# Curriculum Vitae
# James G. Booth

March 2023

## Contact information

Department of Statistics and Data Science
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## Education

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|---|---|---|---|
| PhD | Statistics | 1987 | University of Kentucky |
| MS | Statistics | 1984 | University of Kentucky |
| MSc | Statistics | 1982 | University of Leeds, England |
| BSc | Mathematics | 1981 | University of Leeds, England |

## Positions

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|---|---|---|
| Professor | 2004 – present | Cornell University |
| Visiting Professor | 2017 – Spring | Australian National University |
| Visiting Professor | 2016 – Fall | University of Connecticut |
| Visiting Professor | 2003 – 2004 | Cornell University |
| Professor | 2000 – 2004 | University of Florida |
| Visiting Professor | 1996 – 1997 | Colorado State University |
| Associate Professor | 1993 – 2000 | University of Florida |
| Research Fellow | 1990 – 1992 | Australian National University |
| Assistant Professor | 1987 – 1993 | University of Florida |
| Instructor | 1986 – 1987 | Transylvania University, KY |

## College and University Service

- *Director of Graduate Studies*: Statistics, July 2017–present.
- *Member*: Search committee for SDS/CALS fall 2021-spring 2022.
- *Co-Chair*: Search committee for Chair of Statistics and Data Science, fall 2020-spring 2021.
- *Member*: CIS Hopper-Dean fellowship committee, spring 2021.
- *Member*: Search committee for CIS Director of Diversity Recruitment, fall 2020
- *Chair*: Faculty search committee for Statistics and Data Science, fall 2019-spring 2020.
- *Member*: Faculty search committee for Population Medicine and Diagnostic Sciences, fall 2019-spring 2020.
- *Chair*: Department of Biological Statistics and Computational Biology, College of Agriculture and Life Sciences, Cornell University, July 2007– June 2016.
- *Director of Undergraduate Studies*: Biometry and Statistics, and Computational Biology, July 2010–June 2016.
- *College Curriculum Committee*: College of Agriculture and Life Sciences, Cornell University, 2004–8, 2012–2016.

- *Ad hoc committees*: Tenure and promotion cases in the Colleges of Agriculture and Life Sciences, Engineering, Veterinary Medicine, Human Ecologoy, and School of Industrial and Labor Relations, Cornell University
- *Faculty search committees*: Statistics, Computational Biology, Nutrition, Cornell University
- *Acting Chair*: Department of Statistics, University of Florida, Fall 2002
- *Associate Chair*: Department of Statistics, University of Florida, 2001–2003
- *Graduate Coordinator*: Department of Statistics, University of Florida, 1995–1996, 1997–2001

## Professional Service

- *Program Committee*: 37th International Workshop on Statistical Modelling, Natal, Brazil, July 2023. (Delayed a year because of Covid-19.)
- *Elected Representative*: National Institute of Statistical Sciences 2021-present, and Chair of the Board of Trustees.
- *IMS Representative*: National Institute of Statistical Sciences 2012-2021.
- *External Review Committee*: Department of Statistics, Southern Methodist University, Nov. 2012.
- *Executive Committee*: Statistical Modelling Society 2006-2012.
- *Associate Editor*: Journal of Statistical Planning and Inference, 2012–2014, Journal of the American Statistical Association, 2006–2012, Statistical Modelling: 2001–, ANZ Journal of Statistics: 2001–2008, Journal of the Royal Statistical Society,Series B: 2001–2005, Computational Statistics: 1996–2002
- *Book Review Board*: Journal of the American Statistical Association: 1999–2002
- *NSF Review Panels*: Program in Statistics: Dec. 10-12, 2001 and Feb. 6-8, 2013.
- *Referee*: American Sociological Review, Annals of Statistics, Bayesian Analysis, Bioinformatics, Biometrics, Biometrika, Biostatistics, BJPS, BMC Medical Research Methodology, CJS, CSDA, EJS, JASA, JCGS, JRSS B, PLoS Genetics, Proteome Science, Statistics and Computing, Survey Methodology, Statistica Sinica

## Graduate Students

- Yixiao Lin, PhD Statistics 3rd year, Cornell University
- Xaioyun Quan, PhD Statistics, Cornell University. May 2020 (defended, Dec. 2019). Data Scientist, Google.
- Kelson Zawack, PhD Computational Biology, Cornell University. (Co-adviser with Yrjo Grohn). May 2017. Postdoctoral Associate, Yale University.
- Irina Gaynanova, PhD Statistics, Cornell University. (Co-adviser with Martin Wells). May 2015. Associate Professor, Texas A&M University.
- Muting Wan, PhD Statistics, Cornell University. January 2015. Statistician/Data Scientist with New York Life in NYC.
- Caitlin Cunningham, PhD Statistics, Cornell University. August 2012. Associate Professor, LeMoyne College, Syracuse.

- Haim Bar, PhD Statistics, Cornell University. January 2012. Associate Professor, Department of Statistics, University of Connecticut.
- Kirsten Eilertson, PhD Statistics, Cornell University. August 2011. Assistant Professor, Department of Statistics, Colorado State University. (Co-adviser with Carlos Bustamante)
- Matthias Kormacksson, PhD Statistics, Cornell University. August 2010. IBM Research, Rio de Janeiro, Brazil. Data Scientist, Novartis.
- Vadim Zipunikov, PhD Statistics, Cornell University. August 2009. Associate Professor, Department of Biostatistics, Johns-Hopkins University.
- Caitlin Cunningham, MS Statistics, Cornell University. May 2009.
- Matthais Kormaksson, MS Statistics, Cornell University. May 2007.
- Serena Chan, MS Statistics, Cornell University. May 2006.
- David Hitchcock, PhD Statistics, University of Florida. August 2004. Associate Professor at University of South Carolina. (Co-advisor with George Casella)
- Bernhard Klingenberg, PhD Statistics, University of Florida, August 2004. Professor at Williams College. (Co-advisor with Alan Agresti)
- Brian Caffo, PhD Statistics, University of Florida, August 2001. Professor, Department of Biostatistics, Johns-Hopkins University.
- Wolfgang Jank, PhD Statistics, University of Florida, August 2001. Anderson Professor of Global Management, University of South Florida.
- Glen Hartless, PhD Statistics, University of Florida, August 2000. CIA Analyst in Washington D.C. (Co-advisor with Ramon Littell)
- Somnath Sarkar, PhD Statistics, University of Florida, August 1996. Statistician at Eli-Lilly, Indianapolis. (Co-advisor with Malay Ghosh)

## Refereed Publications in Statistics


[1] J.G. Booth, B.J. Hanley, F.H. Hodel, C.S. Jennelle, J. Guinness, C.E. Them, C.I. Mitchell, Md.S. Ahmed, and K.L. Schuler. Sample size for estimating disease prevalence in free-ranging wildlife: a bayesian modeling approach. 2023. Under review by JABES.

[2] Yihan Bao and James G. Booth. Mixed models and shrinkage estimation for balanced and unbalanced designs. *Communications in Statistics: Simulation and Computation*, 2022. Published online: 03 January.

[3] Haim Y. Bar, James G. Booth, and Martin T. Wells. Mixed effects modeling and variable selection for quantile regression. *Statistical Modelling*, 2021. Published online: 23 August.

[4] James G. Booth and Alan H. Welsh. Generalized regression estimation via the bootstrap. *Australian and New Zealand Journal of Statistics*, 62(1):5–24, 2020.

[5] Haim Bar, James G. Booth, and Martin T. Wells. A scalable empirical bayes approach to variable selection in generalized linear models. *Journal of Computational and Graphical Statistics*, 29(3):535–546, 2020.

[6] Xiaoyun Quan, James G. Booth, and Martin T. Wells. Rank-based approach for estimating correlations in mixed ordinal data. *Journal of Multivariate Analysis*, 2019. Under review.

[7] Muting Wan, James G. Booth, and Martin T. Wells. Variational bayes for hierarchical mixture models. In Wolfgang Hardle, Henry Lu, and Xiaotong Shen, editors, *Handbook of Big Data Analytics*, chapter 7, pages 151–201. Springer International Publishing, 2018.

[8] Haim Bar, James G. Booth, Kangyan Liu, and Martin T. Wells. Facilitating high-dimensional transparent classificiation via empirical Bayes variable selection. *Applied Stochastics Models in Business and Industry*, 2018.

[9] Irina Gaynanova, James G. Booth, and Martin T. Wells. Penalized versus constrained generalized eigenvalue problems. *Journal of Computational and Graphical Statistics*, 26(2):379–387, 2017. Posted online 06 Apr 2016.

[10] Irina Gaynanova, James G. Booth, and Martin T. Wells. Simultaneous sparse estimation of canonical vectors in the p>>n setting. *Journal of the American Statistical Association*, 111(514):696–706, 2016. Published online 16 Apr 2015.

[11] Haim Y. Bar, James G. Booth, and Martin T. Wells. A bivariate model for simulataneous testing in bioinformatics data. *Journal of the American Statistical Association*, 109(506):537–547, 2014.

[12] Matthias Kormaksson, James G. Booth, Maria E. Figueroa, and Ari Melnick. Integrative model-based clustering of microarray methylation and expression data. *Annals of Applied Statistics*, 6(3):1327–1347, 2012.

[13] Haim Y. Bar, James G. Booth, and Martin T. Wells. A mixture-model approach for parallel testing for unequal variances. *Statistical Applications in Genetics and Molecular Biology*, 11(1), 2012. Article 8.

[14] Raazesh Sainudiin, Keven Thornton, Jennifer Harlow, James Booth, Michael Stillman, Ruriko Yoshida, Robert Griffiths, Gil McVean, and Peter Donelly. Experiments with the site frequency spectrum. *Bulletin of Mathematical Biology*, 73(4):829–872, 2011. http://www.springerlink.com/content/0748966716753484/.

[15] Caitlin Cunningham and James G. Booth. A Bayesian approach to analysis of covariance in balanced randomized block experiments. *Journal of Statistical Computation and Simulation*, 81(11):1449–1460, 2011.

[16] Haim Bar, James Booth, Elizabeth Schifano, and Martin T. Wells. Laplace approximated EM microarray analysis: an empirical bayes approach for comparative microarray experiments. *Statistical Science*, 25(3):388–407, 2010.

[17] James G. Booth, Walter T. Federer, Martin T. Wells, and Russell Wolfinger. A multivariate variance component model for analysis of covariance in designed experiments. *Statistical Science*, 24(2):223–237, 2009.

[18] Vadim Zipunnikov, James G. Booth, and Ruriko Yoshida. Table counting using the saddlepoint approximation. *Journal of Computational and Graphical Statistics*, 18(4):915–929, 2009.

[19] James G Booth, George Casella, and James P Hobert. Clustering using objective functions and stochastic search. *Journal of the Royal Statistical Society*, B 70(1):119–139, 2008.

[20] Yongsung Joo, James G. Booth, Younghwan Namkoong, and George Casella. Model-based Bayesian clustering (MBBC). *Bioinformatics*, 24:874–875, 2008.

[21] Ronald W. Butler, Richard K. Sutton, James G. Booth, and Pamela Ohman Strickland. Simulation-assisted saddlepoint approximation. *Journal of Statistical Computation and Simulation*, 79(8):731–745, 2008.

[22] David B. Hitchcock, James G. Booth, and George Casella. The effect of pre-smoothing functional data on cluster analysis. *Journal of Statistical Computation and Simulation*, 77(12):1043–1055, 2007.

[23] Yongsung Joo, George Casella, James G. Booth, Keunbaik Lee, and Steven Enkeman. Normalization of dye bias in microarrays using the mixture of splines model. *Statistical Applications in Genetics and Molecular Biology*, 6(1), 2007. Art. 2.

[24] David B. Hitchcock, George Casella, and James G. Booth. Improved estimation of dissimilarities by smoothing functional data. *Journal of the American Statistical Association*, 101(473):211–222, 2006.

[25] James G. Booth, Marinela Capanu, and Ludwig Heigenhauser. Exact conditional p-value calculation for the quasi-symmetry model. *Journal of Computational and Graphical Statistics*, 14(3):716–725, 2005.

[26] James G. Booth, George Casella, Herwig Friedl, and James P. Hobert. Negative binomial loglinear mixed models. *Statistical Modelling*, 3(3):179–191, 2003.

[27] Glen L. Hartless, James G. Booth, and Ramon C. Littell. Local influence of predictors in multiple linear regression. *Technometrics*, 45(4):326–332, 2003.

[28] Wolfgang Jank and James G. Booth. Efficiency of Monte Carlo EM and simulated maximum likelihood in generalized linear mixed models. *Journal of Computational and Graphical Statistics*, 12(1):214–229, 2003.

[29] Brian S. Caffo and James G. Booth. Monte Carlo conditional tests for log-linear and logistic models: a survey of current methodology. *Statistical Methods in Medical Research*, 12:1–15, 2003.

[30] Brian S. Caffo, James G. Booth, and Anthony C. Davison. Empirical sup rejection sampling. *Biometrika*, 89:745–754, 2002.

[31] James G. Booth and Brian S. Caffo. Unequal sampling for Monte Carlo EM algorithms. *Computational Statistics and Data Analysis*, 39:261–270, 2002.

[32] James G. Booth, James P. Hobert, and Wolfgang Jank. A survey of Monte Carlo algorithms for maximizing the likelihood of a two-stage hierarchical model. *Statistical Modelling*, 1:333–349, 2001.

[33] Brian S. Caffo and James G. Booth. A Markov chain Monte Carlo algorithm for approximating exact conditional tests. *Journal of Computational and Graphical Statistics*, 10:730–745, 2001.

[34] Alan Agresti, James G. Booth, James P. Hobert, and Brian Caffo. Random effects modeling of categorical response data. *Sociological Methodology*, 30:27–80, 2000.

[35] James G. Booth and James P. Hobert. Maximizing generalized linear mixed model likelihoods with an automated Monte Carlo EM algorithm. *Journal of the Royal Statistical Society*, B 61:265–285, 1999.

[36] James G. Booth, James P. Hobert, and Pamela A. Ohman. On the probable error of the ratio of two gamma means. *Biometrika*, 86:439–452, 1999.

[37] James G. Booth and Ronald W. Butler. An importance sampling algorithm for exact conditional tests in log-linear models. *Biometrika*, 86:321–332, 1999.

[38] James G. Booth and James P. Hobert. Standard errors of prediction in generalized linear mixed models. *Journal of the American Statistical Association*, 93:262–272, 1998.

[39] James G. Booth and Somnath Sarkar. Monte Carlo approximation of bootstrap variances. *American Statistician*, 52:354–357, 1998.

[40] James G. Booth and Brett Presnell. Allocation of Monte Carlo resources for the iterated bootstrap. *Journal of Computational and Graphical Statistics*, 7:92–112, 1998.

[41] James G. Booth, Ronald W. Butler, Snehelata Huzurbazar, and Andrew T. A. Wood. Saddlepoint approximations for p-values of some tests of covariance matrices. *Journal of Statistical Computation and Simulation*, 53:165–180, 1995.

[42] James G. Booth and Andrew T. A. Wood. An example in which the lugannani-rice saddlepoint formula fails. *Statistics and Probability Letters*, 23:53–61, 1995.

[43] James G. Booth, Ronald W. Butler, and Peter Hall. Bootstrap methods for finite populations. *Journal of the American Statistical Association*, 89:1282–1289, 1994.

[44] James G. Booth, Peter Hall, and Andrew T. A. Wood. On the validity of edgeworth and saddlepoint expansions. *Journal of Multivariate Analysis*, 51:121–138, 1994.

[45] James G. Booth and Peter Hall. Monte Carlo approximation and the iterated bootstrap. *Biometrika*, 81(2):331–340, 1994.

[46] James G. Booth and Peter Hall. An improvement of the jackknife distribution function estimator. *Annals of Statistics*, 21(3):1476–1485, 1993.

[47] James G. Booth and Peter Hall. Bootstrap confidence regions for functional relationships in errors-in-variables models. *Annals of Statistics*, 21(4):1780–1791, 1993.

[48] James G. Booth and Kim-Anh Do. Simple and efficient resampling methods for constructing bootstrap confidence intervals. *Computational Statistics*, 8:333–346, 1993.

[49] Andrew T. A. Wood, James G. Booth, and Ronald W. Butler. Saddlepoint approximations to the cdf of some statistics with nonnormal limit distributions. *Journal of the American Statistical Association*, 88(422):680–686, 1993.

[50] James G. Booth, Peter Hall, and Andrew T. A. Wood. Balanced importance resampling for the bootstrap. *Annals of Statistics*, 21(1):286–298, 1993.

[51] Ronald W. Butler, James G. Booth, and Snehelata Huzurbazar. Saddlepoint approximations for tests of block independence, sphericity, and equal variances and covariances. *Journal of the Royal Statistics Society*, B 55:171–184, 1993.

[52] Ronald W. Butler, Snehelata Huzurbazar, and James G. Booth. Saddlepoint approximations for the bartlett–nanda–pillai trace statistic in multivariate analysis. *Biometrika*, 79:705–715, 1992.

[53] James G. Booth. A note on a one compartment model with clustering. *Journal of Applied Probability*, 29:535–542, 1992.

[54] James G. Booth, Peter Hall, and Andrew T. A. Wood. Bootstrap estimation of conditional distributions. *Annals of Statistics*, 20(3):1594–1610, 1992.

[55] Ronald W. Butler, Snehelata Huzurbazar, and James G. Booth. Saddlepoint approximations to the generalized variance and wilk's statistic. *Biometrika*, 79:157–169, 1992.

[56] James G. Booth. A note on the estimation of rate parameters in stochastic compartmental models. *Communications in Statistics*, B 20(1):391–397, 1991.

[57] James G. Booth and Ronald W. Butler. Randomization distributions and saddlepoint approximations in generalized linear models. *Biometrika*, 77:787–796, 1990.

[58] James G. Booth. On the limiting behavior of downton's carrier epidemic in the case of a general infection mechanism. *Journal of Applied Probability*, 26:625–630, 1989.

[59] James G. Booth, Joseph Gani, Marie-Pierre Malice, H. Mansouri, and Gaby Maravankin. A general solution for the epidemic with carriers. *Statistics and Probability Letters*, 4:9–15, 1986.

## Collaborative Publications

- Hirschl, T., Booth, J.G. and Glenna, L. (2023), Religion and climate change indifference: linking the sacred to the social, Review of European Studies, 15(1), March issue.
- Hodel, F.H and Booth, J.G. (2023), The beta binomial distribution, Cornell University Library eCommons. DOI: https://doi.org/10.7298/qedt-mg35.
- Cazer CL, Westblade LF, Simon MS, Magleby R, Castanheira M, Booth JG, Jenkins SG, Grohn YT, "Analysis of multidrug resistance in Staphylococcus aureus with a machine learning-generated antibiogram", Antimicrobial Agents and Chemotherapy. doi: 10.1128/AAC.02132-20.
- Daly S. E., Usack J. G., Harroff L. A., Booth J. G., Keleman M. P. and Angenent L. T. (2020). "A systematic analysis of factors that affect food-waste storage: toward maximizing lactate accumulation for resource recovery". ACS Sustainable Chemistry & Engineering. Vol. 8, No. 37, pp. 13934-13944.
- Tippens ND, Liang J, Leung KY, Wierbowski SD, Ozer A, Booth JG, Lis JT, Yu H (2020), "Transcription imparts architecture, function, and logic to enhancer units". Nature Genetics 52, 1067-1075.
- Zawack K, Love WJ, Lanzas C, Booth JG, Grohn YT (2019), "Estimation of Multidrug Resistance Variability in the National Antimicrobial Monitoring System". Preventive Veterinary Medicine, V167:137-145. doi: 10.1016/j.prevetmed.2019.03.006

- Constance A Roco, Peter Dörsch, James G Booth, Charles Pepe-Ranney, Peter M Groffman, Timothy J Fahey, Joseph B Yavitt (2019), "Using metagenomics to reveal landscape scale patterns of denitrifiers in a montane forest ecosystem". Soil Biology and Biochemistry. https://doi.org/10.1016/j.soilbio.2019.107585
- Casey L Cazer, Mohammad A Al-Mamun, Karun Kaniyamattam, William J Love, James G Booth, Cristina Lanzas, Yrjo T Grohn (2019), "Shared multidrug resistance patterns in chicken-associated Escherichia coli identified by association rule mining". Frontiers in Microbiology: Antimicrobials, Resistance and Chemotherapy. https://doi.org/10.3389/fmicb.2019.00687
- Angela C. Poole, Julia K. Goodrich, Sha Li, Jessica L. Sutter, Jillian L. Waters, Qiaojuan Shi, Mohamed El-Hadidi, Lynn M. Johnson, Haim Y. Bar, Daniel H. Huson, James G. Booth, Ruth E. Ley (2019), "Human salivary amylase gene copy number impacts oral and gut microbiomes". Cell Host and Microbe, 25(4): 553-564.e7
- Zawack, K., Li, M., Booth, J.G., Love, W., Lanzas, C., Grohn, Y. (2016), "Monitoring antimicrobial resistance in the food supply chain and its implications for FDA policy initiatives". Antimicrobial Agents and Chemotherapy. To appear.
- Love, W., Zawack, K., Booth, J.G., Grohn, Y.T and Lanzas, C. (2016), "Markov networks of collateral resistance: National antimicrobial resistance monitoring system surveillance results from Escherichia coli Isolates, 2004-2012. PLoS Computational Biology. To appear.
- Eilertson, Booth and Bustamante (2012), "SnIPRE: Selection inference using a Poisson random effects model." PLoS Computational Biology 8(12): e1002806. doi:10.1371/journal.pcbi.1002806.
- Hirschl, Booth, Glenna and Green (2012), "Politics, religion and society: Is the United States experiencing a period of religious-political polarization?" Review of European Studies 4(4) (Aug 3, 2012 Epub ahead of print).
- Rosenbaum, Bar, Beg, Segrč, Booth, Cotta and Angenent (2012), "Transcriptional analysis of Shewanella oneidensis MR-1 with an electrode compared to Fe(III)citrate or oxygen as terminal electron acceptor", PLoS ONE 7(2):e30827.
- Booth, Eilertson, Olinares and Yu (2010), "A Bayesian mixture model for comparative spectral count data in shotgun proteomics" Molecular and Cellular Proteomics", Molecular and Cellular Proteomics 10(8):M110.007203. First Published on May 20, 2011, doi: 10.1074/mcp.M110.007203.
- Rosenbaum, Bar, Beg, Segrè, Booth, Cotta and Angenent (2010), "Shewanella oneidensis in a lactate-fed pure-culture and a glucose-fed co-culture with Lactococcuslactis with an electrode as electron acceptor", Bioresource Technology 102(3):2623-2628 (Oct 12, 2010 Epub ahead of print).
- Figueroa, Lugfhart, Li, Erpelnick-Verschueren, Deng, Christos, Schifano, Booth, van Putten, Skrabenek, Campagne, Mazumdar, Greally, Valk, Lowenberg, Delwel and Melnick (2010), "DNA methylation signatures identify biologically distinct subtypes in acute myeloid leukemia", *Cancer Cell* 07 January.
- Hirschl, Booth and Glenna (2009), "The link between voter choice and religious identity in comtemporary society: bringing classical theory back in", *Social Science Quarterly* 90(4):927-944.
- Davis, Lewenstein, Simon, Booth, Connolly, "Open access publishing, article downloads, and citations: randomised controlled trial", *British Medical Journal* 2008;337:a568

- Holloway, Booth, Edelmann, McGowan, Cohen (2008), "MUS81 generates a subset of MLH1-MLH3-independent crossovers in mammalian meiosis", PLoS Genetics, 4(9) e1000186. doi:10.1371/journal.p
- Brooks, MacNguyen, Hall, Gupta and Booth, "Indirect Carrier Detection of Canine Hemophilia A Using Factor VIII Microsatellite Markers", *Animal Genetics*, June 2008, 39:306-309.
- Kim, Booth, Gauch, Sun, Park, Lee and Lee, "Simple sequence repeats in Neurospora crassa: distribution, polymorphism and evolutionary inference", *BMC Genomics* 2008, 9:31.
- Michael, Park, Kim, Booth, Byer, Sun, Chory and Lee (2007), "Simple sequence repeats provide a substrate for phenotypic variation in the Neurospora crassa circadian clock", *PloS ONE*, 2(8):e795.
- Booth and Willett (1996), "The statistical analysis of standard costing variances", *IMA Journal of Mathematical Applications in Business and Industry*, 8:167-179.

## Non-refereed Publications

- James G. Booth, Review of "Generalized Linear Models with Random Effects: Unified Analysis via H-likelihood", by Lee, Nelder and Pawitan. *Biometrics* 63:1296
- James G. Booth, Review of "Exact Analysis of Discrete Data", by Karim F. Hirji.*J. Amer. Statist. Assoc.* 102(478):764, 2007.
- James G. Booth, Review of "Analysis of Variance for Random Models: Theory, Methods, Applications, and Data Analysis. Volume 1: Balanced Data, and Volume 2: Unbalanced Data", by Hardeo Sahai and Mario Miguel Ojeda. *J. Amer. Statist. Assoc.* 101, No.475, 2006.
- James G. Booth and Brett Presnell, "Resampling Methods for Sample Surveys," *Bulletin of the International Statistical Institute*, 52nd Session Proceedings, 1999.
- James G. Booth, Review of *Odds Ratios in the Analysis of Contingency Tables*, by Tamas Rudas. #119 in Series: Quantitative Applications in the Social Sciences (1998), in *J. Amer. Statist. Assoc.* 94, 657, 1999.
- James G. Booth, Review of *Series Approximation Methods in Statistics*, 2nd Edition, by J. E. Kolassa. Lecture Notes in Statistics 88: Springer (1996), in *J. Amer. Statist. Assoc.* 94, 343, 1999
- James G. Booth and Ronald W. Butler, Contribution to the discussion of "Approximately exact inference for the common odds-ratio in several $2 \times 2$ tables," by Strawderman, R.L. and Wells, M.T. *J. Amer. Statist. Assoc.* 93, 1310-1313, 1998.
- James G. Booth, "Bootstrap methods for generalized linear mixed models with applications to small area estimation," Proceedings of the 10th International Workshop on Statistical Modelling, Lecture Notes in Statistics Series: Springer, 1995.
- James G. Booth, "A note of the accuracy of two saddlepoint tail probability approximations," Proceedings of the American Statistical Association – Section on Physical and Engineering Sciences, 1994.
- James G. Booth, Review of *Resampling-Based Multiple Testing* by P.H. Westfall and S.S. Young. New York: John Wiley (1993), in *J. Amer. Statist. Assoc.* 89, 354-55, 1994.
- James G. Booth and Andrew T.A. Wood, Contribution to the discussion of "Practical use of higher order asymptotics for multiparameter exponential families," by Pierce, D.A. & Peters, D. *J. Roy. Statist. Soc.*, B 54, 701-38, 1992.

## Grants

- Co-PI (with PI Haim Bar and Co-PI Martin Wells), NSF DMS-1611893, "Collaborative proposal: Variable Selection When $p >> N$ – Beyond the Linear Regression and Normal Errors Model " 2016-2019. No cost extension to June 30, 2020.
- PI (co-PI Martin Wells), NSF DMS-1208488, "Models and Computational Strategies in Statistical Bioinformatics" 2012-2014.
- PI, NSA Grant 08C-016, "24th International Workshop on Statistical Modeling" 2008-2009.
- PI, NSF DMS-0805865, "Applications and computational issues involving generalized linear and mixed models", 2008-2010.
- Co-PI (with George Casella), NSF DMS-0405543, "Cluster analysis, predictive distributions, and stochastic search algorithms," 2004-2008.
- Co-PI (with Jim Hobert), NSF DMS-0072827, "Combining EM and Monte Carlo to maximize intractable likelihood functions," 2000-2004.
- PI, NSF DMS-9813374, "NSF/CBMS Regional Conference in the Mathematical Sciences - Generalized Linear Mixed Models and Related Topics - June 8-12, 1999"
- PI, NSF DMS-93010836, "Some new bootstrap methods for sample surveys," 1993-1996.

## Graduate Fields

Statistics, Operations Research, Epidemiology, Computational Biology

## Awards

- *Fellow of the American Statistical Association*: 2004
- *Best Contributed Presentation*: Joint Statistical Meetings, New York, 2003
- *Teaching Improvement Program Award*: University of Florida, 1995
- *R.L. Anderson Outstanding Graduate Student*: University of Kentucky, 1985

## Invited Talks at Meetings

- ICSA Applied Statistics Symposium, Boston, June 23-26, 2012
- Kansas ASA Chapter Meeting, Kansas State University, April 28, 2011
- Fall Conference on Statistics in Biology, October 13-15, 2008, Iowa State University.
- Joint Statistical Meetings, August 6-10, 2006, Seattle, WA.
- Euroworkshop on Statistical Modelling - Mixed Models, Nov 2-5, 2000, Schloß Höhenried, Bernried, near Munich Germany
- Workshop on Inference and Asymptotics, July 9-14, 2000, Ascona, Switzerland
- ISI Meetings, Aug.9-18, 1999, Helsinki, Finland
- Joint Statistical Meetings, Aug 9-13, 1998, Dallas, TX
- Southern Regional Conference on Statistics, June 7-11, 1998, Navarre Beach, FL.
- Interface 98: 30th Symposium on the Interface of Computing Science and Statistics, May 13-16, 1998, Minneapolis, MN

- 7th CRM Summer School, Likelihood and Asymptotics, Aug 1-10, 1997, Banff, Canada
- 14th Statistical Methods Symposium, May 5-7, 1997, San Antonio, TX
- Miniconference on Small Area Estimation, May 1996, Southampton, England.
- International Workshop on Statistical Modelling, July 1-14, 1995, Innsbruck, Austria

## Invited Talks in Other Departments

Australian National University, Bath UK, Berkeley (MSRI), SUNY Buffalo, Cambridge UK, Chicago, Colorado State, Cornell, Denver, EPFL CH, Florida, Georgia, Technical U. Graz, Harvard, Iowa, Iowa State, Johns-Hopkins, Kansas State, Kentucky, Lancaster UK, Maryland, M.D. Anderson, Minnesota, Munich D, Northern Illinois, Novartis, Ohio State, Otago NZ, Penn State, Rice, Southampton UK, Southern Methodist, SUNY Oswego, Swinbourne AUS, Sydney AUS, Texas A&M, Toronto, Virginia, Wyoming.

## Teaching

- College courses including: Categorical Data Analysis, Generalized Linear Models, Theory of Linear Models, Matrix Algebra, Multivariate Analysis, Sampling, Probability Theory, Stochastic Processes, Likelihood and Bayesian Methods, Statistical Computing, and an assortment of undergraduate and graduate level service courses in both statistics and mathematics.
- Shortcourses for industry on Generalized Linear Models, Logistic Regression, and Categorical Data Analysis