

Michael Isaac Parzen

Harvard University, Department of Statistics
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EDUCATION

- 1993 **Harvard University, School of Public Health**
Doctor of Science in Biostatistics
Thesis: On Semiparametric Models and Estimating Equations
Advisor: Dr. David Harrington
- 1989 **Brown University**
Master of Science in Applied Mathematics
- 1987 **Carnegie Mellon University**
Master of Science in Mathematics
Bachelor of Science in Mathematics

EMPLOYMENT

- 2010 - *Senior Lecturer on Statistics*
Harvard University, Department of Statistics
- 2004 – 2010 *Associate Professor of Information Systems and Operations Management*
Emory University, Goizueta Business School
- 1997 – 2003 *Associate Professor of Econometrics and Statistics*
University of Chicago, Booth School of Business
- 1993 - 1997 *Assistant Professor of Econometrics and Statistics*
University of Chicago, Booth School of Business
- 1995 - 2003 *Faculty Associate*
University of Chicago, Graduate Program in Health Administration and Policy
- 1995 - 2003 *Research Associate*
University of Chicago, Population Research Center and the Center on Aging

AWARDS

1994, 1998	IBM Corporation Scholar, University of Chicago
1992	Harvard University Robert Reed Prize in Biostatistics
1989 - 1993	Harvard University Teaching Fellow
1989 - 1992	National Cancer Institute Training Grant Recipient
1987 - 1989	Brown University Research Fellow
2012, 2013	Voted one of Harvard University's Favorite Professors

RESEARCH INTERESTS

My active research fields are applicable statistical methods for Missing Data, Non-Standard Regression, Resampling, General Applied Statistics, and Computational Statistics. Citations provide evidence that methods developed in my publications are relevant to the current problems of many empirical researchers.

PUBLICATONS

- Parzen, M., Wei, L.J. and Ying, Z. (1994), "A Resampling Method Based on Pivotal Estimating Functions," *Biometrika*, 81:341-50.
- Lipsitz, S. and Parzen, M. (1995), "Sample Size Calculations for Non-Randomized Studies," *Journal of The Royal Statistical Society, Series D (The Statistician)*, 44:81-90.
- Lipsitz, S. and Parzen, M. (1996), "A Jackknife Estimator of Variance for Cox Regression for Correlated Survival Data," *Biometrics*, 52:291-98.
- Rudberg, M.A., Parzen, M., Leonard, L. and Cassel, C.K. (1996), "Functional Limitation Pathways and Transitions in Older Persons," *The Gerontologist*, 36:430-42.
- Hayes, C.H. and Parzen, M. (1997), "QUEM: An Achievement Test for Knowledge-Based Systems," *IEEE Transactions on Knowledge and Data Engineering*, 9:838-43.
- Fiebig, C., Hayes, C.H. and Parzen, M. (1997), "Development of expertise in complex domains," *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics*, 3:2684-2689.
- Parzen, M., Wei, L.J. and Ying, Z. (1997), "Simultaneous Confidence Intervals for the Difference of Two Survival Functions," *Scandinavian Journal of Statistics*, 24:309-14.
- Strawderman, R., Parzen, M. and Wells, M. (1997), "Accurate Confidence Limits for Survivor Function Quantiles under Random Censoring," *Biometrics*, 43:1399-1415.
- Lipsitz, S., Parzen, M. and Ewell, M. (1998), "Inference Using Conditional Logistic Regression with Missing Covariates," *Biometrics*, 54:295-303.

- Lipsitz, S., Parzen, M. and Molenberghs, G. (1998), "Obtaining the Maximum Likelihood Estimates in Incomplete $R \times C$ Contingency Tables Using a Poisson Generalized Linear Model," *Journal of Computational and Graphical Statistics*, 7:356-76.
- Parzen, M., Lipsitz, S. and Dear, K. (1998), "Does Clustering Affect the Usual Test Statistics of No Treatment Effect in a Randomized Clinical Trial?," *Biometrical Journal*, 40:385-402.
- Lipsitz, S., Ibrahim, J. and Parzen, M. (1999), "A Degrees-of-Freedom Approximation for a t-Statistic with Heterogeneous Variance," *Journal of The Royal Statistical Society, Series D (The Statistician)*, 48:495-506.
- Parzen, M. and Lipsitz, S. (1999), "A Global Goodness-of-Fit Statistic for Cox Regression Models," *Biometrics*, 55:580-84.
- Lipsitz, S., Parzen, M., Molenberghs, G. and Ibrahim, J. (2001), "Testing for Bias in Weighted Estimating Equations with Missing Covariates," *Biostatistics*, 2:295-307.
- Lipsitz, S., Williamson, J., Klar, N., Ibrahim, J. and Parzen, M. (2001), "A Simple Method for Estimating a Regression Model for Kappa between a Pair of Raters," *Journal of the Royal Statistical Society, Series A (Statistics in Society)*, 164:449-65.
- Lipsitz, S., Laird, N., Brennan, T. and Parzen, M. (2001), "Estimating the Kappa-Coefficient from a Selected Sample," *Journal of the Royal Statistical Society, Series D (The Statistician)*, 50:407-16.
- Parzen, M., Lipsitz, S., Ibrahim, J. and Klar, N. (2002), "An Estimate of the Odds Ratio that Always Exists," *Journal of Computational and Graphical Statistics*, 11:420-436.
- Klar, N., Lipsitz, S., Parzen, M. and Leong, T. (2002), "An Exact Bootstrap Confidence Interval for Kappa in Small Samples," *Journal of the Royal Statistical Society, Series D (The Statistician)*, 51:1-12.
- Parzen, M., Lipsitz, S., Ibrahim, J. and Lipshultz, S. (2002), "A Weighted Estimating Equation for Linear Regression with Missing Covariate Data," *Statistics in Medicine*, 21:2421-2436.
- Parzen, M., Lipsitz, S. and Zhao, L.P. (2002), "A Degrees-of-Freedom Approximation in Multiple Imputation," *Journal of Statistical Computation and Simulation*, 72:309-318.
- Horton, N., Lipsitz, S. and Parzen, M. (2003), "A Potential for Bias when Rounding in Multiple Imputation," *The American Statistician*, 57:229-233.
- Lipsitz, S., Parzen, M., Fitzmaurice, G. and Klar, N. (2003), "A Two-Stage Logistic Regression Model for Analyzing Inter-Rater Agreement," *Psychometrika*, 68(2):289-298.
- Chen, L., Wei, L.J. and Parzen, M. (2003), "Quantile Regression for Correlated Observations," *Proceedings of the Second Seattle Symposium in Biostatistics: Analysis of Correlated Data*, (Eds. Danyu Lin and Patrick Heagerty). Lecture Notes in Statistics. Springer, New York.
- Lipsitz, S., Parzen, M., Natarajan, S., Ibrahim, J. and Fitzmaurice, G. (2004), "Generalized Linear Models with a Coarsened Covariate," *Journal of the Royal Statistical Society, Series C (Applied Statistics)*, 53 (2):279-289.

- Parzen, M., Fitzmaurice, G. and Lipsitz, S. (2005), "A note on reducing the bias of the approximate Bayesian bootstrap imputation variance estimator," *Biometrika*, 92(4), 971-974.
- Nelson, K., Lipsitz, S., Fitzmaurice, G., Ibrahim, J., Parzen, M. and Strawderman, R. (2006), "Use of the Probability Integral Transformation to fit nonlinear mixed-effects models with non-normal random effects," *Journal of Computational and Graphical Statistics*, 15(1):39-57.
- Parzen, M., Lipsitz, S., Fitzmaurice, G., Ibrahim, J. and Troxel, A. (2006), "Pseudo-Likelihood methods for longitudinal binary data subject to nonignorable missing responses and covariates," *Statistics in Medicine*, 25(16):2784-2796.
- Parzen, M., Lipsitz, S., Fitzmaurice, G., Ibrahim, J., Troxel, A. and Molenberghs, G. (2007), "Pseudo-Likelihood methods for the analysis of longitudinal binary data subject to nonignorable non-monotone missingness," *Journal of Data Science*, 5(1):1-21.
- Parzen, M., and Lipsitz, S. (2007), "Perturbing the minimand resampling as an extension of the Bayesian bootstrap," *Statistics and Probability Letters*, 77(6):654-657.
- Natarajan, S., Lipsitz, S., Parzen, M. and Lipshultz, S. (2007), "A measure of partial association for generalized estimating equations," *Statistical Modelling*, 7(2):175-190.
- Fitzmaurice, G., Lipsitz, S. and Parzen, M. (2007), "Approximate Median Regression via the Box-Cox Transformation," *American Statistician*, 61(3):233-238.
- Lipsitz, S., Fitzmaurice, G., Ibrahim, J., Sinha, D., Parzen, M. and Lipshultz, S. (2009), "Joint generalized estimating equations for multivariate longitudinal binary outcomes with missing data: An application to AIDS data," *Journal of the Royal Statistical Society, Series A (Statistics in Society)*, 172(1):3-20.
- Bahadir, C., Bharadwaj, S. and Parzen, M. (2009), "Meta-Analysis of the Determinants of Organic Sales Growth," the *International Journal of Research in Marketing*, 26:263-275.
- Labianca, J., Fairbank, J., Andrevski, G. and Parzen, M. (2009), "Striving towards the future: aspiration-performance discrepancies and planned organizational change," *Strategic Organization*, 7(4):433-466.
- Parzen, M., Lipsitz, S. and Metters, R. (2010), "Correlation When Data Are Missing," *Journal of the Operational Research Society*, 61(1):1049-1056.
- Parzen, M., Ghosh, S., Lipsitz, S., Fitzmaurice, G., Ibrahim, J. and Mallick, B. (2011), "A generalized linear mixed model for longitudinal binary data with a marginal logit link function," *Annals of Applied Statistics*, 5(1):449-467.

UNDER DEVELOPMENT

- Parzen, M. and Polson, N., "A simulation approach to quantile regression," expected to be submitted for publication to the *Journal of the American Statistical Association*.
- Parzen, M. and Polson, N., "Censored Quantile Regression: Estimation and Diagnostics," expected to be submitted for publication to the *Journal of Econometrics*.

Cooper, R., Bray, D. and Parzen, M., “Who Wins in a Dynamic World? Theory of Constraints vs. Activity Based Costing,” expected to be submitted for publication to *Management Science*.

Metters, R. and Parzen, M., “A problem with logistic regression,” expected to be submitted to the *Journal of Operations Management*.

TEACHING EXPERIENCE

Booth School of Business, University of Chicago

- Introduction to Business Statistics (MBA course)
- Applied Regression Analysis (MBA course)
- Topics in Data Analysis (advanced MBA/PhD course)

Goizueta Business School, Emory University

- Introduction to Decision Analysis (Undergraduate course)
- Data and Decision Analytics (MBA course)
- Data Analysis for Business Research (PhD course)

Department of Statistics, Harvard University

- Introduction to Quantitative Methods for Economics (Undergraduate course)
- Introduction to Business and Financial Statistics (Undergraduate course)

PhD COMMITTEES

PhD Committee Member for Tyler Shumway, University of Chicago, Graduate School of Business (1996), “The Premium for Default Risk in Stock Returns”.

PhD Committee Member for Elizabeth Fama, University of Chicago, Graduate School of Business (1996), “The Optimal Timing of Mammography Screening”.

PhD Committee Member for Gerald Kane, Emory University, Goizueta Business School (2006), “Casting the net: a multimodal network perspective on knowledge sharing”.

JOURNAL REFEREEING

Biometrika, the *Journal of Computational and Graphical Statistics*, *Biometrics*, and the *Journals of the Royal Statistical Society*.

EMORY COMMITTEE SERVICE

- Implementation Committee for the 2008 MBA curriculum redesign
- Research Committee tasked with designing and implementing the faculty research awards system
- Computing and Education Committee
- Two ISOM area hiring committees

HARVARD COMMITTEE SERVICE

- Master's Program in Statistics Admissions Committee (2010-2014)
- Departmental Preceptor Hiring Committee

PROFSSIONAL MEMBERSHIPS

- American Statistical Association
- Eastern North American Region/International Biometric Society