linear Regression Model," *International Journal of Statistical Sciences*, Volume 22(2), 25-38.
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- Guin, A., Roy, A., and Sinha, B. In Press. "Bayesian Analysis of Singly Imputed Partially Synthetic Data Generated by Plug-In Sampling and Posterior Predictive Sampling under the Multiple Linear Regression Model," *International Journal of Statistical Applications*.
- McElroy, T. and Roy, A. 2022. "A Review of Seasonal Adjustment Diagnostics," *International Statistical Review*, 90(2), 259-284.
- McElroy, T. and Roy, A. 2022. "Model Identification via Total Frobenius Norm of Multivariate Spectra," *Journal of the Royal Statistical Society, Series B, Volume 84*, 473-495.
- McElroy, T., Roy, A., Livsey, J., Firestone, T., and Notis, K. 2021. "Anticipating Revisions in the Transportation Services Index," *Journal of the International Association of Official Statistics*, 37, 641-653.
- McElroy, T. and Roy, A. 2021. "Testing for Adequacy of Seasonal Adjustment in the Frequency Domain," *Journal of Statistical Planning and Inference*, 221, 241-255.
- Roy, A., McElroy, T., and Linton, P. 2019. "Estimation of Causal Invertible VARMA Models." *Statistica Sinica*, 29, 455-478.

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- Guha, N., I. Roy, and Anindya Roy. 2013. "Bayesian Estimation of Huff Curves." *Electronic Journal of Statistics*, 7, 2794-2821.
- Warfield, J.D. and Anindya Roy. 2013. "A Semiparametric Sequential Algorithm for Estimation of Dose-Response Curve." *Sequential Analysis*, 32, 196-213.
- Guha, N., Anindya Roy, L. Kopylev, J. Fox, M. Spassova, and P. White. 2013. "Nonparametric Bayesian Method for Benchmark Dose Estimation." *Risk Analysis*, 33, 1608-1619.
- Danaher, M.R., Anindya Roy, Z. Chen, S.L. Mumford, and E.F. Scheisterman. 2012. "Minkowski-Weyl Priors for Models with Parameter Constraints: An Analysis of the Biocycle Study." *Journal of the American Statistical Association*.
- Roy, Anindya, N.J. Perkins, and G.M. Buck Louis. 2012. "Assessing Chemical Mixtures and Human Health: Use of Bayesian Belief Net Analysis." *Journal of Environmental Protection*, 3, 462-468.
- Ghosal, S. and Anindya Roy. 2011. "Identifiability of the Proportion of Null Hypothesis in Mixture Models for P-Value Distribution." *Electronic Journal of Statistics*, 5, 329-341.
- Ghosal, S. and Anindya Roy. 2011. "Predicting False Discovery Proportion Under Dependence." *Journal of the American Statistical Association*, 106, 1208-1218.
- Novey, M., T. Adali, and Anindya Roy. 2010. "The Complex Generalized Gaussian Distribution-Characterization, Generation, and Estimation." *IEEE Transactions on Signal Processing*, 58, 1427-1433.
- Roy, Anindya and A. Bose. 2009. "Large Sample Modification for Generalized Confidence Intervals." *Journal of the Multivariate Analysis*, 100, 1384-1397.
- Roy, Anindya, S. Ghosal, and W.F. Rosenberger. 2009. "Convergence Properties of Sequential Bayesian D-Optimal Designs with Application to Phase I Clinical Trials." *Journal of Statistical Planning and Inference*, 139, 425-440.
- Roy, Anindya, D. Bhaumick, R. Gibbons, and J. Aryal. 2007. "Sample Size Determination for Three-Level Longitudinal Designs with Differential Attrition Rates." *Biometrics*, 63, 699-707.
- Ghosal, S. and Anindya Roy. 2006. "Posterior Consistency of Gaussian Process Prior for Nonparametric Binary Regression." *Annals of Statistics*, 34, 2413-2429.
- Choudhuri, N., S. Ghosal, and Anindya Roy. 2004. "Bayesian Estimation of the Special Density of a Time Series." *Journal of the American Statistical Association*, 99, 1050-1059.
- Choudhuri, N., S. Ghosal, and Anindya Roy. 2004. "Contiguity of the Whittle Measure for a Gaussian Time Series." *Biometrika*, 91, 211-218.

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Fields of Interest

- The jackknife, bootstrap and other resampling methods
- Variable selection and inference with high dimensional data
- Sample surveys (variance estimation, imputation for nonrespondents)
- Missing data (nonignorable missing, dropout, semi-parametric methods)
- Longitudinal data analysis with missing data and/or measurement error
- Medical statistics (clinical trials, personalized medicine, covariate-adaptive design)

Education

- Ph.D. in Statistics, 1987, University of Wisconsin-Madison
- B.S. in Mathematics, 1982, East China Normal University

Professional Experience

- Principal Researcher, U.S. Census Bureau, 2008-present
- Professor, Statistics, University of Wisconsin, 1996-present
- Chair, Statistics Department, University of Wisconsin, 2005-2009
- Associate Chair, Statistics Department, University of Wisconsin, 1997-2004
- Senior Research Fellow, NSF/ASA/BLS/Census Bureau, 1996-1997, 2006-2007
- Senior Research Fellow, Covance, 1998
- Associate Professor, Statistics, University of Wisconsin, 1994-1996
- Associate Professor, Mathematics, University of Ottawa, 1991-1993
- Assistant Professor, Mathematics, University of Ottawa, 1989-1991
- Assistant Professor, Statistics, Purdue University, 1987-1989

Professional Associations

- Fellow, Institute of Mathematical Statistics
- Fellow, American Statistical Association
- Member, International Chinese Statistical Association

Selected Publications

- Shao, J. (2025). "Asymptotic distributions of degenerated U-statistics," *Statistical Theory and Related Fields* 9 (4), 434-443.
- Gao, J., Wang, L., Shao, J. (2025). "Distributed subsampling and quasi decorrelated score for cluster data: An application to Beijing multisite air quality," *The Annals of Applied Statistics* 19 (3), 1967-1987.
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- Shao, J. (1999). *Mathematical statistics*. Springer New York.
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- Rao, J. N. K., and Shao, J. (1992). "Jackknife variance estimation with survey data under hot deck imputation," *Biometrika*, 79 (4), 811–822.
- Shao, J., and Wu, C. F. J. (1989). "A general theory for jackknife variance estimation," *The Annals of Statistics*, 17 (3), 1176–1197.

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Fields of Interest

- Multivariate Analysis, Mixed Linear Models
- Decision Theory, Robustness
- Statistical Inference (Frequentist and Bayesian)
- Environmental Statistics, Meta-Analysis, Disclosure Avoidance Methods




Education

- Ph.D., Statistics, Calcutta University, 1973
- M.S., Statistics, Calcutta University, 1967
- B.Sc., Statistics, Calcutta University, 1965

Professional Experience

- Principal Researcher, Research Mathematical Statistician, U.S. Census Bureau, 2008-Present
- Professor of Statistics, Department of Mathematics and Statistics, UMBC, 1985-Present
- Associate Professor, University of Pittsburgh, 1981-1985
- Senior Lecturer, Indian Statistical Institute, 1971-1978
- Visiting Scientist, University of Montreal, 1979-1980

Professional Associations

- [Fellow, Institute of Mathematical Statistics](#) 
- [Fellow, American Statistical Association](#) 
- [Elected Member, International Statistical Institute](#) 
- Presidential Research Professor, UMBC, 2000-2003

Selected Publications

- Guin, A., Roy, A., and Sinha, B. 2022. "Bayesian Analysis of Multiply Imputed Synthetic Data under the Multiple Linear Regression Model," *International Journal of Statistical Sciences*, Volume 22(2), 25-38.
- Guin, A., Roy, A., and Sinha, B. 2023. "Bayesian Analysis of Singly Imputed Synthetic Data under the Multivariate Normal Model," *International Journal of Statistical Sciences*, Volume 23(2), November 2023.
- Guin, A., Roy, A., and Sinha, B. In Press. "Bayesian Analysis of Singly Imputed Partially Synthetic Data Generated by Plug-In Sampling and Posterior Predictive Sampling under the Multiple Linear Regression Model," *International Journal of Statistical Applications*.
- Moura, R., Klein, M., Zylstra, J., Coelho, C., and Sinha, B. In Press. "Inference for Multivariate Regression Model Based on Synthetic Data Generated Under Plug-In Sampling," *Journal of the American Statistical Association (Theory & Methods)*.
- Klein, M., J. Zylstra, and Bimal Sinha. In Press. "Finite Sample Inference for Multiply Imputed Synthetic Data under a Multiple Linear Regression Model." *Calcutta Statistical Association Bulletin*.

- Klein, M., R. Moura, and Bimal Sinha. In Press. "Multivariate Normal Inference Based on Singly Imputed Synthetic Data under Plug-In Sampling." *Sankhya*.
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- Klein, Martin and Bimal Sinha. 2016. "Likelihood Based Finite Sample Inference for Singly Imputed Synthetic Data under the Multivariate Normal and Multiple Linear Regression Models." *Journal of Privacy and Confidentiality*, 7, 43-98.
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- Sinha, Bimal and Martin Klein. 2015. "Likelihood-based Inference for Synthetic Data Based on a Normal Model." *Statistics and Probability Letters*, 105, 168-175.
- Klein, Martin, Thomas Mathew, and Bimal Sinha. 2014. "Noise Multiplication for Statistical Disclosure Control of Extreme Values in Log-Normal Regression Samples." *Journal of Privacy and Confidentiality*, 6, 77-125.
- Klein, Martin and Bimal Sinha. 2013. "Statistical Analysis of Noise Multiplied Data Using Multiple Imputation." *Journal of Official Statistics*, 29, 425-465.
- Nayak, Tapan, Bimal Sinha, and Laura Zayatz. 2011. "Statistical Properties of Multiplicative Noise Masking for Confidentiality Protection." *Journal of Official Statistics*, 27, 527-544.
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- Mathew, Thomas, A. Niyogi, and Bimal Sinha. 1994. "Improved Nonnegative Estimation of Variance Components in Balanced Multivariate Mixed Models." *Journal of Multivariate Analysis*, 51, 83-101.
- Mathew, Thomas, Bimal Sinha, and L. Zhou. 1993. "Some Statistical Procedures for Combining Independent Tests." *Journal of the American Statistical Association*, 88, 912-919.
- Mathew, Thomas and Bimal Sinha. 1992. "Exact and Optimum Tests in Unbalanced Split-plot Designs under Mixed and Random Models." *Journal of the American Statistical Association*, 87, 192-200.
- Mathew, Thomas, Bimal Sinha, and B. Sutradhar. 1992. "Nonnegative Estimation of Variance Components in Unbalanced Mixed Models with Two Variance Components." *Journal of Multivariate Analysis*, 42, 77-101.
- Mathew, Thomas and Bimal Sinha. 1991. "Towards an Optimum Test for Non-additivity in Tukey's Model." *Journal of Multivariate Analysis*, 36, 68-94.
- Mathew, Thomas and Bimal Sinha. 1988. "Optimum Tests for Fixed Effects and Variance Components in Balanced Models." *Journal of the American Statistical Association*, 83, 133-135.
- Mathew, Thomas and Bimal Sinha. 1988. "Optimum Tests in Unbalanced Two-way Models without Interaction." *Annals of Statistics*, 16, 1727-1740.
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- Das, Rita and Bimal Sinha. 1986. "Detection of Outliers with Dispersion Slippage in Elliptically Contoured Distributions." *Annals of Statistics*, 14, 1619-1624.
- Gupta, A. Das and Bimal Sinha. 1986. "Estimation in the Multiparameter Exponential Family: Admissibility and Inadmissibility Results." *Statistics and Decisions*, 4, 101-130.
- Kariya, T. and Bimal Sinha. 1985. "Nonnull and Optimality Robustness of Some Multivariate Tests." *Annals of Statistics*, 13, 1182-1197.
- Sinha, Bimal. 1984. "Detection of Multivariate Outliers in Elliptically Contoured Distributions." *Annals of Statistics*, 12, 1558-1565.
- Sinha, Bimal and S.K. Sarkar. 1984. "Invariant Confidence Sequences for Some Parameters in a General Linear Regression Model." *Annals of Statistics*, 12, 301-310.
- Ghosh, J.K. and Bimal Sinha. 1981. "A Necessary and Sufficient Condition for Second Order Admissibility with Applications to Berkson's Problem." *Annals of Statistics*, 9, 1334-1338.
- Ghosh, J.K., Bimal Sinha, and H.S. Wieand. 1980. "Second Order Efficiency of the MLE wrt Any Bounded Bowl-shaped Loss Function ." *Annals of Statistics*, 8, 506-521.
- Ghosh, M. and Bimal Sinha. 1980. "On the Robustness of Least Squares Procedures in Regression Models." *Journal of Multivariate Analysis*, 10, 332-342.

- Sinha, Bimal and H.S. Wieand. 1979. "Union Intersection Test for the Mean Vector when the Covariance Matrix is Totally Reducible." *Journal of the American Statistical Association*, 74, 340-343.
- Ghosh, J.K., Bikas K. Sinha, and Bimal Sinha. 1977. "Multivariate Power Series Distributions and Neyman's Properties for Multinomial." *Journal of Multivariate Analysis*, 7, 397-408.
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- Ghosh, M., Bimal Sinha, and N. Mukhopadhyay. 1976. "Multivariate Sequential Point Estimation." *Journal of Multivariate Analysis*, 6, 281-294.

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Fields of Interest

- Entity resolution (record linkage), privacy-preserving record linkage
- Clustering, Machine learning
- Bayesian methodology and applications
- Small area estimation



Education

- Ph.D., Statistics, Thesis entitled: "Bayes and Empirical Bayes Benchmarking for Small Area Estimation", University of Florida, Gainesville, 2012
- M.S., Mathematical Sciences, Clemson University, 2005
- B.Sc., Mathematics, Davidson College, 2001

Professional Experience

- Principal Researcher, Research Mathematical Statistician, U.S. Census Bureau, 2017-Present
- Assistant Professor, Department of Statistical Science, Duke University, 2015-Present
- Visiting Assistant Professor, Department of Statistics, Carnegie Mellon University, 2012-2015
- Dissertation Fellow, U.S. Census Bureau, 2010-2012

Selected Publications

- Steorts, R. 2023. "A Primer on the Data Cleaning Pipeline," *Journal of Survey Statistics and Methodology*, 11, 553-568.
- Marchant, N.G., Rubinstein, B.I.P., and Steorts, R. 2023, "Bayesian Graphical Entity Resolution Using Exchangeable Random Partition Priors," *Journal of Survey Statistics and Methodology*, 11, 569-596.
- Deo, N., Sanguthevar R., Joyanta B., Soliman, A., Weinberg, D., and Steorts, R. In Press. "Novel Blocking Techniques and Distance Metrics for Record Linkage," *Proceedings of the 25th International Conference on Information Integration and Web Intelligence (iiWAS)*, Lecture Notes in Computer Sciences, Springer.
- Basak J., Soliman A., Deo N., Haase, K., Mathur, A., Park, K., Steorts, R., Weinberg, D., Sahni. S., and Sanguthevar R. 2023. "On Computing the Jaro Similarity Between Two Strings," *Proceedings of the 19th International Symposium on Bioinformatics Research and Applications*, Springer, 31-44.
- Aleshin-Guendel, S. and Steorts, R. In Press. "Monitoring Convergence Diagnostics for Entity Resolution," *Annual Review of Statistics and Its Applications*.
- Mosaferi, S., Ghosh, M., and Steorts, R. In Press. "Measurement Error Models for Small Area Estimation," *Communications and Statistics: Simulation and Computation*.
- Marchant, N., Kaplan, A., Rubenstein, B., Elzar, D., and Steorts, R. 2021. "d-blink: Distributed End-to-End Bayesian Entity Resolution," *Journal of Computational Graphics and Statistics*, 30(2), 406-421.
- Betancourt, B., Zanella, G., and Steorts, R. In Press. "Random Partition Models for Microclustering Tasks," *Journal of the American Statistical Association, Theory and Methods*.
- Steorts, R. Tancredi, A., and Liseo, B. In Press. "Generalized Bayesian Record Linkage and Regression with Exact

Error Propagation,” *Privacy in Statistical Databases*.

- Tang, J., Reiter, J., and Steorts, R. In Press. “Bayesian Modeling for Simultaneous Regression and Record Linkage,” *Privacy in Statistical Databases (Lecture Notes in Computer Science)*.
- Steorts, R., Schmid, T., and Tzavdis, N. In Press. “Smoothing and Benchmarking for Small Area Estimation with Application to Rental Prices in Berlin,” *International Statistical Review*.
- Enamorado, T. and Steorts, R. In Press. “Probabilistic Blocking and Distributed Bayesian Entity Resolution,” *Privacy in Statistical Databases (Lecture Notes in Computer Science 12276)*, ed. Josep Domingo-Ferrer and Krishnamurty Muralidhar, 224-239; <https://link.springer.com/book/10.1007/978-3-030-57521-2>; <https://doi.org/10.1007/978-3-030-57521-2>.
- Tancredi, A., Steorts, R., and Liseo, B. 2020. “A Unified Framework for De-Duplication and Population Size Estimation,” *Bayesian Analysis*, 15:2, 633-682.
- Binette, O. and Steorts, R. 2020. Discussion of “Multiple-Systems Analysis for the Quantification of Modern Slavery: Classical and Bayesian Approaches,” *Journal of the Royal Statistical Society, Series A*.
- Steorts, Rebecca, M. Barnes, and M. Neiswanger. 2017. [“Performance Bounds for Graphical Record Linkage.”](#) *Proceedings of the 20th International Conference on Artificial Intelligence and Statistics (AISTATS)*, 54: 298-306.
- Durante, D., N. Mukherjee, and Rebecca Steorts. 2017. “Bayesian Learning of Dynamic Multilayer Networks.” *Journal of Machine Learning Research*, 18(43), 1-29, arxiv:608.02209.
- Steorts, Rebecca, R. Hall, and S.E. Fienberg. 2016. “A Bayesian Approach to Graphical Record Linkage and De-duplication.” *Journal of the American Statistical Association*, 111(516), 1660-1672, arxiv:1312.4645, doi:10.1080/01621459.
- Zanella, G., B. Betancourt, H. Wallach, J. Miller, A. Zaidi, and Rebecca Steorts. 2016. “Flexible Models for Microclustering with Applications to Entity Resolution.” *Neural Information Processing Systems (NIPS)*, 1417-1425, arxiv: 1610.09780.
- Steorts, Rebecca. 2015. “Entity Resolution using Empirically Motivated Priors.” *Bayesian Analysis*, 10(4), 849-875, arxiv:1409.0643, doi: 10.1214/15-BA965SI.
- Wehbe, L., A. Ramdas, Rebecca Steorts, and C.R. Shalizi. 2015. “Regularized Brain Reading with Smoothing and Shrinkage Using Bayesian and Frequentist Methods.” *Annals of Applied Statistics*, 9(4), 1997-2022, arxiv:1401.6595, doi:10.1214/15-AOAS837.
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Fields of Interest

- Missing Data
- Imputation
- Record Linkage
- Modeling and Forecasting



Education

- Ph.D., Statistics, Carnegie Mellon University, 1988
- M.S., Statistics, Carnegie Mellon University, 1984
- B.S., Mathematics, McGill University (Canada), 1983
- M.S., Computer Science, Johns Hopkins University, 2001


Professional Experience

- Principal Researcher, Research Mathematical Statistician, U.S. Census Bureau, 1988-Present
- Survey Methodologist, The Gallup Organization, 1995-1996

Professional Associations

- [American Statistical Association](#) 
- [Statistical Society of Canada](#) 

Selected Publications

- Thibaudeau, Yves, Eric Slud, and Y. Cheng. 2020. "Small-Area Estimation of Cross-Classified Gross Flows Using Longitudinal Survey Data." in P. Lynn (Ed), *Methodology of Longitudinal Surveys*, 2 New York, NY: Wiley Series in Survey Methodology.
- Slud, Eric and Yves Thibaudeau. 2019. "Multi-Outcome Longitudinal Small Area Estimation - A Case Study." *Statistical Theory and Related Fields. Special Issue on Small Area Estimation*, 3, 136-149.
- Thibaudeau, Yves, Eric Slud, and A. Gottshalck. 2017. "Log-Linear Conditional Probabilities for Prediction in Surveys." *Annals of Applied Statistics*, 11, 680-697.
- Thibaudeau, Yves, Eric Slud, and Alfred Gottshalck. 2017. "Modeling Log-Linear Conditional Probabilities for Estimation in Surveys." *Annals of Applied Statistics*, 11, 2, 680-697.
- Slud, Eric and Yves Thibaudeau. 2010. "[Simultaneous Calibration and Nonresponse Adjustment.](#)"  *Research Report Series, (Statistics #2010-03)*, Center for Statistical Research and Methodology, U.S. Census Bureau, Washington, D.C.
- Thibaudeau, Yves, J. Mulrow, and J. Shao. 2007. "A Study of Calibration Estimators." *Proceedings of the Survey Research Section of the American Statistical Association*.
- Thibaudeau, Yves. 2002. "Model Explicit Item Imputation for Demographic Categories." *Survey Methodology*, 28, 135-143.

- Thibaudeau, Yves. 2000. "Laplace Approximations for Variances of Estimators Based on Categorical Data in Presence of Unreported Items." *Proceedings of the Survey Research Section of the American Statistical Association*.
- Thibaudeau, Yves. 1993. "The Discriminatory Power of Dependency Structures in Record Linkage." *Survey Methodology*, 19, 31-38.
- Thibaudeau, Yves and P.H. Styan. 1983. "Bounds for Chakrabarti's Measure of Imbalance in Experimental Design." *Proceedings of the First International Tampere Seminar on Linear Statistical Models and Their Applications*, T. Pukkila and S. Puntanem, eds.

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Daniel Weinberg

Research Mathematical Statistician



Contact Information

- 301-763-8854
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Fields of Interest

- Applied Harmonic Analysis
- Directional Representations
- Image Processing, Remote Sensing, and Machine Learning
- Mathematical Modeling of Biological Systems



Education

- Ph.D., Mathematics, University of Maryland, College Park, 2015
- M.A., Mathematics, University of Maryland, College Park, 2011
- B.A., Mathematics and Chemistry, Johns Hopkins University, 2007

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2015-Present
- Instructor (Fall), University of Maryland, Department of Mathematics, 2015

Professional Associations

- [Society for Industrial and Applied Mathematics](#) 
- [American Mathematical Society](#) 

Selected Publications

- Deo, N., Sanguthevar R., Joyanta B., Soliman, A., Weinberg, D., and Steorts, R. In Press. "Novel Blocking Techniques and Distance Metrics for Record Linkage," *Proceedings of the 25th International Conference on Information Integration and Web Intelligence (iiWAS)*, Lecture Notes in Computer Sciences, Springer.
- Basak J., Soliman A., Deo N., Haase, K., Mathur, A., Park, K., Steorts, R., Weinberg, D., Sahnii. S., and Sanguthevar R. 2023. "On Computing the Jaro Similarity Between Two Strings," *Proceedings of the 19th International Symposium on Bioinformatics Research and Applications*, Springer, 31-44.
- Wojciech, C., Murphy, J.M., and Weinberg, D. 2018. "Superresolution of Noisy Remotely Sensed Images Through Directional Representations," *IEEE Geoscience and Remote Sensing Letters*, 99, 1-5.
- Czaja, W., A. Hafftk, B. Manning, and Daniel Weinberg. 2015. "Randomized Approximations of Operators and their Spectral Decomposition for Diffusion Based on Embeddings of Heterogeneous Data." *3rd International Workshop on Compressed Sensing Theory and Its Applications to Radar, Sonar and Remote Sensing (CoSeRa)*.
- Bosch, E., W. Czaja, J. Murphy, and Daniel Weinberg. 2015. "Anisotropic Representations for Superresolution of Hyperspectral Data." in *SPIE Defense+Security*.
- Czaja, W., J. Murphy, and Daniel Weinberg. 2015. "Superresolution of Remotely Sensed Images with Anisotropic Features." *Proceedings of Sampling Theory and Applications (SAMPTA)*.
- Weinberg, Daniel and D. Levy. 2014. "Modeling Selective Local Interactions with Memory: Motion on a 2D Lattice." *Physica D* 278-279, 13-30.

- Schuurman, M., Daniel Weinberg, and D. Yarkony. 2007. "On the Simulation of Photoelectron Spectra in Molecules with Conical Intersections and Spin-Orbit Coupling: The Vibronic Spectrum of CH₃S." *Journal of Chemical Physics*, 127(10), 104309.

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Tommy Wright

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Fields of Interest

- Probability Sampling & Estimation; Sample Design; Rankings
- Elementary Applied Probability & Combinatorics
- Apportionment Methods
- Applications of Lagrange's Identity



Education

- Ph.D., Statistics, The Ohio State University, 1977
- -Dissertation, "Bayes Allocation and Sequential Estimation in Stratified Populations", (OSU), 1977
- M.S., Statistics, The Ohio State University, 1975
- M.S., Mathematics, University of Tennessee, 1970
- -Thesis, "On Fully Ordered Groups", (UT), 1970
- B.S., Mathematics, Knoxville College, 1969

Professional Experience

- Research Mathematical Statistician, U. S. Bureau of the Census, 1996-Present
- Chief, Center for Statistical Research and Methodology (formerly Statistical Research Division), U. S. Bureau of the Census, 1996-Present
- Adjunct Faculty, Georgetown University, 2009-Present
- Research Staff, Oak Ridge National Laboratory, 1979-1996
- Adjunct Faculty (Statistics & Mathematics), University of Tennessee, 1977-1995
- Faculty (Mathematics), Knoxville College, 1977-1995

Professional Associations

- Presented, NAM-MAA David H Blackwell Lecture, 2021
- [Fellow, American Statistical Association, 1995](#) 
- [Elected Member, International Statistical Institute, 1989](#) 

Selected Publications

- Wright, T. 2021. "From Cauchy-Schwartz to the House of Representatives: Application of Lagrange's Identity," *Mathematics Magazine*, Vol 94, 244-256.
- Wright, T. 2021. "Demystifying Apportionment Computations for the U.S. House of Representatives", *AMSTATNEWS*, July, American Statistical Association, Alexandria, VA, 8-11.
- Wright, T. 2020. "A General Exact Optimal Sample Allocation Algorithm: With Bounded Cost and Bounded Sample Sizes," *Statistics and Probability Letters*, Vol 165, Article 108829.

- Klein, M., Wright, T., and Wieczorek, J. 2020. "A Joint Confidence Region for an Overall Ranking of Populations," *Journal of the Royal Statistical Society, Series C, 69, Part 3*, 589-606.
- Wright, Tommy, Martin Klein, and Jerzy Wiecezorek. 2019. "A Primer on Visualization for Comparing Populations, Including the Issue of Overlapping Confidence Intervals." *The American Statistician*, Vol 73, No. 2, 165-178.
- Wright, Tommy. 2018. "No Calculations When Observation Can Be Made." in A.K. Chattopadhyay and G. Chattopadhyay (Eds.), *Statistics and Its Applications*, Springer Singapore, 139-154.
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- Klein, Martin and Tommy Wright. 2011. "Ranking Procedures for Several Normal Populations: An Empirical Investigation." *International Journal of Statistical Sciences*, 11, 37-58.
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- Wright, Tommy. 2000. "Census 2000: Who Says Counting Is Easy As 1-2-3?" *Government Information Quarterly*, Vol. 17, No. 2, 121-136.
- Wright, Tommy and Howard Hogan. 1999. "Census 2000: Evolution of a Revised Plan." *Chance*, Vol. 12, No. 4, 11-19.
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- Wright, Tommy. 1992. "Lagrange's Identity Reveals the Correlation and Straight Line Connection." *The American Statistician*, 46, 106-107.
- Wright, Tommy. 1995. "Pascal's Triangle Gets Its Genes from Stirling Numbers of the First Kind." *The College Mathematics Journal*, 26, No. 5, 369-371.
- Wright, Tommy. 1992. "A Note on Sampling to Locate Rare Defectives with Strong Prior Evidence." *Biometrika*, 79, No. 4, 685-691.
- Miaou, S. -P., P.S. Hu, Tommy Wright, A.K. Rathi, and S.C. Davis. 1992. "Relationship Between Truck Accidents and Highway Geometric Design: A Poisson Regression Approach." *Transportation Research Record #13761*, pp. 10-18, Transportation Research Board of National Research Council, Washington, D.C..
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- Wright, Tommy. 1989. "A Note on Pascal's Triangle and Simple Random Sampling." *The College Mathematics Journal*, *20, No. 1*, 59-66.
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- Wright, Tommy. 1988. "A Note on Optimal Allocation Which Leads to An Ordering of the Family of Beta Prior Distributions." *Communications in Statistics: Theory and Methods*, *17, No. 1*, 123-138.
- Wright, Tommy and H. Tsao. 1985. "On an Optimal Solution for Maximizing the Probability of Retention in PPS Sampling." *Journal of Linear Algebra and Its Applications*, *67*, 67-80.
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- Wright, Tommy. 1982. "An Inverse Sampled Bernoulli (ISpB) Procedure for Estimation of a Population Proportion with Nuclear Material Applications." *American Journal of Mathematical and Management Sciences*, *2*, 123-134.
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Fields of Interest

- Data Visualization
- Data for Non-professionals
- Information Design
- Self-surveillance



Education

- Ph.D., Statistics, University of California at Los Angeles, 2013
- -Dissertation, "An Online Tool for Personal Data Collection and Exploration"
- M.S., Statistics, University of California at Los Angeles, 2007
- B.S., Electrical Engineering and Computer Sciences, Minor in Statistics, University of California at Berkeley, 2004

Professional Experience

- Research Mathematical Statistician, U.S. Census Bureau, 2014-Present
- Editor, FlowingData, 2007-Present

Selected Publications

- Yau, Nathan. 2013. *Data Points: Visualization that Means Something*. Wiley, Inc.
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Approved on: August 11, 2016