Eric Slud

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Mathematics

PERSONAL INFORMATION

Educational Background

- 1976, Ph.D, M.I.T
- 1972, B.A, Harvard College

Academic Appointments at UMD

- 1989-Ongoing, Mathematics Department, Professor
- 1983-1989, Mathematics Department, Associate Professor
- 1976-1983, Mathematics Department, Assistant Professor

Administrative Appointments at UMD

- 2006-2011, Director of Campus-wide Statistics Consortium
- 1989-1992, Director of Statistics Program

Other Employment

- 2011-Ongoing, Area Chief for Mathematical Statistics, Center for Statistical Research & Methodology, US Census Bureau, June 2011-present, (full-time while on leave in 2011-2012, half-time under MOU with UMCP since Fall 2013)
- 2001-2011, Schedule A employee, US Census Bureau, Statistical Research Division, now the Center for Statistical Research and Methodology, US Census Bureau
- 1983-1984, Visiting Associate Professor, Cornell University, Dept. Indust. Eng. & Oper. Res
- 1980-1981, Cancer Expert, National Cancer Institute, Biometry Branch
- 1975-1976, Visiting Assistant Professor, New Mexico State University

Professional Certifications and Licenses

- 1985, Associate of the Society of Actuaries, (passed all 5 Assoc. level examinations)

RESEARCH, SCHOLARLY AND CREATIVE ACTIVITIES

Chapters

Books

- Y. Thibaudeau, E. Slud and Y. Cheng, Small-Area Estimation of Cross-classified Gross Flows Using Longitudinal Survey Data, Chapter 19 in: Advances in Longitudinal Surveys Methodology, ed. P. Lynn (2021), Wiley.
- E. Slud, Overview of Inferential Methods for Categorical Time-to-Event Data, Chapter 5 in: Design and Analysis of Clinical Trials with Time-to-Event Endpoints, ed. Karl Peace MD (2009), Taylor and Francis, ISBN 978-1-4200-6639-5
- Products of independent randomly perturbed matrices (1982). Ergodic Theory and Dynamical Systems II, A. Katok, ed., vol. 2, 1982, Boston: Birkhaeuser, ISBN 3-7643-3096-1.

Encyclopedia

- E. Slud, Staggered Entry (1998, 6pp.), article in Encyclopedia of Biostatistics, eds. P. Armitage and T. Colton. New York: John Wiley, online ISBN: 9780470011812.

Articles in Refereed Journals

Refereed Journal Articles

- K. Mainali, E. Slud, M. Singer and W. Fagan, A Better Index for Analysis of Co-occurrence and Similarity, to appear, Science Advances (2022).
- Yu-Chieh Cheng, Fang-Jing Lee, Ya-Ting Hsu, Slud, Eric, V, Chao A. Hsiung, Chun-Hong Chen, Ching-Len Liao, Tzai-Hung Wen, Chiu-Wen Chang, Jui-Hun Chang, Hsiao-Yu Wu, Te-Pin Chang, Pei-Sheng Lin, Hui-Pin Ho, Wen-Feng Hung, Jing-Dong Chou, Hsiao-Hui Tsou (2020). Real-time dengue forecast for outbreak alerts in Southern Taiwan, PLOS Neglected Tropical Diseases (2020), July 27, 2020, https://doi.org/10.1371/journal.pntd.0008434
- E. Slud and Y. Thibaudeau, Multi-outcome Longitudinal Small Area Estimation – a Case Study, Statistical Theory and Related Fields (2019) 3:2, 136-149, DOI: 10.1080/24754269.2019.1669360
- X. Yao and E. Slud, Nonexistence of an unbiased estimating function for the Cox model, Statistics and Probability Letters (2019) 152, 122-127.
- C. Franco, R. Little, T. Louis and E. Slud, Comparative Study of Confidence Intervals for Proportions in Complex Sample Surveys, Journal of Survey Statistics and Methodology (2019) 7, 334-364.
- E. Slud, I. Vonta and A. Kagan, Combining Estimators of a Common Parameter Across Samples, Statistical Theory and Related Fields (2018) 2:2, 158-171, DOI10.1080/24754269.2018.1530903

- M.S. Kumar, E. Slud, K. Okrah, S. Hicks, S. Hannenhali and H.C. Bravo, Analysis and correction of compositional bias in sparse sequencing count data, BMC Genomics (2018) 19:799-821.
- V. de Oliveira, B. Wang and E. Slud, Spatial modeling of rainfall accumulated over short periods of time, Journal of Multivariate Analysis (2018), 166, 129-149
- K. Mainali, S. Bewick, P. Thielen, T. Mehoke, F. Breitwieser, S. Paudel, A. Adhikari, J. Wolfe, E.Slud, D. Karig and W. Fagan, Statistical analysis of co-occurrence patterns in microbial presence-absence datasets, 2018, PlosONE 12(11): e0187132. http://doi.org/10.1371/journal.pone.0187132.
- Y. Thibaudeau, E. Slud and A. Gottschalck, Modeling log-linear conditional probabilities for estimation in surveys, Annals of Applied Statistics 11 (2017), 680-697.
- R. Ashmead, E. Slud and T. Hughes, Adaptive intervention methodology for reduction of respondent contact burden in the American Community Survey, Journal of Official Statistics 33 (2017), 901-919.
- M. Shen, E. Russek-Cohen and E.Slud, Checking distributional assumptions for pharmacokinetic summary statistics based on simulations with compartmental models (2017), Journal of Biopharmaceutical Statistics 27, 756-772.
- M. Shen, E. Slud and E. Russek-Cohen, Exact calculation of power and sample size in bio-equivalence studies using two one-sided tests (2015), Pharmaceutical Statistics 14, 95-101.
- E. Slud and J. Suntornchost, Parametric survival densities from phase-type models, Lifetime Data Analysis 20 (2014), 459-480.
- J. Shao, E. Slud, Y. Cheng, S. Wang and C. Hogue, Theoretical and empirical properties of model assisted decision-based regression estimators, Survey Methodol. 40 (2014), 81-104.
- M. Tang, E. Slud and R. Pfeiffer, Goodness of fit tests for linear mixed models, Journal of Multivariate Analysis 130 (2014), 176-193
- E. Slud, Assessment of zeroes in survey-estimated tables via small-area confidence bounds, Special Issue of Journal of Indian Soc. for Agricult. Statistics 66 (2012), 157-169.
- E. Slud and T. Maiti, Small-area estimation of survey data from a left-censored Fay-Herriot model, Journal of Statistical Planning & Inference 141 (2011), 3520-3535
- E. Slud and M. DeMissie, Validity of regression meta-analyses versus pooled analyses of mixed linear models, Mathematics in Engineering, Science & Aerosp. 2 (2011), 251-265.
- E. Slud, Discussion of "Impact of Frequentist and Bayesian Methods on Survey Sampling Practice: A Selective Appraisal" by J. N. K. Rao, Statistical Science (2011) 26, 262-265.
- E. Slud and L. Bailey, Evaluation and selection of models for attrition nonresponse adjustment, Journal of Official Statistics 26 (2010), 127-143.
- E. Slud and T. Maiti, Mean-squared error estimation in transformed Fay-Herriot models, Journal of the Royal Statistical Society Series B (Methodological) 68 (2006), 239-257.
- E. Slud and F. Vonta, Efficient semiparametric estimators via modified profile likelihood, Journal of Statistical Planning & Inference 129 (2005), 339-367.
- E. Slud and F. Vonta, Consistency of the NPML estimator in the right-censored transformation model, Scandinavian Journal of Statistics 31 (2004), 21-41.
- E. Slud, M. Stone, P. Smith and M. Goldstein Jr., Principal components representation of the two-dimensional coronal tongue surface, Phonetica 59 (2002), 108-33.

- J. Silver, E. Slud and K. Takamoto, Statistical mechanics of wealths of many agents with independent preferences in an ideal exchange economy, Journal of Economic Theory <u>106</u> (2002), 417-435.
- E. Slud and E. Korn, Semiparametric two-sample tests in clinical trials with a post-randomization response indicator, Biometrika <u>84</u> (1997), 221-230
- E. Slud, Testing for imperfect debugging in software reliability, Scandinavian Journal of Statistics <u>24</u> (1997), 555-72.
- E. Slud, Some applications of counting process models with partially observed covariates, Journal of Telecommunication Systems <u>7</u> (1997), 95-104.
- F. Kong and E. Slud, Robust covariate adjusted logrank tests, Biometrika <u>84</u> (1997), 847-62.
- D. Chambers and E. Slud, Mixing for stationary processes with finite-order Multiple Wiener-Ito integral representation, Ergodic Theory & Dynam. Sys. <u>16</u> (1996), 1087-1100.
- I. Fakhre-Zakeri and E. Slud, Optimal stopping of sequential size-dependent search, Annals of Statistics, <u>24</u> (1996), 2215-32.
- I. Fakhre-Zakeri and E. Slud, Mixture models for reliability of software with imperfect debugging: identifiability of parameters, IEEE Transac. on Reliability <u>44</u> (1995), 104-113.
- A. Koutsoukos and E. Slud, Inaccuracy rates and Hodges-Lehmann large deviation rates for parametric inference with nuisance parameters, Journal of Statistical Planning & Inference <u>48</u> (1995), 47-68
- S. Bose and E. Slud, Maximin efficiency robust tests with nuisance parameters and censored data, Journal of Statistical Planning & Inference <u>46</u> (1995), 105-21.
- E. Slud, Analysis of factorial survival experiments, Biometrics <u>50</u> (1994), 25-38
- B. Kedem and E. Slud, On autocorrelation estimation in mixed spectrum Gaussian processes, Stochastic Processes & Applications <u>49</u> (1994), 227-44.
- E. Slud and B. Kedem, Partial likelihood analysis of logistic regression and autoregression, Statistica Sinica <u>4</u> (1994), 89-106
- E. Slud, Stability of stochastic integrals under change of filtration, Stochastic Processes & Applications <u>50</u> (1994), 221-33.
- E. Slud, Multiple stochastic integral representation of the number of curve crossings by a differentiable Gaussian process, with applications. Annals of Probab. <u>22</u> (1994) 1355-80
- E. Slud, The moment problem for polynomial forms in normal random variables, Annals of Probability <u>21</u> (1993), 2200-14.
- E. Slud, Best precedence tests for censored data, Journal of Statistical Planning and Inference <u>31</u> (1992), 283-293
- E. Slud, Partial likelihood for continuous-time stochastic processes, Scandinavian Journal of Statistics <u>19</u> (1992), 97-110
- P. Lakner and E. Slud, Optimal consumption by a bond investor: the case of random interest rate adapted to a point process, SIAM Journal of Optimization & Control, <u>29</u> (1991), 638-655
- E. Slud, Multiple Wiener-Ito integral expansions for level-crossing-count functionals, Probability Theory and Related Fields <u>87</u> (1991), 349-364
- E. Slud, Relative efficiency of the logrank test within a multiplicative intensity model, Biometrika <u>78</u> (1991), 621-30.
- A. Schatzkin and E. Slud, Competing risks bias arising from an omitted risk factor, American Journal of Epidemiology <u>129</u> (1989), 850-856.

- D. Chambers and E. Slud, Central limit theorems for nonlinear functionals of stationary Gaussian processes, Probability Theory and Related Fields, $\underline{80}$ (1989), 323-346
- E. Slud, Clipped Gaussian processes are never m-step Markov. Journal of Multivariate Analysis $\underline{29}$ (1989), 1-14
- D. Chambers and E. Slud, Necessary conditions for nonlinear functionals of Gaussian processes to satisfy central limit theorems, Stochastic Processes & Applications $\underline{32}$ (1989), 93-107
- E. Slud and C. Hoesman, Moderate- and large-deviation probabilities in actuarial risk theory (with C. Hoesman). Advances in Applied Probability $\underline{21}$ (1989), 725-741.
- E. Slud and D. Byar, How dependent causes of death can make risk factors appear protective, Biometrics, $\underline{44}$ (1988), 265-269
- E. Slud, Subpixel translation-registration of random fields. IEEE Transactions on Geoscience and Remote Sensing $\underline{26}$ (July 1988), 487-490
- E. Slud, D. Byar and A. Schatzkin, Dependent competing risks and the latent failure model, Biometrics $\underline{44}$ (1988), 1203-1204
- E. Slud, Generalization of an inequality of Birnbaum and Marshall, with applications to growth rates for submartingales, Stochastic Processes & Applications $\underline{24}$ (1987), 51-60.
- E. Slud, Stability of exponential rate of growth of products of random matrices under local random perturbations. Journal of the London Mathematical Society (1986) $\underline{33}$, 180-192
- E. Slud, Inefficiency of inferences with the partial likelihood Communications in Statistics – Theory and Methods $\underline{15}$ (1986), 3333-3351.
- E. Slud, D. Byar and S. Green, A comparison of reflected versus test-based confidence intervals for the median survival time based on censored data, Biometrics $\underline{40}$ (1984), 587-600
- E. Slud, Multivariate dependent renewal processes. Advances in Applied Probability $\underline{16}$ (1984), 347-362
- E. Slud, Sequential linear rank tests for two-sample censored survival data. Annals of Statistics $\underline{12}$ (1984), 551-571
- E. Slud, P. Smith and R. Langel, Reduction of satellite magnetic anomaly data, Journal of Geophysics $\underline{54}$ (1984), 207-212.
- E. Slud, Tests of separate families of hypotheses using right-censored data. Communications in Statistics – Simulation and Computation $\underline{12}$ (1983), 507-509
- E. Slud and L. Rubinstein, Dependent competing risks and summary survival curves, Biometrika $\underline{70}$ (1983), 643-649
- E. Slud, Consistency and efficiency of inferences with the partial likelihood. Biometrika $\underline{69}$ (1982), 547-552.
- E. Slud, A characterization problem in stationary time series. Annals of Statistics $\underline{10}$ (1982), 630-633
- B. Kedem and E. Slud, Time series discrimination by higher order crossings, Annals of Statistics $\underline{10}$ (1982), 786-794.
- E. Slud and L.-J. Wei, Two-sample repeated significance tests based on the modified Wilcoxon statistic, Journal of the American Statistical Assoc. $\underline{77}$ (1982), 862-868.
- Y. Kifer and E. Slud, Perturbations of random matrix products in a reducible case, Ergodic Theory and Dynamical Systems $\underline{2}$ (1982), 367-382
- B. Kedem and E. Slud, On goodness of fit of time series models: an application of higher order crossings, Biometrika $\underline{68}$ (1981), 551-556.

- E. Slud, Entropy and maximal spacings for random partitions, Zeitschrift für Wahrscheinlich-keitstheorie <u>41</u> (1978), 341-352. *Correction* to "Entropy and maximal spacings for random partitions", Zeitschrift. für Wahrscheinlichkeitstheorie <u>60</u> (1982), 139-141
- E. Slud, A note on exchangeable sequences of events, Rocky Mountain Journal of Mathematics <u>8</u> (1978), No. 3, 439-442.
- E. Slud, Distribution inequalities for the binomial law, Annals of Probability <u>5</u> (1977), 404-412.
- E. Slud, Relative extinction times for independent branching processes, Journal of Applied Probability <u>14</u> (1977), 382-386.

Published Conference Proceedings

Refereed Conference Proceedings

- E. Slud, Adaptive designs for group-sequential clinical survival experiments, Ch. 31 in: Statistical Models and Methods for Biomedical and Technical Systems, eds. F. Vonta, M. Nikulin, N. Limnios, and C. Huber-Carol (2009). Birkhaeuser, ISBN 978-0-8176-4464-2.
- E. Slud and L. Kopylev, Dependent competing risks with time-dependent covariates (1994), pp. 323-330 in: Lifetime Data: Models in Reliability and Survival Analysis, eds. Jewell, N., Kimber, A., Lee, M. and Whitmore, G., Boston: Kluwer, ISBN 0-7923-3783-2.
- MWI expansions for functionals related to level-crossing counts. Chapter 6 in: Chaos Expansions, Multiple Wiener Integrals and their Applications, Proc. International Workshop held in Guanajuato, Mexico, July 1992. V. Perez-Abreu and C. Houdre, eds. (1993) CRC Press, ISBN 0-8493-8072-3.
- E. Slud, Nonparametric identifiability of marginal survival distributions in the presence of dependent competing risks and a prognostic covariate, in: Survival Analysis: State of the Art (1992), J. Klein and P. Goel eds., Kluwer Publishers. NATO ASI Series E, Vol. 211 (Proc. of NATO Workshop June 1991, Columbus, Ohio), ISBN 0-7923-1634-7.
- E. Slud, Stability of exponential growth rate for randomly perturbed random matrix products via Markov-chain arguments, in: Contemporary Mathematics <u>50</u> (1986), A.M.S. pp. 87-92.
- J. Alexander and E. Slud, Global convergence rates of piecewise-linear continuation methods: a probabilistic approach, p. 15-30 in: Homotopy Methods and Global Convergence, B. Eaves, F. Gould, H.-O. Peitgen and M. Todd eds. 1983), NATO Conf. Series II, Vol. 13. New York: Plenum, ISBN 0-306-41127-X.
- M. Gail, D. DeMets and Slud, E., Simulation studies of increments of the two-sample logrank test for survival-time data with application to group sequential boundaries, pp. 287-301 in: Survival Analysis (1982), I.M.S. Monograph Series vol. 2, ed. J. Crowley and R. Johnson, ISBN 0-940600-02-1.
- E. Slud, Loss of information from transforming stationary time series, pp. 525-533 in <u>Time Series Analysis</u>, O.D. Anderson and M. R. Perryman, eds., 1981, New York: North-Holland, ISBN 0-444-86177-7.

Non-Refereed Conference Proceedings

- E. Slud, Nonidentifiability of Mixed-Model Parameters under Informative Sampling using only Single-Inclusion Weights (2020), American Statistical Association, Joint Statistical Meetings (Virtual), Survey Research Methods Section, pp. 93-106.
- R. Ashmead and E. Slud, Small Area Model Diagnostics and Validation with Applications to the Voting Rights Act, Section 203 (2017), American Statistical Association, Joint Statistical Meetings, Baltimore, pp. 1515-1523.
- E. Slud and R. Ashmead, Hybrid BRR and Parametric-Bootstrap Variance Estimates for Small Domains in Large Surveys (2017), American Statistical Association, Joint Statistical Meetings, Baltimore, pp. 1716-1730.
- C. Franco, R. Little, T. Louis and E. Slud, Coverage Properties of Confidence Intervals for Proportions in Complex Sample Surveys (2015), American Statistical Association, Joint Statistical Meetings, pp. 1799-1813
- E. Slud, Modeling frame deficiencies for improved calibration, Proc. American Statistical Association in Survey Research Methods (2014), CD-ROM
- E. Slud and C. Erdman, Adaptive curtailment of survey followup based on contact history data," Proceedings of the Federal Committee on Statistical Methodology Research Conference (2013), 1-11, http://fcsm.sites.usa.gov/files/2014/05/B1_Slud_2013FCSM.pdf
- E. Slud, C. Grieves and R. Rottach, Single-stage generalized raking weight adjustment in the Current Population Survey, Proc. American Statistical Association in Survey Research Methods (2013), CD-ROM
- J. Suntornchost, E. Slud and R. Wei, Modeling U.S. cause-specific mortality rates using an age-segmented Lee-Carter model, Proc. American Statistical Association (2010), Joint Statistical Meetings, Vancouver
- E. Slud and Y. Thibaudeau, BRR versus inclusion probability formulas for variances of nonresponse adjusted survey estimates, Proc. American Statistical Association in Survey Research Methods (2008).
- E. Slud and L. Bailey, Evaluation and selection of models for attrition non-response adjustment, Proc. Federal Committee on Statistical Methodology Research Conference 2007, posted to FCSM web-page, www.fcsm.gov/07papers/Slud.V-C.pdf
- E. Slud, Small area estimation errors in SAIPE using GLMM versus FH models, Proc. American Statistical Association on Survey Research Methods (2004), CD-ROM.
- E. Slud, Comparison of models for household response in the 1990 and 2000 census, Proc. American Statistical Association on Survey Research Methods (2003), CD-ROM.
- E. Slud, Assessing fit of SAIPE models to Census and CPS child-poverty rates (2003), Proceedings of Federal Committee on Statistical Methodology Research Conference, posted to FCSM web-page, www.fcsm.gov. (Also CD-ROM)
- E. Slud, Model-assisted weighting for surveys with multiple response mode, Proc. American Statistical Association on Survey Research Methods (2002), CD-ROM.
- E. Slud, Order selection, random effects, and multilevel predictors in modeling decennial census response, Proc. Amer. Statistical Association on Survey Research Methods (2001), CD-ROM.
- E. Slud, Comparison of aggregate versus unit-level models for small-area estimation Proc. American Statistical Association on Survey Research Methods (2000),
- E. Slud, Analysis of 1990 Decennial Census Check-in Time Data (1999), paper given at Fed. Comm. on Statist. Methodology Research Conference, Nov. 15-17, 1999, posted at Conference web-site, www.fcsm.gov/events/papers1999/index.html

- E. Slud, Predictive models for decennial census household nonresponse, Proc. American Statistical Association on Survey Research Methods (1998), 272-277.

<u>Conferences, Workshops and Talks</u>

Invited Talks

- 2020, Nonidentifiability of Mixed-Model Parameters under Informative Sampling using only Single-Inclusion Weights, Invited talk, Joint Statistical Meetings (Virtual)
- 2019, Statistics Colloquium, North Carolina State University, Estimating a Two-Way Random Effects Model from Informatively Sampled Data, Raleigh NC, Nov. 22, 2019
- 2017, Hybrid BRR and Parametric-Bootstrap Variance Estimates for Small Domains in Large Surveys, Joint Statist. Meetings, Baltimore, based on work with R. Ashmead
- 2015, Weighted Estimating Equations Based on Response Propensities in Terms of Covariates That Are Observed Only for Responders, NISS Workshop on Nonignorable Nonresponse at Bureau of Labor Statistics on November 12-13, 2015.
- 2015, Weighted Estimating Equations Based on Response Propensities in Terms of Covariates That Are Observed Only for Responders, Joint Statistical Meetings 2015, Seattle, WA, Topic-Contributed session on Weighted Estimating Equations in Biostatistics and Survey Sampling
- 2014, Survey Estimating Equations under Nonstandard MAR Models, Frontiers of Hierarchical Modeling in Observational Studies, Complex Surveys and Big Data, Conference in Honor of Malay Ghosh, College Park, MD, May 29-31, 2014
- 2013, Single Stage Generalized Raking Weight Adjustment in the Current Population Survey, Joint Statistical Meetings, Montreal, based on work with C. Grieves and R. Rottach
- 2012, Small Area Confidence Bounds on Small Cell Proportions in Survey Populations, Joint Statist. Meetings, San Diego, based on work with A. Gilary and J. Maples
- 2012, Small Area Confidence Bounds on Small Cell Proportions in Survey Populations, Statistics Seminar, Statistics Dept, George Washington University, Sept. 14, 2012
- 2012, Small Area Confidence Bounds on Small Cell Proportions in Survey Populations, Statistics Seminar, Statistics Dept, Rutgers University, Oct. 17, 2012
- 2012, Small Area Confidence Bounds on Small Cell Proportions in Survey Populations, Washington Statistical Society Seminar at WESTAT, Rockville, MD, Nov. 9, 2012
- 2011, (with) V. Sotiris and M. Pecht, Reliability Inference in a First Hitting-Time Model with Augmented Data, International Conference on Methods of Math Reliability (MMR2011), Beijing, invited ½ hour talk (on joint work)
- 2011, Resampling Variance Estimation Methods for Decision-based Stratified Regression Estimates, Joint Statististical Meetings (JSM11), Miami Beach, FL, ½ hour invited talk at based on joint work, based on joint work with Y. Cheng and C. Hogue
- 2011, Survival Analysis of Phase-Type Regression Models, Conference on Risk Assessment and Evaluation of Predictions, Silver Spring MD, (joint work with J. Suntornchost), ½ hour invited talk, Oct. 12-14, 2011
- 2009, Variance estimation via balanced replication for surveys with misspecified nonresponse weight-adjustments, UMBC Probability and Statistics Day, UMBC, Catonsville, ½ hour

- 2008, Two-sample rank tests for treatment effectiveness when death and censoring depend on covariates, Office of Biometric Research, National Heart Lung and Blood Institute, Bethesda, Seminar talk, April 8, 2008
- 2006, Adaptive designs for group-sequential clinical survival experiments, BIOSTAT2006 International Conference, Limassol, Cyprus, May 29-31, 2006

Symposia

- 2010, Validity of regression meta-analyses versus pooled analyses of mixed effect linear models, International Symposium on Stochastic Models in Reliability Engineering, Life Sciences, and Operations Management, Beer Sheva, Israel
- 2009, Evaluation and selection of models for attrition non-response adjustment, Statistics Canada 2009 Symposium, Longitudinal Surveys: from Design to Analysis, Gatineau, Canada
- 2005, Survival Analysis Models and Statistical Methods, Spring Statistical Symposium, one-day short course given, co-sponsored by UMD Statistics Consortium and American Statistical Association (ASA), March 22, 2005

Workshops

- 2011, Short Course on Sampling Theory, series of 6 1-hour lectures at Statistics Department, East China Normal University, June 1-3, 2011. Also gave four of these lectures at Beijing University, June 9-10, 2011

Colloquia

- 2014, Modeling Frame Deficiencies for Improved Calibration, Statistics Colloquium, Michigan State University
- 2014, Modeling Frame Deficiencies for Improved Calibration, Columbia Biostatistics Department Colloquium
- 2013, Small Area Confidence Bounds on Small Cell Proportions in Survey Populations, Statistics Colloquium, University of Wisconsin, Feb. 13, 2013

Professional Publications

Reports and Non-Refereed Monographs

- 2020, Slud, E. "Model-assisted Estimation of Mixed Model Parameters in Complex Surveys", Census Bureau CSRM Research Report, Statistics # 14, 2020-05
- 2018, Slud, E., R. Ashmead, P. Joyce and T. Wright, "Statistical Methodology (2016) for Voting Rights Act, Section 203 Determinations, Census Bureau CSRM Research Report, Statistics #2018-12
- 2016, Hughes, T., E. Slud, R. Ashmead, and R. Walsh. 2016. "Results of a Field Pilot to Reduce Respondent Contact Burden in the American Community Survey's Computer Assisted Personal Interviewing Operation. American Community Survey Research and Evaluation Report Memorandum Series #ACS16-RER-07.

- 2014, R. Janicki and E. Slud, Effects of missing data on modeling enumeration status in the U.S. Census, Census Bureau CSRM Research Report, Statistics # 14, 2012-14
- 2014, E. Slud, Moderate-sample behavior of adaptively pooled stratified regression estimators, Census Bureau CSRM Research Report, Statistics #2014-1
- 2014, D. Griffin, E. Slud and C. Erdman, Reducing Respondent Burden in the American Community Survey's Computer Assisted Personal Visit Interviewing Operation – Phase 3 Results, American Community Survey Research and Evaluation Report Series, American Community Survey Office, U.S. Census Bureau, (#ACS14-RER-28)
- 2010, E. Slud and Y. Thibaudeau, Simultaneous Calibration and Nonresponse Adjustment, Census Bureau CSRM Research Report, Statistics # 3
- 2000, E. Slud, Models for Simulation and Comparison of SAIPE Analyses, Small Area Income and Poverty Estimates Technical Reports
- 2000, E. Slud, Accurate Calculation and Maximization of Log-likelihood for Mixed Logistic Regression, Small Area Income and Poverty Estimates Technical Reports
- 1983, E. Slud, Asymptotic variances and relative efficiencies for statistics based on higher-order crossings counts and autocorrelations of stationary continuous-time Gaussian processes, University of Maryland Math.Dept, TR 83-48
- 1983, E. Slud, Estimating a parameterized mixture of normal distributions, Cornell School of Operations Research Tech., Rep. 611
- 1983, E. Slud, An empirical Bayes goodness of fit test, Cornell School of Operations Research Tech, Rep. 598

Refereed Extension Publications

- 2015, E. Slud, Impact of Mode-based Imputation on ACS Estimates, American Community Survey Research and Evaluation Report
- 2015, D. Griffin, E. Slud and C. Erdman, Reducing Respondent Burden in the American Community Survey's Computer Assisted Personal Visit Interviewing Operation - Phase 3 Results, American Community Survey Research and Evaluation Report

Non-refereed Extension Publications

- 2014, E. Slud, Moderate-Sample Behavior of Adaptively Pooled Stratified Regression Estimators, Center for Statistical Research and Methodology Research Report

Book Reviews

- 2015, C. Borgelt and R. Kruse, "Review of "Graphical Models: Methods for Data Analysis and Mining", *Technometrics*
- 2012, "E. Slud, Book review of Essential Methods for Design Based Sample Surveys, D. Pfeffermann and C.R.Rao eds.", *Journal of the American Statistical Association*, 107 432-433

Sponsored Research

- 1996, (P.I.) Maureen Stone (U.M. Med. Sch.), Four-dimensional tongue behavior in speech, NIH grant, R01 DC 01758, Co-Investigator
- 1985, Nonstationary Time Series, B. Kedem, ONR Contract N00014-86-K-0007 (FAS 01-5-28831) (Renewed 1988-91, number N00014-89-J-1051), Co-Investigator
- 1982, B. Kedem, Statistical analysis of events generated by time series, AFOSR, Contract No. 82-0187, Co-Investigator
- 1979, B. Kedem, Higher-order crossings in time series, AFOSR, Contract No. F49620-79-C-0094, Co-Investigator

Fellowships, Gifts and Other Funded Research

- 2015, Big Data: Multiscale Analysis of Dynamical Processes in Terms of an Integrative Method from Harmonic Analysis, Partial Differential Equations, and Statistics - 15113579, NSF
- 1996, (P.I.) Maureen Stone (U.M. Med. Sch.), Four-dimensional tongue behavior in speech, NIH grant, R01 DC 01758

Fellowships

- 1998, American Statistical Association & Census Bureau Fellowship, 1997-98, research project titled "Counting Process Models for Census Data"

TEACHING, MENTORING AND ADVISING

Courses Taught

- Stat 702, Survival Analysis, Fall 2021, Enrollment 12
- Stat 818D, Bootstrap Methods, Spring 2021, Enrollment 13
- Stat 770, Categorical Data Analysis, Fall 2020 (Virtual), Enrollment 7
- Stat 650, Applied Stochastic Processes, Spring 2020 (Virtual), Enrollment 14
- Stat 818M, Analysis of Missing Data, Spring 2019, Enrollment 8
- Stat 770, Categorical Data Analysis, Fall 2018, Enrollment 7
- Stat 730, Time Series Analysis, Spring 2017, enrollment 15
- Stat 650, Applied Stochastic Processes, Spring 2016 and 2018, enrollment 20-25
- Stat 710, Advanced Statistics, Spring 2011, enrollment approx. 5
- Stat 705, Computational Statistics in R, Fall 2009, 2015, 2016 and 2017, enrollments 20-25
- Stat 701, Mathematical Statistics II, Spring 2010 and 2014 and 2015, each enrollment approx. 20
- Stat 700, Mathematical Statistics I, Fall 2009 and 2013 and 2014, enrollment approx. 20
- Stat 689, RIT on Weighted Estimating Equations in Surveys and Biostatistics, Spring 2014
- Stat 689, RIT on Weighted Estimating Equations in Surveys and Biostatistics, Fall 2013
- Stat 689, RIT on Biased Sampling, Fall 2010, enrollment approx. 5
- Stat 440, Sampling Theory, Fall 2010, enrollment approx. 5
- Stat 401, Applied Prob. And Statistics II, Spring 2011, enrollment approx. 20
- Stat 401, Applied Prob. And Statistics II, Fall 2010, enrollment approx. 20
- Math 420, Mathematical Modeling, Spring 2011, enrollment approx. 20

Teaching Innovations

Course or Curriculum Development

- 2011, Revived and co-developed MATH 420 Modeling course, Math 420. Jointly with B. Hunt, D. Levermore, and W. Czaja, revived this course in Spring 2011; co-developed plan, curriculum and modules
- 2001, Developed STAT 405 Course on Stoch. Processes & Queueing Models, Developed and taught course STAT405 Spring 2001 & 2002.
- 1997, Initiated course STAT 798C (now STAT 705) in Statistical Computation jointly with P. Smith and B. Kedem, Stat 705. Initiated this course 1997 in Statistical Computation jointly with Prof.'s P. Smith and B. Kedem; co-developed plan, curriculum and course notes
- 1989, Stat 470 Initiated this course in Actuarial Mathematics, developed curriculum and wrote extensive course notes serving as primary text, (freely available to students on web-page)

Advising: Research

Master's

- Fall 2009, Mathewos DeMissie, Investigating center effects in a multi-center clinical trial study using a parametric proportional hazards meta-analysis model, Aug. 2009
- Fall 2009, John Kuykendall, An Exposition on Stochastic Integrals and their Application to Linearization Coefficients, Dec. 2009
- Spring 2008, Chin-Fang Weng, Fixed versus Mixed Parameterization in Logistic Regression Models: Application to Meta-Analysis, May 2008
- Fall 1996, Chun-Kuo Li, Estimation of exponential mixtures, Dec. 1996
- Fall 1993, Jesse Chittams, A multivariate analysis of covariance of a two-way mixed model for An immune response study, Aug. 1993
- Spring 1993, Brian Morrow, Logistic regression using time-dependent regressors in baseball, May 1993
- Spring 1991, Marsha Reichman, Cox proportional hazards survival analysis with multiple time scales, May 1991
- Fall 1987, Craig Hoesman, Ruin probabilities and premium calculation in a Bayesian setting, Aug. 1987

Doctoral

- Spring 2018, Eun-Young Jessie Moon, Consistency of Spectral Clustering with Functional Magnetic Resonance Imaging Data (co-advised with Dr. Shuo Chen), FDA
- Spring 2018, Xuan Yao, Extended Estimating Equations and Empirical Likelihood, Abb-Vie Pharmaceuticals
- Spring 2018, Xia Li, Misspecified Weights in Weight-Smoothing Methods, Google, Inc.

- Fall 2016, Peter Rankel, Statistical Analysis of Text Summarization Evaluation (co-advised with John Conroy of IDA)
- Summer 2015, Meiyu Shen, Statistical Methods in Bioequivalence Studies, Food and Drug Administration
- Fall 2013, Ekaterina Sotiris, Outlier Detection in Spatial Statistics, Aug. 2013, (co-advised with William Bell, US Census Bureau), Nielsen Corp
- Summer 2012, Jiraphan Suntornchost, Mortality Statistics and Survival Models, June 2012, Chulalongkorn University Math. Dept., Thailand
- Fall 2011, Vasilis Sotiris, Prognostics and Health Management Models for Eelectronic Products and Systems, Aug. 2011, (co-advised with M. Pecht of ENME at UMCP), Dow Jones
- Fall 2010, Ziliang Li, Minimum Disparity Estimator for Continuous time Stochastic Volatility Models, Aug. 2010, Merck, Inc
- Summer 2010, Min Tang, Goodness of Fit for Linear and Generalized-Linear Mixed Models, July 2010, (co-advised with R. Pfeiffer of National Cancer Institute), NCI, then Dana-Farber Cancer Center
- Spring 2008, Yabing Mai, Comparing Survival Time Distributions in the Presence of Dependent Censoring, May 2008, Merck, Inc
- Fall 2007, Ganesh Nadarajasundaram, Spatial and Small Area Estimation Problems, Dec. 2007, (co-advised with P. Lahiri of JPSM at UMCP), National Opinion Research Center
- Fall 2007, Calandra Tate, The Relationship between Automated Machine Translation Metrics and User Performance in an Information Extraction Task, Dec. 2007, (co-advised with B. Dorr of CMSC at UMCP), West Point Mathematics Dept
- Fall 2005, Hsiao-Hui Tsou, Factor analysis of cross-classified data, Aug. 2005, National Health Research Institute, Taiwan
- Fall 2005, Ru Chen, Misspecified models with parameters of increasing dimension, Aug. 2005
- Fall 2004, Yang Cheng, Maximum likelihood estimation and computation in a random effect factor model, Aug. 2004, US Postal Service
- Fall 2000, George Wright, Efficient Semiparametric Estimation Via Finite-Dimensional Likelihoods, Dec. 2000, National Cancer Institute
- Fall 2000, Eric Leifer, Two-Stage Optimal Designs for Early Stopping of Clinical Trials, Dec. 2000, National Heart, Lung and Blood Institute
- Fall 1997, Leonid Kopylev, On Estimation of the marginal survival function in the Cox model, Aug. 1997, Environmental Protection Agency
- Fall 1992, Filia Vonta, Efficient estimation of a structural parameter in a nonproportional hazards model in the two-sample problem, Aug. 1992, University of Cyprus
- Fall 1990, Antonis Koutsoukos, Probabilities of Moderate and Large Deviations of Test Statistics and Estimators in the Presence of Nuisance Parameters, Aug. 1990, Food and Drug Administration
- Fall 1983, Daniel Chambers, Central and functional central limit theorems for functionals of Gaussian processes, Aug. 1983, Boston College

Advising: Other than Research Direction

Undergraduate

- Spring 2011, Actuarial science undergraduate advisor, 1989-2011
- Spring 2011, Regular undergraduate math major advisor, Undergraduate Statistics advisor, 1977-1981, 1990-2011

Master's

- Fall 1984, MAPL/AMSC Adviser, 1984-present

Other Teaching Activities

- 2015, RIT in Weighted Estimating Equations in Surveys and Biostatistics
- 2008, Experimental Statistics, Taught in Maryland Mathematics Institute, first-day, one-week 2-credit course Math 498M offered to high school teachers, June 23-27, 2008

SERVICE AND OUTREACH

Editorships, Editorial Boards and Reviewing Activities

Editorial Boards

- Associate Editor, Statistical Theory & Related Fields, 2017-present
- Associate Editor, Biometrika, (May 2014- present)
- Associate Editor, Journal of Survey Statistics and Methodology, (Jan. 2014-present)
- Associate Editor, Jour. of Royal Statist. Soc., Series B, 2003-2007 and 2009-2014
- 2001, Associate Editor, Lifetime Data Analysis, (Jan. 2001-present)

Reviewing Activities for Journals and Presses

- Reviewer, Annals of Statistics, J.A.S.A., Annals of Probability, Biometrika, Biometrics, Amer. Statistician, Jour. of Statist. Planning and Inference, Scand. Jour. of Statist., Statistics in Medicine, Haematology, Survey Methodology, Journal of Official Statistics, Canadian Journal of Statistics, and many others

Reviewing Activities for Agencies and Foundations

- Dates various, Reviewer, NSF, Census Bureau, Reviewer of Proposals

Committees, Professional & Campus Service

Campus Service - Department

- 2017-2018, Member, Policy Committee
- 2009-2011, Member, Hiring Committee, also 1998-99, 2003-2004, 2005-2006
- 2008-2011, Chair, Math/Stat Majors Committee, 1982-84, 1998-00 (1999-00)
- 2007-2009, Member, Policy Committee various, incl, 1999-00, 2003-04
- 2006-2007, Member, Search Committee for Math. Department
- 2005-2008, Organizer, Statistics Seminar, 2005-Fall 2008
- 2003-2004, Member, Graduate Committee for Applied Mathematics, 1999-00
- 2002-2003, Chair, Departmental Committee on CMPS & Eng'g Service courses, (Math 401, Math 461, Stat 400)
- 2001-2001, Member, Salary Committee, also 1988-1989
- 1999-1999, Member, Hiring Priorities Committee, Spring
- 1996-1997, Member, Periodic Review Committee, EEEO Officer, 1995-96 incl
- 1995-1996, Member, Mathnet Committee
- 1993-1995, Chair, Promotions Committee
- 1989-1992, Other, Director of Statistics Program
- 1984-1987, Member, Financial Aid Committee

Campus Service - College

- 2001-2002, Member, Search Committee for faculty in new Center for Biological Computing and Bioinformatics
- 2000-2001, Member, CMPS College APT Committee, 1999-00

Campus Service - University

- 2015-2016, Member, Search Committeee for Chair of Department of Epidemiology and Biostatistics, School of Public Health
- 2013-2014, Member, Search Committee for Faculty in Biostatistics, School of Public Health, 2007-08
- 2006-2011, Other, Statistics Consortium (College Park campus), Director until 2009
- 2002-2002, Member, Statistics Task Force (University-wide), Fall

Other Non-University Committees, Memberships, Panels, etc.

- 2019, Chair of Steering Committee for National Academy of Sciences Workshop May 15, 2019 on National Agricultural Statistics Service's Livestock Estimation Program
- 2019, Member of FDA Pharmaceutical Sciences and Clinical Pharmacology Advisory Committee
- 2013-2016, Member, Washington Statistical Society, Morris Hansen Lecture Committee, 2013-present (Chair in 2015)
- 2012-2012, Other, NRC Panel on Estimates of Children Eligible for School Nutrition Programs using the American Community Survey, Reviewer of Final Report

- 2012-2012, Other, CIRUN / NOAA / ESSIC, Chesapeake Bay Workshop Participant, Feb. 21-22, 2012 workshop to identify priority items for scientific and agency research on issues related to vibrio, blue-green algae growth, and human disease
- 2012-2012, Member, NRC Steering Committee for a Workshop on Future Directions for National Patterns of Research & Development, Workshop held Sept. 6-7,, report completed Dec.
- 2010-2010, Member, NRC Steering Committee for a Workshop on Evaluating Databases for Use in the Children's Health Insurance Program (CHIP) Allocation
- 2005-2011, Member, NSF GRFP Mathematical Sciences panels, spring 2005 and 2011
- 1999-2000, Member, NRC Committee to review National Council of Teachers of Mathematics, K-12 Standards Document
- 1999-2000, Member, Search Committee for Chief, Biometry and Mathematical Statistics Branch, National Institute of Child Health and Human Development

External Service and Consulting

Other

- 2015, Half-time Federal Employee under University MOU dated 2013, Center for Statistical Research and Methodology, US Census Bureau
- 2014, Half-time federal employee during academic terms, full-time in summer under MOU, US Census Bureau, Center for Statistical Research and Methodology, Work done throughout the year as a regular GS-15 employee for federal government, US Census Bureau, according to a Memorandum of Understanding executed 2013 with the University of Maryland under which I work half-time during academic terms at UMCP (MW and alternate Fridays) and half-time at the Census Bureau (TuTh and alternate Fridays).

AWARDS, HONORS AND RECOGNITION

- 2004, Fellow, American Statistical Association, since 2004, awarded by American Statistical Association for cumulative accomplishments
- 2001, Fellow, Institute of Mathematical Statistics, since 2001, awarded by Institute for Mathematical Statistics (professional society) for cumulative accomplishments)