

Statistical Laboratory

established 1933

Annual Report

July 1, 2000 to June 30, 2001



IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

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VIGRE:

Stretching the academic boundaries

Dean Isaacson and Mark Kaiser know the new five-year \$2.2 million VIGRE (Vertical Integration of Research and Education) grant the Department of Statistics has received from the National Science Foundation (NSF) will benefit both faculty and students. They are also hopeful that this grant will promote interdisciplinary research and training of graduate students across the academic boundaries.



Dean Isaacson and Mark Kaiser are excited about the opportunities the VIGRE Grant will provide for the Department of Statistics.

The VIGRE program is designed to benefit the mathematical sciences by bringing together working groups consisting of undergraduate students, graduate students, postdoctoral fellows and faculty. The working groups will focus on areas of statistical investigation and application.

Each working group will conduct research and write proposals for external funding of their activities, participate in a VIGRE workshop, work with others to plan undergraduate summer research experiences, and present research results at meetings and through publications in both statistics and subject-oriented scientific journals.

The working groups are intended to provide an open framework for participation in statistical research by individuals across levels of statistical training. Each group will consist of a set of 'core' members composed of several statistics faculty who have the group topic as one of their primary research interests, several graduate students planning to do dissertation research in that topical area, and possibly an undergraduate student and/or postdoctoral fellow. It is hoped that other faculty from both within and outside the Department of Statistics, will become involved in particular research projects.

WORKING GROUPS UPDATES

Currently working groups exist in the areas of:

- Bioinformatics and Genetic Statistics
- Ecological and Environmental Statistics
- Engineering Statistics
- Probability and Mathematical Statistics
- Survey Sampling Methodology
- Statistics in the Social Sciences
- Graphical and Computational Statistics

All working groups are meeting in some capacity at this time. Updates from a number of the working groups follow.

Ecological and Environmental Statistics

Many participants in this working group have backgrounds in statistics and a second field. The model for this group is the 'lab group' that is common in other scientific fields, but rare in statistics. These groups provide students and faculty with common interests an opportunity to learn the current literature, engage in research projects, and get feedback on new ideas. This VIGRE group, headed by Philip Dixon, is a diverse group; in addition to the statisticians, participants include Bill Clark and Dave Otis from Animal Ecology, Gene Takle from Atmospheric Sciences, and Forrest Nutter from Plant Pathology.

The common interest is the development and use of statistical methods for ecological and environmental questions. The group started in the fall with a series of "what I do / what I'm interested in" presentations and reading a recent textbook on spatial epidemiology. They are now working on two research problems: modelling spatial patterns in duck nests, especially the dependence of nest predation on raccoon and skunk movements, and modelling the spread over time of an epidemic in a papaya plantation.



The Ecological and Environmental VIGRE group discussed statistical methods to analyze spatio-temporal data on the spread of an epidemic in a papaya plantation. From left to right: Shuxia Sun, Brooke Fridley, Dale Tessin, Paul Esker, and Mark Kaiser.

Survey Statistics

The VIGRE Survey Statistics working group has been meeting weekly since the beginning of this academic year. The participants include faculty and students from the department, with the core members coming from the Survey Section of the Statistical Laboratory. During the Fall semester, participants presented the results of research or projects they were involved in, including small area estimation in natural resource surveys, callback number estimation, dual frame sampling for welfare recipients, estimation of the number of calls required for case/control recruitment, measurement error models,



Jean Opsomer heads the Survey Statistics working group.

regression estimation, and an introduction to the National Resources Inventory.

A semester-long project in questionnaire development is currently underway during the Spring semester. The goal of the project is to expose participants to all the aspects of developing an actual survey questionnaire. This is done by developing a study on the factors of academic success for ISU undergraduate students, in collaboration with Dr. Don Whalen from the ISU Residence Halls. After meeting several times with Dr. Whalen to specify the client objectives and the target population, the working group participants are developing survey questions and a complete survey instrument. Once developed, this survey instrument will be tested on undergraduate students.

Bioinformatics and Genetic Statistics



Rhonda DeCook, graduate student, presents information on Inferential Data Analysis for Microarrays to the Bioinformatics and Genetic Statistics group.

The VIGRE Bioinformatics and Genetic Statistics working group, headed by Hal Stern, has held a weekly seminar series during the 2001-2002 academic year. The meetings are regularly attended by a mix of faculty and graduate students, typically about 20 people in all each week. Faculty members involved include Hal Stern, Dan Nettleton, Dianne Cook, Heike Hofmann, Karin Dorman, Ken Koehler, Mervyn Marasinghe and Taps Maiti. Each meeting consists of a 20 to 30 minute informal presentation of a research problem followed by group discussion.

Key focus areas for the group include the analysis of data from gene expression studies and the role of modern algorithmic statistical methods (neural networks, regression trees) in such analyses. In addition to the statistics department, the working group meetings have included faculty and students from Zoology and Genetics, and the interdepartmental Bioinformatics and Computational Biology program.



Dianne Cook facilitates the Graphical and Computational Statistics work group.

Graphical and Computational Statistics

The VIGRE working group for graphical and computational statistics has been meeting regularly. This group focuses on topics in statistics which have a visual or computational aspect. There are three faculty members (Dianne Cook--group leader, Mervyn Marasinghe, Heike Hofmann) and five students (Manuel Suarez, Eun-Kyung Lee, Ozlem Ilk, Jason Sinnwell, and Weiping Shi) regularly attending the meetings. Discussions of two software packages, GGobi and MANET, and two topics, ANOVA for unreplicated data, and projection pursuit, have taken place this semester.

The goal is to introduce students to other topics in computational and graphics statistics that reach beyond their creative component and thesis research, so they can place their research into a big picture of the field.

It is an arena for discussion of ideas, requesting input and suggestions for particular research problems.

Theoretical Statistics and Probability Theory

The working group on Theoretical Statistics and Probability Theory is headed by Soumendra Lahiri and provides a forum for faculty and graduate students to discuss topics of current research interest in mathematical statistics and probability theory. The core of the working group consists of five faculty members: T-M. Huang (Statistics), S. N. Lahiri (Statistics), S. Sethuraman (Mathematics), A. Weerasinghe (Mathematics) and Y. Yang (Statistics).

The activities of this group consists of a weekly seminar series covering different topics in probability theory and statistics by faculty members and students. The levels of the seminars are classified as introductory and advanced, depending on the accessibility of the material presented.

Introductory level seminars are expected to be suitable for students entering the Ph.D. program and beyond while the advanced level seminars are more like a regular departmental seminar, but in a more informational setting to help encourage discussion and student participation.

Topics so far have included seminars on:

- Bootstrap
- Nonparametric functional estimation
- Large deviations
- Option pricing and derivatives, and
- Asymptotic properties of tests.

FUTURE OF THE VIGRE PROGRAM

The NSF grant has been initially funded for \$1,293,228 for the first three years. "After the first three years, the program must be reviewed," said Mark Kaiser, associate professor of statistics and director of graduate studies. "That means the other \$985,536 has been approved on merit but the funds have not been allocated."

The grant will eventually provide funding for 14 graduate fellowships, eight postdoctoral fellows and 12 undergraduates. One criteria NSF requires is that to be eligible, participants must be U.S. citizens or permanent residents.

Undergraduate students will be on the Iowa State campus during the summer months and assigned to an ongoing research group.



Soumendra Lahiri acts as group leader for the Theoretical Statistics and Probability Theory VIGRE work group.

Working groups conduct research and write proposals for external funding of their activities, participate in a VIGRE workshop, work with others to plan undergraduate summer research experiences, and present research results at meetings and through publications in both statistics and subject-oriented scientific journals.

The VIGRE program is designed to benefit the mathematical sciences by bringing together working groups consisting of undergraduate students, graduate students, post-doctoral fellows and faculty,” Isaacson said.

“The idea is to provide undergraduate students, possibly with majors other than statistics, exposure to statistics as a problem-solving tool,” Kaiser said. “This will be accomplished through an eight-week summer research experience.” Undergraduate students will spend the first portion of their time interacting with members of an appropriate working group and planning the next phase of the experience, which is a several week-long data collection exercise in conjunction with staff from other departments. The final portion of the program will again be spent interacting with statisticians, conducting data analysis and preparing a report.

Graduate students can be funded up to five years. The working groups will provide graduate students the opportunity to incorporate research and interdisciplinary problem solving into their educational experience at an early stage. This should result in a reduction in the average time it typically takes a graduate student to earn a Ph.D. degree.

Postdoctoral fellows can be in the program for up to three years. The VIGRE grant will pay half of the cost of a postdoctoral fellow. The department is seeking candidates for these positions with a dual interest in statistics and another academic discipline, thus requiring both departments to pay for only one-fourth of the cost of a postdoc.

“The traditional role and motivation for postdocs is to publish research papers,” Kaiser said. “Part of the idea behind the VIGRE grant is also to provide them the experience of research, teaching and professional practice. The plan is to prepare postdocs to enter an academic career.”

And finally, the grant is designed to increase the level of interdisciplinary research opportunities for faculty, both across areas of research in statistics and mathematics, and across boundaries of the mathematical and applied sciences.

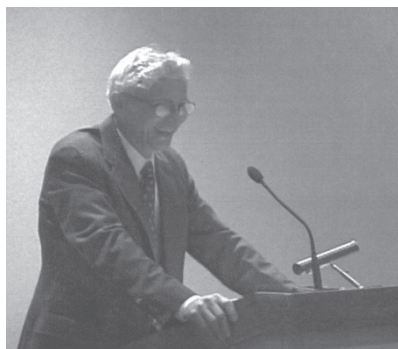
It’s that interdisciplinary activity that excites both statistics professors.

“We’re not just looking for statisticians,” Isaacson states. “I hope we can find students and post docs who are interested in statistics as well as sociology, engineering, computer science, mathematics, psychology, genetics - any number of academic disciplines.”

“There is an opportunity for almost every department on campus to benefit from the VIGRE grant,” Isaacson said. “Plus we hope to receive applications from both on and off campus.”

For more information on VIGRE opportunities, contact:
Mark Kaiser
Phone: (515) 294-8871
E-mail: mskaiser@iastate.edu
or visit the VIGRE web pages at <http://www.stat.iastate.edu/update/vigre.html>

Wayne Fuller Conference



A conference was held in celebration of Wayne A. Fuller's 70th birthday on June 21-22, 2001. Fuller is a 1959 Ph.D. graduate of Iowa State University in Agricultural Economics. After graduating he joined the faculty of ISU as a faculty member in the Departments of Statistics and Economics.

Dr. Fuller is well known for his significant contribution to the development of theory and methodology in several areas of statistics. The conference was designed to stimulate discussion in three areas of

statistics where Fuller continuously maintained an active research program: time series, measurement error models, and survey sampling. In honor of his deep interest in bridging statistical and scientific disciplines, the conference also focused on application domains in which he is an active contributor, including national statistical programs and subject matter areas such as dietary assessment, natural resource monitoring and econometrics.

Over 150 colleagues, collaborators, former students and friends attended the 2-day event. Below are a few photos from the conference.



Photo 1: Wayne Fuller and his wife Evelyn. Photo 2: Dianne Anderson (Survey Section), Wayne, Kevin Dodd (Ph.D. '99) and Todd Sanger (Ph.D. '92). Photo 3: Wayne with Ray Carroll (Texas A & M). Photos 4 & 5: Wayne with some of his former students. Photo 4: George Battese (Ph.D. '74), George H. K. Wang (Ph.D. '76), Jim Mellon (M.S. '68), Jeff Goebel (Ph.D. '74), Mike Hidioglou (Ph.D. '74), and Wayne. Photo 5: Dan Schnell (Ph.D. '87), Steve Miller (Ph.D. '86), Carol Francisco (Ph.D. '87), and Wayne.

ON THE LIGHTER SIDE



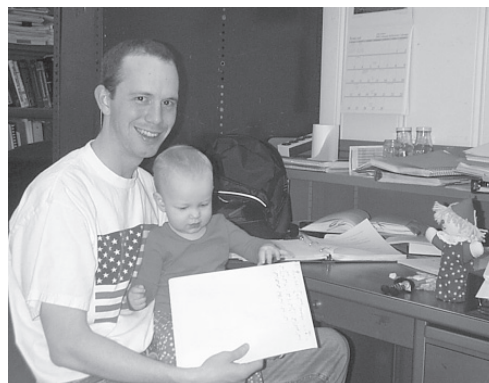
Birthdays, especially for 50 year olds, bring out strange guests. Beth Weiser, writer/editor, meets the "Grim Reaper" as part of her birthday celebration. (The Grim Reaper was portrayed by administrative assistant Edith Landin.)



Faculty, staff and students enjoy a good volleyball game at the department's fall picnics.



Pete Sherman talks to Shashikala Sukhatme. Dr Sukhatme retired from the department December 2000.



Do stat students come in all ages? Novellynn Landes, 17 month old daughter of grad student Reid Landes, is a frequent visitor to the first floor of Snedecor Hall.

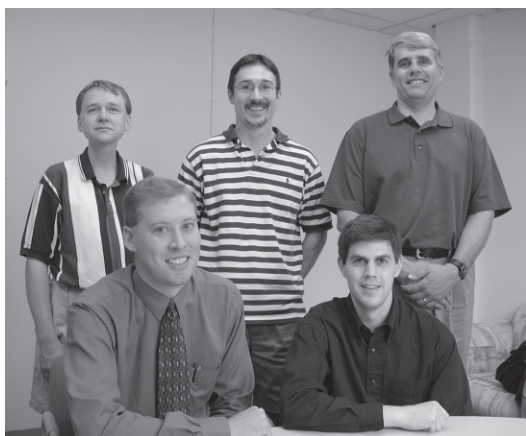


Photo credit: Tom Freelove, ISU Extension

On June 26 the first two Mayo Clinic students in the department's distance education program came to Ames to defend their creative component. From l-r: (first row) Chris Scott, Jeff Slezak. (back row) Dan Sarget (Mayo), Mike Daniels (assistant professor and served on the committee for both students), Terry Therneau, Mayo Clinic professor.



A stat barbeque wouldn't be complete without veggie burgers. Here grad students Carsten Botts and Jenn Czuprynski dishes them out.

Refereed Publications 2000-2001

Athreya, K. and J. Dai. (2000) Random logistic maps I. *Journal of Theoretical Probability*, 13(2) 595-608.

Athreya, K. and R. N. Battacharya. (2001) Random iteration of iid quadratic maps. *Kallianpur Festschrift*, Ed Hida et al, Birkhauser. **Volume and page numbers unknown.**

Athreya, K. and J. Dai. (2001) On the nonuniqueness of the invariant measure for random logistic maps, an example, *Annals of Probability*, **Volume and page numbers unknown.**

Bilder, C. R., T. M. Loughin and D. Nettleton. (2000) Testing for multiple marginal independence with pick any/c variables. *Communications in Statistics - Computation and Simulation*, 29(4) 1285-1316.

Breidt, F. J. and J. D. Opsomer. (2000) Local polynomial regression estimators in survey sampling. *Annals of Statistics*, 28, 1026-1053.

Breidt, F. J., and A. L. Carriquiry. (2000) Highest density gates for multiple target tracking. *IEEE Transactions on Aeronautics and Electronic Control*, 36, 47-55.

Chiou, C. P., R. B. Thompson, V. Chan, and W. Q. Meeker. (2001) Ultrasonic and Statistical Analyses of Hard Alpha Defects in Titanium Alloys. *Review of Progress in Quantitative Nondestructive Evaluation*, D. O. Thompson and D. E. Chimenti, eds., (New York: Plenum Press) 20, 1979-1986.

Christensen, W. F. and Y. Amemiya. (2001) Generalized shifted-factor analysis method for multivariate geo-referenced data. *Mathematical Geology*, 33, 801-824.

Cocciolone, S. M., L. V. Sidorenko, S. Chopra, P. M. Dixon, and T. Peterson. (2000) Hierarchical patterns of transgene expression indicate involvement of developmental mechanisms in the regulation of the maize P1-rr promoter. *Genetics*, 156, 839-846.

Cook, D. and P. Sutherland. (2000) Calibrate Your Eyes to Recognize High-Dimensional Shapes from Their Low-Dimensional Projections. *Journal of Statistical Software*, 2(6) pages unknown. <http://www.public.iastate.edu/~dicook/JSS/paper/paper.html> (original: <http://www.stat.ucla.edu/journals/jss/>)

Dail, P. W., M. C. Shelley II and S. Fitzgerald. (2000) Methodologies for examining homelessness and their application to a mandated statewide study. *Policy Studies Journal*, 28(2) 421-444.

Daniels, M., F. Dominici, J. Samet and S. Zeger. (2000) Estimating particulate matter-mortality dose-response curves and threshold levels: An analysis of daily time series data for the 20 largest U. S. cities (with invited commentary). *American Journal of Epidemiology*, 152, 397-406.

Daniels, M. J. et al (HIV Surrogate Marker Collaborative Group). (2000) Human Immunodeficiency Virus Type I RNA Level and CD4 Count as Prognostic Markers

and Surrogate Endpoints: A Meta-Analysis. *AIDS Research and Human Retroviruses*, **16**, 1123-1133.

Daniels, M. and J. Hogan. (2000) Reparameterizing the pattern mixture models for sensitivity analysis under informative dropout in longitudinal studies, *Biometrics*, **56**, 1241-1249.

Daniels, M. and N. Cressie. (2000) A hierarchical approach to covariance function estimation for time series. *Journal of Time Series Analysis*, **22**, 253-266.

De Cock, D. and **J. Stufken**. (2000) On finding mixed orthogonal arrays of strength 2 with many 2-level factors. *Statistics and Probability Letters*, **50**, 383-388.

Devanathan, S., **D. K. Rollins** and **S. B. Vardeman**. (2000) A new approach for improved identification of systematic measurement errors. *Computers and Chemical Engineering*, **24**(12) 2755-2764.

Doganaksoy, N., G. J. Hahn, and **W. Q. Meeker**. (2000) Product Life Analysis: A Case Study. *Quality Progress*, **33**, 115-122.

Duckworth, W. (2000) Some Binary Maximin Distance Designs. *Journal of Statistical Planning and Inference*, **88**, 149-170.

Gai, X., S. Lal, L. Xing, **V. Brendel**, and V. Walbot. (2000) Gene discovery using the maize genome database ZmDB. *Nucleic Acids Research*, **28**, 94-96.

Gaines, K. F., A. L. Bryan, Jr., and **P. M. Dixon**. (2000) The effects of drought on foraging habitat selection in breeding wood storks in coastal Georgia. *Waterbirds*, **23**, 64-73.

Guo, C., J. Stone, H. M. Stahr and **M. C. Shelley II**. (2000) Monitoring granular terbufos breakthrough: Comparison of cotton gauze and alpha-cellulose. *Bulletin of Environmental Contamination and Toxicology*, **66**, 553-556.

Hausmann, M. F., J. A. Carroll, G. D. Weesner, **M. J. Daniels**, R. L. Matteri and D. C. Lay, Jr. (2000) Administration of ACTH to restrained, pregnant sows alters their pigs hypothalamic-pituitary-adrenal (HPA) axis. *Journal of Animal Science*, **78**, 2399-2411.

Hockaday, C., S. J. Crase, **M. C. Shelley II** and D. F. Stockdale. (2000) A prospective study of adolescent pregnancy. *Journal of Adolescence*, **23**(4) 423-438.

Hraba, J., **F. O. Lorenz** and Z. Pechacova. (2000) Czech families ten years after the Velvet Revolution. *Journal of Contemporary Ethnography*, **29**, 643-681.

Hraba, J., **F. O. Lorenz**, E. Ma and Z. Pechacova. (2001) Age and distress in the Czech Republic. *Research on Aging*, **23**, 552-585.

Isaki, C. T. M. M. Ikeda, J. H. Tsay, and **W. A. Fuller**. (2000) An estimation file that incorporates auxiliary information. *Journal of Official Statistics*, **16**, 155-172.

Isaki, C. T., J. H. Tsay, and **W. A. Fuller**. (2000) Estimation of census adjustment factors. *Survey Methodology*, **26**, 31-42.

- Johnson, L. M., J. Hrabá and F. O. Lorenz. (2000) Criminal victimization and depression in the Czech Republic. *Czech Sociological Review*, 8, 195-210.
- Kennel, S. J., L. J. Foote, M. Morris, A. A. Vass and W. H. Griest. (2000) Mutation Analysis of a Series of TNT-related Compounds Using the CHO-hprt Assay, *Journal of Applied Toxicology*, 20, 441-448.
- Kongsjahju, R. and D. K. Rollins. (2000) Accurate identification of biased measurements under serial correlation. *Icheme Transactions Part A – Chemical Engineering Research and Design*, 78, 1010-1017.
- Lau, S. and P. J. Sherman. (2000) The influence of period variation on time/frequency analysis of the Westland helicopter data. *Mechanical Systems & Signal Processing*, 14(4) 571-578.
- Lewis, G. P., B. E. Taylor, J. E. Pinder III, P. M. Dixon. (2000) Apparent decline of the sediment ¹³⁷Cs inventory of an abandoned reactor cooling reservoir: export or uncertainty? *Journal of Environmental Radioactivity*, 49, 293-306.
- Lihono, M. A., A. F. Mendonca, J. S. Dickson, and P. M. Dixon. (2001) Influence of Sodium Pyrophosphate on thermal inactivation of *Listeria monocytogenes* in pork slurry and ground pork. *Food Microbiology*, 18, 269-276.
- Meeden, G. and S. B. Vardeman. (2000) A simple hidden Markov model for Bayesian modeling with time dependent data. *Communications in Statistics*, 29(8) 1801-1826.
- Meeker, W. Q., V. Chan, R. B. Thompson, and C. P. Chiou. (2001) A Methodology for Predicting Probability of Detection for Ultrasonic Testing. *Review of Progress in Quantitative Nondestructive Evaluation*, D. O. Thompson and D. E. Chimenti, eds., (New York: Plenum Press) 20, 1972-1978.
- Meeker, W. Q., N. Doganaksoy, and G. J. Hahn. (2001) Using Degradation Data for Product Life Analysis, *Quality Progress*, 32, 60-65.
- Meyer, C. L., P. J. Berger, K. J. Koehler, J. R. Thompson and C. G. Sattler. (2000) Phenotypic Trends in Incidence of Stillbirth for Holsteins in the United States. *Journal of Dairy Science*, 84, 515-523.
- Meyer, C. L., P. J. Berger and K. J. Koehler. (2000) Interactions among factors affecting stillbirths in Holstein cattle in the United States. *Journal of Dairy Science*, 83, 2657-2663.
- Meyer, D. and D. Cook. (2000) Visualization of Data. *Current Opinion in Biotechnology*. No volume or pages.
- Munkvold, G. P., C. A. Martinson, J. M. Shriver, and P. M. Dixon. (2001) Probabilities for profitable fungicide use against gray leaf spot in hybrid maize. *Phytopathology*, 91, 477-484.
- Opsomer, J. D. (2000) Asymptotic properties of backfitting estimators. *Journal of Multivariate Analysis*, 73, 166-179.

Opsomer, J. D., Y. Wang and Y. Yan. (2001) Nonparametric regression with correlated errors. *Statistical Science*, **16**(2) , 134-153.

Opsomer, J. D. (2000) Nonparametric regression. *Encyclopedia of Environmetrics*, A.H. El-Shaarawi and W.W. Piegorsch, eds. (Chichester U.K.:Wiley & Sons) **3**, 1411-1425.

Philippi, T., B. E. Collins, S. Guisti, and P. M. Dixon. (2001) A multistage approach to population monitoring to detect trends for rare nt populations. *Natural Areas Journal*, **21**, 111-116.

Pollak, E. (2000) The effective population size of some age-structured populations. *Mathematical Biosciences*. **168**, 39-56.

Price, R. M. and D. G. Bonett. (2000) Estimating the ratio of two Poisson rates. *Computational Statistics & Data Analysis*, **34**, 345-356.

Price, R. M. and D. G. Bonett. (2001) Estimating the variance of the sample median. *Journal of Computational Statistics and Simulation*, **68**, 295-305.

Roberts, C. W. (2000) A Conceptual Framework For Quantitative Text Analysis: On Joining Probabilities and Substantive Inferences about Texts. *Quality & Quantity*, **34**(3) 259-274.

See, K., J. Stufken, S. Y. Song and A. J. Bailer. (2000) Relative efficiencies of sampling plans for selecting a small number of units from a rectangular region. *Journal of Statistical Computation and Simulation*, **66**, 273-294.

Shim, S. Y., J. E. Herwig and M. C. Shelley II. (2000) Play behaviors with peers in classroom and playground settings. *Journal of Research in Childhood Education*, **15**(2) 147-161.

Stehman, S. V., R. L. Czaplewski, S. M. Nusser, L. Yang, and Z. Zhu. (2000) Combining accuracy assessment of land-cover maps with environmental programs. *Environmental Monitoring and Assessment*, **64**, 115-126.

Stern, H. S. and N. Cressie. (2000) Posterior predictive model checks for disease mapping models. *Statistics in Medicine*, **19**, 2377-2397.

Sutherland, P., A. Rossini, T. Lumley, J. Dickerson, Z. Cox, and D. Cook. (2000) Orca: A Visualization Toolkit for High-Dimensional Data. *Journal of Computational and Graphical Statistics*, **9**(3) 509-529.

Symanzik, J., D. Cook, N. Lewin-Koh, J. J. Majure,, and I. Megretskaia. (2000) Linking ArcView 3.0 and XGobi: Insight Behind the Front End. *Journal of Computational and Graphical Statistics*, **9**(3) 470-490.

Usuka, J. and V. Brendel. (2000) Gene structure prediction by spliced alignment of genomic DNA with protein sequences: Increased accuracy by differential splice site scoring. *Journal of Molecular Biology*, **297**, 1075-1085.

Usuka, J., W. Zhu, and V. Brendel. (2000) Optimal spliced alignment of homologous cDNA to a genomic DNA template. *Bioinformatics*, **16**, 203-211.

Wall, M. M. and Y. Amemiya. (2000) Estimation for polynomial structural equation models. *Journal of American Statistical Association*, 95, 929-940.

Wall, M. M. and Y. Amemiya. (2001) Generalized appended product indicator procedure for fitting polynomial structural models. *Journal of Educational and Behavioral Statistics*, 26, 1-29.

Wang, Yufeng and E. Pollak. (2000) The effective number of a population that varies cyclically in size. I. Discrete generations. *Mathematical Biosciences*. 166, 1-21.

Wang, W., L. Heideman, C. S. Chung, J. C. Pelling, K. J. Koehler and D. F. Birt. (2000) Cell cycle arrest at G2/M and Growth Inhibition by Apigenin in Human Colon Carcinoma Cell Lines. *Molecular Carcinogenesis*, 28, 102-110.

Xing, L. and V. Brendel. (2001) Multi-query sequence BLAST output examination with MuSeqBox. *Bioinformatics*, 17, 744-745.

Yuhong Yang. (2000) Adaptive Estimation in Pattern Recognition by Combining Different Procedures. *Statistica Sinica*, 10, 1069-1089.

Yuhong Yang. (2001) Minimax rate adaptive estimation over continuous hyperparameters. *IEEE Transaction on Information Theory*, 47, 2081-2085

Yuhong Yang. (2001) Adaptive regression by mixing. *Journal of American Statistical Association*, 96, 574-588.

Books 2000-2001

Bardes, B. A., M. C. Shelley II and S. W. Schmidt. (2000) American government and politics today: The essentials, 2000-2001 edition, (Belmont, CA: Wadsworth/Thomson Learning) xxii + 588 pp.

David. H. A. and A. W. F. Edwards. (2001) Annotated readings in the history of statistics. Springer Series in Statistics: Perspectives in Statistics. (New York: Springer Verlag) xiv + 252 pp.

Mercier, J. M., S. Garasky and M. C. Shelley II, eds. (2000) Redefining family policy: Implications for the 21st century, (Ames, IA: Iowa State University Press) xxvi + 286 pp.

Schmidt, S. W., M. C. Shelley II and B. A. Bardes, eds. (2001) American government and politics today, 2001-2002 edition, (Belmont, CA: West/Wadsworth) xxxiv + 670 pp.

Schmidt, S. W., M. C. Shelley II and B. A. Bardes, eds. (2000) American government and politics today: Brief edition, 2001-2002 edition, (Belmont, CA: Wadsworth/Thomson Learning) xxii + 336 pp. + A-20 + G-10 + I-12.

Vardeman, S. B. and Jobe, J. M., eds. (2001) Basic engineering data collection and analysis. (Pacific Grove, CA: Duxbury/Thomson Learning) xvi + 832 pp.

Book Chapters 2000-2001

Athreya, K. and A. N. Vidyashankar. (2001) Branching processes. *Handbook of Statistics. 19. Stochastic Processes, Theory and Methods.* C. R. Rao and D. N. eds. (New York : Elsevier).

Dixon, P. M. (2000) The Bootstrap and the Jackknife: Describing the precision of ecological indices. Chapter 14. *Design and Analysis of Ecological Experiments*, 2nd Edition, S. Scheiner S. and J. Gurevitch, eds. (Oxford, England: Oxford University Press), 267-288.

Mercier, J. M. and **M. C. Shelley II.** (2000) Access to health care among three cohorts of older Americans residing in a rural state: Comparative structural equations models. *Redefining Family Policy: Implications for the 21st Century*, Joyce M. Mercier, Steven Garasky and **Mack C. Shelley II**, eds., (Ames, IA: Iowa State University Press) 155-180.

Roberts, C. W. (2001) Quantitative Text Analysis. *Reader's Guide to the Social Sciences*, edited by Jonathan Michie. (Chicago : Fitzroy Dearborn).

Stout, W., **A. G. Froelich** and F. Gao. (2001) Using Resampling to Produce an Improved DIMTEST Procedure. *Essays on Item Response Theory.* A. Boomsma, M. A. J. van Duijn, T. A. B. Snijders, eds. (New York: Springer-Verlag). 357-376.

Non-Refereed Publications 2000-2001

Amemiya, Y. (2000) Nonlinear errors-in-variables analysis with instrumental variables. *Proceedings of Business and Economic Statistics Section, the Annual Meeting of the American Statistical Association*, (Alexandria, VA: American Statistical Association) 13-19.

Carriquiry, A. L., S. Fernandez and W. Kliemann. (2000) A Study of Student Learning in Large versus Small Calculus Sections. A report prepared for the Colleges of Liberal Arts and Sciences and Engineering, Iowa State University.

Carriquiry, A. L. and **G. Camano.** (2001) Analysis of the Non-Response and Imputation of Missing Data in the Supplementary Nutritional Survey of Older Americans. A final report prepared for the National Center for Health Statistics.

Carriquiry, A. L. and **G. Camano.** (2001) Fractional Hot-Deck and Model-Based Imputation of Missing Nutrient Intake Values in the Supplementary Nutritional Survey of Older Americans.

Desai, U. and **M. C. Shelley II.** (2000) Policy studies journal editors' report, 1999-2000," *Policy Studies Journal*, 28(3) 683-688.

Djang, F. and **W. R. Stephenson.** (2000) Planning a Study: How students answer free response questions on AP statistics exams. *2000 Proceedings of the Section on Statistical Education.* (Alexandria, VA: American Statistical Association), 198-203.

Duckworth, W. M. and **W. R. Stephenson.** (2000) Beyond Traditional Statistical Methods. *2000 Proceedings of the Section on Statistical Education.*) Alexandria, VA: American Statistical Association), 136-140.

Duckworth, W. M. and W. R. Stephenson. (2000) Statistical Computing: An Undergraduate Course for the New Millennium. *2000 Proceedings of the Section on Statistical Education*. Alexandria, VA: American Statistical Association), 253-255.

Kim, J. Y., F. J. Breidt and J. D. Opsomer. (2000) Local polynomial regression estimation in two-stage sampling. *Proceedings of the Section on Survey Research Methods*. (Alexandria, VA: American Statistical Association), 55-61.

Koehler, K. J. (2000) Statistical Inference: Free response questions on the AP Statistics Exam. *Proceedings of the Section on Statistical Education the Section on Teaching Statistics in the Health Sciences and the Section on Statistical Consulting*. (Alexandria, VA: American Statistical Association), 204-209.

Opsomer, J. D., G. G. Moisen, G. Kauermann and J. Y. Kim. (2001) Model-assisted estimation of forest resources with generalized additive models. *Proceedings of the 16th International Workshop on Statistical Modelling*, B. Klein and L. Korsholm, eds., Odense, Denmark, 313-320.

Kim, J. Y., F. J. Breidt and J. D. Opsomer. (2000) Local polynomial regression estimation in two-stage sampling. *Proceedings of the Section on Survey Research Methods*. (Alexandria, VA: American Statistical Association), 55-61.

Schmidt, S. W., M. C. Shelley II and J. E. Clayton, eds. (2001) *Readings in American Government, Third Edition* (Belmont, CA: Wadsworth/Thomson Learning) 164 pp.

Shelley, M. C., II and J. H. Schuh. (2001) *Are the best journals the best? A meta-analysis of writing quality*. ERIC document 448 679, and abstracted in Higher Education Abstracts.

Shelley, M. C., II, L. Doering and L. Ebbers. (2001) Learning communities and higher education: Effects on undergraduate academic performance and retention. *2000 Proceedings of the Section on Statistical Education, the Section on Teaching Statistics in the Health Sciences, and the Section on Statistical Consulting*. (Alexandria, VA: American Statistical Association), 164-169.

Stephenson, W. R. (2001) AP Statistics. *STATS: The Magazine for Students of Statistics*, Winter, 30. 17-21.

Zhu, J., S. N. Lahiri, and N. Cressie. (2001) Asymptotic Distribution of the empirical cumulative distribution function predictor under nonstationarity. *Spatial Statistics: Methodological Aspects and Applications*. Lecture Notes in Statistics, No. 159, Marc Moore, ed. (New York: Springer), 1-20.

Comments, Letters, Book Reviews, Software, etc. 2000-2001

Athreya, K. B. (2000) Review of N. Krylov's book on Stochastic Differential Equations, AMS. *Journal of the American Statistical Association*. No pages given.

Daniels, M., F. Dominici, J. Samet and S. Zeger. (2001) Reply to the letter of Tobias and Saez re: "Estimating particulate matter-mortality dose-response curves and threshold levels: An analysis of daily time series data for the 20 largest U. S. cities." *American Journal of Epidemiology*, 153, 1027-1028.

Lahiri, S. N. (2000) Book review of “Bootstrap Methods: A practitioner’s guide” by M. R. Chernick. *Journal of Statistical Planning and Inference*, **91**, 171-172.

Shelley, M. C., II. (2000) Comments on “Social movements and American political institutions,” edited by Anne N. Costain and Andrew S. McFarland. *Perspectives on Political Science*, **29**(1) 37.

Stephenson, W. R. (2001) Book Review: Introduction to Probability and Statistics for Engineers and Scientists, 2nd Edition, by S. Ross *The American Statistician*, **55**(1) 81-82.

Stern, H. S. (2000) Discussion of papers by Berger and Bayarri, and Robins, Ventura and van der Vaart. *Journal of the American Statistical Association*, **95**, 1157-1159.

Yuhong Yang. (2000) Comments on “Finite sample performance guarantees of fusers for function estimators” by N. Rao, *Information Fusion*, **2**, 99-100.

Dissertations 2000-2001

de Macedo, Marcia Maria Almeida. Ph.D. (Co-major: Ecology and Evolutionary Biology) *Modern applied statistics and animal populations in geographically complex landscapes: data visualization and modeling.*
Major professors: Dianne Cook and Brent Danielson

Ho Huei, Liu (Grace). Ph.D. (Co-major: Animal Science) *Efficiency of Markov Chain Monte Carlo algorithms for Bayesian inference in random regression models*
Major professor: Hal Stern

Kim, Jae-Kwang. Ph.D. *Variance estimation after imputation.*
Major professor: Wayne Fuller

Peiris, Laknath Baminihennadege. Ph.D. (Co-major: Agronomy) *Comparison of half-sib and full-sib reciprocal recurrent selection and their modifications in simulated populations.*
Major professors: Frederick O. Lorenz

Wallendorf, Michael John. (Ph.D.) (Co-major: Animal Ecology) *Finite mixture models of heterogeneous capture probabilities for mark-recapture estimation of closed population size.*
Major professors: Mark Kaiser and William Clark

Wang, Junyuan. Ph.D. *Topics in small area estimation with applications to the National Resources Inventory.*
Major professors: Wayne Fuller and F. Jay Breidt

Zhu, Jun. Ph.D. *Asymptotic inference for spatial cumulative distribution function.*
Major professors: Soumendra N. Lahiri and Noel Cressie

Yasuo Amemiya - associate editor for *Journal of Business and Economic Sciences* (through 12/00)

Yasuo Amemiya - associate editor for *Statistics and Probability Letters*

Krishna Athreya - associate editor for *Journal of Theoretical Probability*

Krishna Athreya - associate editor, *Sankhya*, *Indian Journal of Statistics*

Krishna Athreya - associate editor, *Resonance*, *Journal of Science Education*

Krishna Athreya - associate editor, *Indian Academy of Sciences Journals*

Douglas G. Bonett - editorial advisory board for *the Journal of Applied Business Research*

Douglas G. Bonett - editorial advisory board for *Review of Accounting Information Systems*

Alicia Carriquiry - editor for *Statistical Science*

Alicia Carriquiry - associate editor for *Bayesian Statistics*, *ISBA 2000*

Alicia Carriquiry - editorial board for *Case Studies in Bayesian Statistics V*, and *VI*

Dianne Cook - editorial board of the *Journal of Statistical Software*

Mike Daniels - corresponding editor for the *IMS bulletin*

Philip Dixon - associate editor for quantitative methods for *Conservation Biology*

Philip Dixon - editorial board, *Journal of Vegetation Science*

William Duckworth - associate editor of *Education for Amstat Online* (the ASA's web site)

Wayne Fuller - associate editor for *Survey Methodology*

Mark Kaiser - associate editor for *Journal of the American Statistical Association*

Kenneth Koehler - associate editor for *Plant Ecology*

Frederick O. Lorenz - associate editor for *Rural Sociology*

Frederick O. Lorenz - associate editor for *TESOL Quarterly* (Teaching English to Students of Other Languages)

Mervyn Marasinghe - associate editor for *Journal of Computational and Graphical Statistics*

William Meeker - associate editor for *Lifetime Data Analysis*

Max Morris - associate editor for *Technometrics*

Max Morris - editorial statistical consultant for *Radiation Research*

Edward Pollak - editorial board of *Mathematical Biosciences*

Jean Opsomer - associate editor for *Journal of Computational and Graphical Statistics*

M. C. Shelley II - co-editor of the *Policy Studies Journal*

Peter Sherman - editorial Board for *Mechanical Systems and Signal Processing*

Peter Sherman - guest editor for special issue of *Mechanical Systems and Signal Processing*

W. Robert Stephenson - associate editor for *STATS: The Magazine for Students of Statistics*

W. Robert Stephenson - editorial board member for the *Journal of Statistics Education*

John Stufken - associate editor for *The Journal of Statistical Planning and Inference*

John Stufken - associate editor for *Communications in Statistics*

Hal Stern - editor for *Chance Magazine* (through 12/01)

Stephen Vardeman - associate editor for *The American Statistician*

AWARDS & RECOGNITIONS 2000-2001

PROMOTION AND APPOINTMENTS:

Mack Shelley II - named the Coordinator of Research, Research Institute for Studies in Education, College of Education

Hal Stern - named the interim director for the Laurence H. Baker Center for Bioinformatics and Biological Statistics

Hall Stern - named Laurence H. Baker Chair for Biological Statistics

John Stufken - appointed as Program Director for Statistics in the Division of Mathematical Sciences of the Mathematical and Physical Sciences Directorate at the National Science Foundation (August 2000 - August 2001)

UNIVERSITY AWARDS:

William Duckworth II - awarded the Iowa State University Foundation Award for Early Achievement in Teaching

W. Robert Stephenson - named into the 2000 Master Teacher Class by the College of Liberal Arts and Sciences

Derrick Rollins - VEISHEA 2001 Nomination as an outstanding Faculty Member.

ASSOCIATION AWARDS:

Ken Koehler - named a Fellow of the American Statistical Association

Hal Stern - named chair of ASA Task Force on the future of Chance

Mack Shelley II - named a fellow for the 2001 Association for Institutional Research Summer Data Policy Institute on the National Center for Education Statistics and National Science Foundation Databases

A paper published by **William Q. Meeker** and his former student F. G. Pascual won the Frank Wilcoxon and the W. J. Youden Prize for the best expository paper in *Technometrics* in 1999.

OTHER:

Steve Vardeman - named 2000-2001 Teacher of the Year by the Iowa State University Stat-ers

Sarah Nusser, **Deb Reed-Margetan** (systems analyst) and **Harvey Terpstra** (data systems manager) were awarded certificates of appreciation from the Soil Survey Division Natural Resources Conservation Service, USDA for the excellent and outstanding assistance of the Iowa State University Statistical Laboratory in research, development and application of Soil Survey Information Systems for the Soils Survey Division, USDA

Derrick Rollins - 2001 NAACP Vanguard Award

H. A. David - Guest of honor and keynote speaker at the International Conference on Order Statistics and Extreme Values held December 18-20, 200 at the university of Mysore, Mysore, India.

Yuhong Yang - NSF CAREER Award

ALUMNI AWARD:

Rebecca Klemm (Ph.D. '76) received the Alumni Merit Award from the Iowa State University Alumni Association recognizing her outstanding contributions to human welfare that transcend purely professional accomplishments and bring honor to the university

AMERICAN STATISTICAL ASSOCIATION / NATIONAL SCIENCE FOUNDATION / BUREAU OF LABOR STATISTICS

Nusser, Sarah M., PI. *Using digital geospatial data in computer assisted survey information collection.* For the period of 08/16/00 - 08/15/01: \$43,376.

AT & T

Meeker, William Q., Jr., PI. *Private instruction and consulting on the technical material in and related to Professor Meeker's book, Statistical Intervals.* For the period of 08/30/00 - 09/09/01: \$2,400.

COMPUTER SCIENCES CORPORATION - NICHOLS

David, Herbert T., PI. *Professional technical advice for development and application of the expanded confidence assessment process (ExCAP).* For the period of 06/01/00 - 11/30/00: \$10,988.

DEPARTMENT OF AGRICULTURE

Nettleton, Daniel, PI. *Improved statistical methods for detecting QTL and estimating their effects* For the period of 06/15/98 - 06/30/02: \$75,000.

Fuller, Wayne A., PI. *Survey design and estimation.* For the period of 10/01/00 - 09/30/04: \$90,000.

DEPARTMENT OF AGRICULTURE, ECONOMIC RESEARCH SERVICE

Jensen, H. H., PI (Economics), Co-PI's: Sarah M. Nusser, C. N. Fletcher (Human Development & Family Studies). *What is happening to food stamp program exiters? An examination of their employment and other experiences using administrative and survey data.* For the period of 09/24/98 - 09/30/01: \$100,000.

Nusser, Sarah M., Co-PI (with Economics). *Improving measurement of food security and hunger.* For the period of 08/26/98 - 09/30/01: \$200,000.

Nusser, Sarah M., Co-PI (with HDFS and Economics). *Survey design considerations for evaluating welfare programs, USDA Economic Research Service and Department of Health & Human Services.* For the period of 09/01/99 - 09/30/00: \$70,000.

Nusser, Sarah M., Co-PI (with HDFS and Economics). *Survey design considerations for evaluating welfare programs, USDA Economic Research Service and Department of Health & Human Services.* For the period of 09/01/99 - 09/30/00: \$70,000.

DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE

Nusser, Sarah M., PI. Co-PI's: Wayne A. Fuller, F. Jay Breidt, Jean Opsomer. *Survey methods and statistical research support for the National Resources Inventory.* For the period of 10/01/99 - 09/30/00: \$1,100,000.

Nusser, Sarah M., PI. Co-PI's: Wayne A. Fuller, Jean Opsomer. *Survey methods and statistical research support for the National Resources Inventory.* For the period of 10/01/00 - 09/30/01: \$1,700,000.

Nusser, Sarah M., PI. Co-PI's: Wayne A. Fuller, F. Jay Breidt. *Soils databases and statistical methods for soil surveys.* For the period of 10/1/98 - 09/30/00: \$938,000.

Nusser, Sarah M., PI. Co-PI: Wayne A. Fuller. *Soils databases and statistical methods for soil surveys.* For the period of 10/01/00 - 09/30/01: \$580,000.

DEPARTMENT OF COMMERCE, BUREAU OF CENSUS

Nusser, Sarah M., PI. *Integrating and characterizing digital location data for computer-assisted survey information collection.* For the period of 08/15/00 - 08/15/01: \$26,350.

DEPARTMENT OF ENERGY

Morris, Max, PI. *Scaling of sensor networks.* For the period of 08/01/99 - 09/30/00: \$170,000.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Stern, Hal, PI. *Small area estimates of U.S. infant mortality using Bayesian statistical methods.* For the period of 09/30/00 - 09/27/01: \$37,691.

DEPARTMENT OF NATURAL RESOURCES

Nusser, Sarah M., PI. *Used oil filter study.* For the period of 06/20/00 - 09/30/00: \$8,000.

ENVIRONMENTAL PROTECTION AGENCY

Dixon, Philip M., PI. *Statistical guidance for fathead minnow short-term reproduction test.* For the period of 09/28/00 - 03/28/01: \$7,500.

FEDERAL AVIATION ADMINISTRATION

Brasche, Lisa, PI (Center for Nondestructive Evaluation - CNDE)). Co-PI's: R. Bruce Thompson (Materials Science and Engineering), Frank J. Margetan (CNDE), Ronald A. Roberts (Aerospace Engineering and Engineering Mechanics - AE & EM), Timothy Gray (AE & EM). **William Q. Meeker, Jr.** *Phase II - Engine Titanium Consortium.* For the period of 09/30/98 - 09/30/03: \$2,840,000.

GENERAL MOTORS CORPORATION

Isaacson, Dean L., PI. *Master's Degree Program in Statistics.* For the period of 11/02/00 - 09/09/01: \$41,400.

Wu, Huiaqing, PI. Co-PI's: Max D. Morris, Stephen B. Vardeman. *Statistical analysis of vehicle communication system design and EMC integration rules.* For the period of 03/09/01 - 12/31/01: \$55,881.

GOVERNOR'S TASK FORCE ON PRIVACY

Nusser, Sarah M., PI. *Iowa privacy law survey.* For the period of 02/20/01 - 05/30/01: \$6,500.

IOWA DEPARTMENT OF NATURAL RESOURCES

Nusser, Sarah M., PI. *Used oil filter study.* For the period of 06/20/00 - 09/30/00: \$23,500.

Nusser, Sarah M., PI. *Used oil filter study waste management assistance division.* For the period of 06/20/00 - 10/31/00: \$3,500.

IOWA DEPARTMENT OF NATURAL RESOURCES/ U.S. DEPARTMENT OF ENERGY

M. Braster, PI (Agronomy). Co-PI's , R. Cruse (Agronomy) and J. D. Opsomer. *An Assessment, Management Plan, and Evaluation of the Water Quality Impacts of Switchgrass Production for Biomass for the Rathbun Lake Watershed*. For the period of 06/01/98 - 05/31/ 2001: \$200,000.

JOHN DEERE & COMPANY

Dickerson, Julie, PI (Electrical & Computer Engineering), Co-PI's: Dianne H. Cook, Carolina Cruz-Neira (Electrical & Computer Engineering), Hung-Ah Pham (Mechanical Engineering). *Phase 1: Visualization of high dimensional control surfaces*. For the period of 08/25/00 - 08/25/01: \$131,316.

JOHN DEERE FOUNDATION

Vardeman, Stephen, PI. *Quality research in education*. For the period of 08/11/98 - 09/09/01: \$2,500.

MAYO FOUNDATION

Isaacson, Dean L., PI. *Master's Degree Program in Statistics*. For the period of 07/01/00 - 06/30/01: \$16,490.

NATIONAL INSTITUTES OF HEALTH

Daniels, Michael J., PI. *Covariance estimation for longitudinal cancer data*. For the period of 02/01/01 - 01/31/02: \$89,523.

NATIONAL INSTITUTE FOR DRUG ABUSE

Spoth, R. L., PI (Institute for Social & Behavioral Research). Co-PI's: C. R. Redmond (Sociology), Yasuo Amemiya. *Rural family and community drug abuse prevention project*. For the period of 08/01/00 - 07/31/01: \$560,231.

NATIONAL INSTITUTE OF MENTAL HEALTH

Birt, Diane Feickert, PI (Food Science & Human Nutrition). Co-PI: Kenneth J. Koehler. *Energy restriction, cell signaling, and cancer prevention*. For the period of 05/01/00 - 04/30/01: \$250,443.

Birt, Diane Feickert, PI (Food Science & Human Nutrition). Co-PI: Kenneth J. Koehler. *Energy restriction, cell signaling, and cancer prevention*. For the period of 05/01/01 - 04/30/02: \$246,982.

NATIONAL SCIENCE FOUNDATION

Nusser, Sarah M., PI. Co-PI's: G. F. Covert, P. Siegel (AIT), *A framework for the dissemination, use and storage of geospatial images for field data collection*. For the period of 08/01/99 - 07/31/00: \$40,000.

Nusser, Sarah M., PI. Co-PI's: Yasuo Amemiya, Alicia L. Carriquiry, *At the interface of time series, measurement errors, and survey sampling: A conference in celebration of Wayne A. Fuller's 70th birthday*. For the period of 04/01/01 - 03/31/02: \$12,000.

Nusser, Sarah M., PI. Co-PI's: L. L. Miller (Computer Science) and G. F. Covert (AIT), *Collecting and using geospatial data in the field: An extensible framework and testbed*. For the period of 10/01/00 - 09/30/02: \$897,800.

Cook, Dianne, PI. Co-PI's: V. G. Honavar, L. L. Miller (Computer Science), *Interactive dynamic visual overviews of large multi-dimensional data*. For the period of 10/15/99 - 09/30/02: \$350,000.

Lahiri, Soumendra, PI. *Resampling methods for temporal and spatial processes*. For the period of 08/01/01 - 07/31/02: \$45,794.

Carriquiry, Alicia, PI. *VIII Latin American congress on probability and mathematical statistics: Mathematical sciences at the interface*. For the period of 01/01/01 - 06/30/02: \$31,070.

Kaiser, Mark, PI. Co-PI's: Michael J. Daniels and Soumendra Lahiri. *Conditionally specified statistical models*. For the period of 09/1/98 - 08/31/01: \$299,998.

Kaiser, Mark, PI. Co-PI: Dean L. Isaacson. *VIGRE Project*. For the period of 04/15/01 - 03/31/04: \$1,293,228.

Yang, Yuhong, PI. *Adaptive regression for dependent data by combining different procedures*. For the period of 06/01/01 - 05/31/03: \$100,000.

NATIONAL SECURITY AGENCY

Yang, Yuhong, PI. *Adaptive nonparametric regression for correlated data*. For the period of 01/13/99 - 01/12/01: \$34,485.

RUAN CORPORATION

Koehler, Kenneth J., PI. *Truck maintenance study*. For the period of 09/01/00 - 05/15/01: \$9,212.

SHELL OIL COMPANY FOUNDATION

Isaacson, Dean L., PI. *Departmental Grant Support*. For the period of 07/01/00 - 06/30/01: \$10,000.

UNIVERSITY OF NEBRASKA MEDICAL CENTER, EPPLEY INSTITUTE FOR RESEARCH

Nusser, Sarah M., PI. *Cancer research study*. For the period of 06/20/00 - 03/31/02: \$14,832.

USDA

Donald C. Lay Jr. (USDA-ARS) PI. Co-PI's: Michael Daniels and Joan Cunnick (Microbiology). *Effects of prenatal stress on the health and well-being of swine*. For the period of 09/01/00 - 08/31/02: \$205,000.

WESTAT, INC.

Fuller, Wayne A., PI. *Education statistical services institute*. For the period of 07/01/00 - 06/30/01: \$25,675.

3M

Isaacson, Dean L., PI. *Master's Degree Program in Statistics*. For the period of 07/01/00 - 06/30/01: \$17,132.

B.S.

Catherine Yiu-King Chui (*Spring '01*)
 Jason Colin Legg (*Fall '00*)
 Kandauda Arachchige Thulitha Wickrama (*Spring '01*)
 Marcus Walter Wood (*Summer '00*)

co-major in Economics

M.S.

William Robert Bamlet (*Summer '00*)
 Wei Cheng (*Summer '00*)
 Jing Han (*Spring '01*)
 Jennifer Rose Herberich (*Spring '01*)
 Ozlem Ilk (*Fall '00*)
 Yimin Liang (*Spring '01*)
 Yan Liu (*Summer '00*)
 Suwen Pan (*Fall '00*)
 Fang Peng (*Summer '00*)
 Hui-Rong Qian (*Spring '01*)
 Yongming Qu (*Fall '00*)
 Shah Sarwar Rashid (*Fall '00*)
 Susan Elizabeth Schulte (*Spring '01*)
 Bradley Snyder (*Fall '00*)
 Edward Lee Staats (*Summer '00*)
 Hong Su (*Summer '00*)
 Yifan Wang (*Fall '00*)
 Xuchun Wang (*Spring '01*)
 Biyong Xu (*Spring '01*)
 Yanchen Xu (*Spring '01*)
 David Alan Zaun (*Summer '00*)
 Hongmei Zhang (*Spring '01*)
 Zhongqi Zhang (*Spring '01*)
 Zhigang Zhou (*Spring '01*)

Ph.D.

(Grace) Ho Huei Liu (*Fall '00*)
 Jae-Kwang Kim (*Summer '00*)
 Junyuan Wang (*Fall '00*)
 Jun Zhu (*Summer '00*)
 Marcia Maria Almeida de Macedo (*Spring '01*)
 Laknath Baminihennadege Peiris (*Spring '01*)
 Michael John Wallendorf (*Spring '01*)

co-major in Animal Science

co-major in Ecology and Evolutionary
 Biology
 co-major in Agronomy
 co-major in Animal Ecology

SCHOLARSHIPS 2000-2001

GRADUATE

Procter and Gamble Scholars

Curtis Miller
Nathan Foster

Shell Fellow

Victor Chan
Kenneth Ryan
James Wright

Shell Scholars

Nathan Foster
Jason Sinnwell
Stephen Weigand
Matt Williams

Smith-Kline-Beecham Industrial Scholar

Jason Sinnwell

Vera David Award

Hongmei Zhang

Vince Sposito Award

Justin Recknor

Snedecor Award

Yao Zhang

Emil Jebe Award

Michael Case
Rhonda DeCook
Tanzy Love

Quintiles Industrial Scholarships

Sarah Timm

Holly & Beth Fryer Scholarship

Brooke Fridley
Gabriel Camano-Garcia

Miller Fellows

Carsten Botts
Cory Heilmann
Matthew W. Puumala

Team Stat Scholarships

Mathew Schmidt
Susan Schulte
Tanya Hoskin

Rebecca J. Klemm Fellowship

Brooke Fridley
Dean DeCock
Sandip Sinharay

Richard Kleber-St. Olaf Scholarship

Sarah Timm
Matthew Williams

Departmental Awards for Scholastic Achievement/Leadership

Teaching Excellence:

Ken Ryan
Dan Nordman
Julie Hanson
Soledad Fernandez

Dan Mowrey Consulting Excellence:

Wei Liu
Zach Dietz

Vince Sposito Computing Excellence:

Yan Zhao

UNDERGRADUATE

Procter and Gamble Scholar

Catherine Yiu-King Chui

Scott Kongable Award

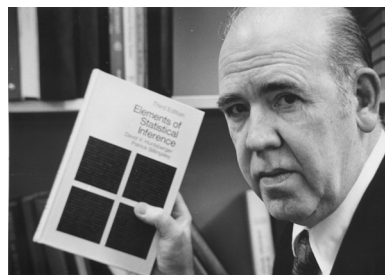
Adam Summers

Max Boehm Scholar

Elizabeth Brei

DAVID. V. HUNTSBERGER**July 22, 1917 - September 7, 2000**

David V. Huntsberger, professor emeritus, passed away at his home on Thursday, September 7, 2000 of a heart ailment.



Huntsberger was born in New Cumberland, Pennsylvania on July 22, 1917. Prior to moving to Iowa in 1949, he lived primarily in western Pennsylvania. Huntsberger served four years in the Air Force as a pilot during World War II. In later years, he enjoyed sharing some of his pilot and war stories with friends, families and students.

Huntsberger received a Bachelor of Science in Mathematics from Bethany College (West Virginia) in 1947. He went on to West Virginia University where he received a Master's degree in Mathematics in 1948. During the 1948-'49 academic year he taught mathematics at West Virginia University.

Huntsberger & Statistics

In the fall of 1949, Huntsberger enrolled as a graduate student in Statistics at Iowa State College (ISC) and served as an instructor and associate of the Statistical Laboratory. In 1952 he passed his doctoral prelims and continued as a professor at ISC. In 1954, under the leadership of T. A. Bancroft, Huntsberger earned his Ph.D.

Recognitions that he received while at Iowa State include: a 1970 faculty citation for "outstanding leadership in developing the statistics program for undergraduates" and the Outstanding Teacher Award in 1971.

Huntsberger was a fellow of the American Statistics Association. He was also a member of the Institute of Mathematical Statistics, International Association for Statistics in the Physical Sciences and the Wildlife Society. Over the course of his career he published numerous articles in statistical journals and conference proceedings. He was author or co-author of a number of books including:

- Elementary Principles of Statistics-Part I (Wm. C. Brown Book Co: Dubuque, 1958)
- Elements of Statistics Inference (Allyn and Bacon: Boston, MA, 1961) 2nd-6th editions followed in 1961, 1967, 1973, 1981 and 1987.
- Statistical Inference in the Biomedical Sciences (Allyn and Bacon: Boston, MA, 1970)
- Statistical Inference for Management and Economics (Allyn and Bacon: Boston, MA, 1975)
- Elements of Statistical Inference for Education and Psychology (Allyn and Bacon: Boston, MA, 1976)

On July 1, 1979 Huntsberger retired from the Statistical Laboratory and Department of Statistics, ISU. He remained in the area until his death.

OSCAR KEMPTHORNE

January 31, 1919 - November 15, 2000

Dr. Oscar Kempthorne, Emeritus Distinguished Professor of Statistics and Emeritus Distinguished Professor in Liberal Arts and Sciences at Iowa State University, died peacefully on November 15, 2000 in Annapolis, Maryland. Following the death of his wife, he had moved to Annapolis in 1996 to be closer to family.

Dr. Kempthorne married Valda Scales in 1949 and they had three children, Jill Kempthorne Thompson, Joan Rawson and Peter Kempthorne. He is survived by his three children, seven grandchildren, two brothers and a sister.



Despite poor health in recent years, he enjoyed frequent visits from his children and grandchildren and letters from professional colleagues and friends.

Kempthorne & Statistics

Dr. Kempthorne was born in 1919 in Cornwall, England, and spent his youth studying hard and working on the family farm. He received multiple scholarships to attend Cambridge University where he received both B.A. and M.A. degrees. He joined the Iowa State College statistics faculty in 1947. He received a research Doctor of Science degree from Cambridge in 1960 and became a Distinguished Professor of Statistics at Iowa State in 1964. He remained an active member of the Iowa State Statistics Department until his retirement in 1989.

Kempthorne contributed largely to three major areas of statistics: experimental design, genetic statistics and the philosophy and foundations of statistics. In a recent article, Klaus Hinkelmann (Ph.D.), former graduate student of Dr. Kempthorne states that although these areas seem to be rather distinct areas, his research shows a common thread in the form of his concern for acquiring scientifically sound data and interpreting such data. In this context he considered the analysis of variance as one of the most powerful statistical techniques, and it is therefore not surprising that much of his research, certainly in experimental design and genetic statistics, centers around this technique. Hinkelman states further “this work established [Kempthorne] very early on as one of the leading statisticians of our time.”

Kempthorne was a Fellow of the American Association for the Advancement of Science, the American Statistical Association, the Institute of Mathematical Statistics, and the International Statistical Institute. In addition, he was an Honorary Fellow of the Royal Statistical Society, a former chairman of the Statistics Section of the American Association for the Advancement of Science, and a past president of the Institute of Mathematical Statistics. Although recognized internationally for his contributions to statistics, he was most passionate about his students and his teaching. Throughout his professional life and into his retirement, he derived considerable pleasure in learning of the accomplishments of former students.

Memorial Established

In his memory contributions may be made to the American Heart Association or to the Oscar Kempthorne Memorial Fund, the Department of Statistics, 102 Snedecor Hall, Iowa State University, Ames, Iowa, 50011-1210. The memorial fund will be used to establish the Kempthorne Award which will be given annually to a promising graduate student in the Statistics Department at Iowa State University.

FACULTY

Yasuo Amemiya, Professor
 Krishna Athreya, Distinguished Professor, *joint appointment with Department of Mathematics (on leave)*
 Theodore B. Bailey, Professor
 Jahnabimala Bhattacharya, Temporary Instructor
 Yannis Biliass, Assistant Professor (*on leave*)
 Doug Bonett, Professor, *joint appointment with Department of Psychology*
 Volker Brendel, Professor, *joint with Department of Zoology & Genetics*
 Alicia L. Carriquiry, Professor
 Dianne Cook, Associate Professor
 Michael Daniels, Assistant Professor
 Philip M. Dixon, Associate Professor
 Karin Dorman, Instructor, *joint with the Department of Zoology & Genetics*
 William M. Duckworth II, Assistant Professor
 Amy Froelich, Assistant Professor
 Wayne A. Fuller, Distinguished Professor, *faculty status in Department of Economics*
 Dean L. Isaacson, Director and Head; Professor
 Mark S. Kaiser, Associate Professor
 William J. Kennedy, Jr., Professor
 Kenneth J. Koehler, University Professor
 Soumendra N. Lahiri, Professor
 Frederick O. Lorenz, Professor, *joint appointment with Department of Sociology*
 Mervyn G. Marasinghe, Associate Professor
 William Q. Meeker, Jr., Distinguished Professor
 Max Morris, Professor, *joint appointment with Dept. of Industrial & Manufacturing Systems Eng.*
 Dan Nettleton, Assistant Professor
 Sarah M. Nusser, Associate Professor (*on leave*)
 Jean D. Opsomer, Associate Professor
 Carl W. Roberts, Associate Professor, *joint appointment with Department of Sociology*
 Derrick Rollins, Associate Professor, *joint appointment with Department of Chemical Engineering*
 Dan Sargent, Assistant Professor, *Mayo Clinic Collaborator*
 Mack C. Shelley II, Professor, *joint appointment with the Department of Educational Leadership and Policy Studies, Coordinator of Research, Institute for Studies in Education, College of Education*
 Peter Sherman, Associate Professor, *joint appointment with Dept. of Aerospace Engineering & Engineering Mechanics*
 Jeff Sloan, Assistant Professor, *Mayo Clinic Collaborator*
 W. Robert Stephenson, University Professor
 Hal S. Stern, Professor, Laurence H. Baker Chair of Biological Statistics
 John Stufken, Professor (*on leave*)
 Terry M. Therneau, Professor, *Mayo Clinic Collaborator*
 Stephen B. Vardeman, Professor, *joint appointment with Dept. of Industrial & Manufacturing Systems Eng.*
 Huaiqing Wu, Assistant Professor
 Yuhong Yang, Associate Professor

RETIREMENTS & RESIGNATIONS

Jay Breidt, Associate Professor, *to Colorado State University, Ft. Collins*

Shashikala Sukhatme, Associate Professor (*retired December 2000*)

EMERITUS

C. Philip Cox, Professor Emeritus

David F. Cox, Emeritus University Professor

Herbert A. David, Emeritus Distinguished Professor

Herbert T. David, Emeritus University Professor

Richard Groeneveld, Emeritus University Professor

David A. Harville, Professor Emeritus

Roy D. Hickman, Professor Emeritus

Paul Hinz, Emeritus University Professor

Donald, K. Hotchkiss, Professor Emeritus

David. V. Hunsberger, Professor Emeritus (*July 22, 1917-September 7, 2000*)

Oscar Kempthorne, Emeritus Distinguished Professor (*January 31, 1919-November 15, 2000*)

Edward Pollak, Professor Emeritus

Robert F. Strahan, Professor Emeritus

LeRoy Wolins, Professor Emeritus

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