

## KAREN KAFADAR

30 March 2007

### Education

1975 B.S. Mathematics, Stanford University  
1975 M.S. Statistics, Stanford University (Bradley Efron, adviser)  
1979 Ph.D. Statistics, Princeton University (John W. Tukey, adviser)

### Professional Experience (relevant publications in [ ])

*1979-1980 - Assistant Professor, Department of Statistics, Oregon State University*

Courses: *Introduction to statistics* (U), *Statistical computer packages* (U); *Advanced experimental design* (G), *Spectrum analysis* (G); consulting at Agriculture Experiment Station

*1980-1983 - Mathematical Statistician, National Bureau of Standards*

Consulting and research: variance components [6]; measurement accuracy [5,8], standard reference materials [6,7]; lead poisoning; Environmental Specimen Bank (EPA); survey design and analysis (National Archives)

*1983-1990 - Mathematical Statistician, Hewlett Packard Company (Stanford Park, HP Labs)*

Statistical methodology and analysis of data in measurement systems; design and analyze experiments in R&D for microwave test equipment [18,38]; develop statistical algorithms for test performance [14] and instrument calibration [29]; specifications (internal report); instrument model performance and validation; instruction in *S*, simulation, fast Fourier transforms; supervise execution of experiment designs and algorithms.

January-June 1989: Sabbatical Leave, School of Mathematics, University of Bath, U.K.

Lecturer: *Distributions and Inference*; Assistant: *Probability*; consultant at Hewlett Packard Laboratories (Bristol) on modeling knowledge-based systems performance.

March-June 1990: Visiting Scientist, Centers for Disease Control and Visiting Associate Professor, Emory University: Analysis of AIDS incidence [24]; Detection of aberrations in public health surveillance [23, 25]; Lectures in Biostatistics at Emory University

*1990-1993 - Fellow, Biometry Branch, Division of Cancer Prevention and Control, National Cancer Institute*

Geographic epidemiology of cancer mortality rates [26,32,33,36]; NCI MAP Program; spatial smoothing [30,34]; randomized screening trials [27,31]; consulting in biomedicine [22]

*1993-1997 - Associate Professor, Mathematics, University of Colorado-Denver*

*1997-present - Professor, Mathematics, University of Colorado-Denver*

*2003-2013 - Chancellor's scholar, Univ of Colorado-Denver & Health Sciences Center*

*2005 (Fall) - Professor (Lawrence Baker Chair of Biological Statistics), Statistics, Iowa State University*

*Summers 1994--2005: Guest researcher, Biometry Branch, National Cancer Institute: statistical methods for randomized cancer screening trials [35,38,53,57,58]*

## Honors and Awards

U.S. Patent 5,321,726, Calibration of the HP 8981 Vector Modulation Analyzer, 1994

1988: Award for Excellence in R&D at Hewlett Packard Stanford Park Division

1993: Statistics Award Finalist (with D.F. Stroup), Centers for Disease Control and Agency for Toxic Substances and Disease Registry [23]

1994: Fellow, American Statistical Association

1995: ASA Award for Outstanding Applications Paper [29]

1995: ASQC Wilcoxon Prize for Outstanding Applications Paper in *Technometrics* [29]

1997: Research and Creativity Award, College of Liberal Arts and Sciences, University of Colorado-Denver

2001: William G. Hunter Award, Statistics Division, American Society for Quality, “for excellence in statistics as a communicator, a consultant, an educator, an innovator, an integrator, of statistics with other disciplines, and an implementor who obtains meaningful results”

2003-2013: Chancellor’s Scholar, University of Colorado-Denver.

## Grants, Fellowships, and Contracts

1995: Grant Award, National Science Foundation: *Methods of Smoothing Bivariate, Irregularly Spaced Data*, \$30,000.

1995: Contract, National Cancer Institute: *Statistical methodology for cancer screening trials*, \$18,344.

1996--2005: Summer contracts, National Cancer Institute, \$8,000-10,000

2000: Contract, Lockheed Martin: *Simulating survival probabilities of Viking Lander on Mars* (K. Kafadar; S. Billups): \$15,000

2001-2004: Grant Award, National Institutes of Health, *Minimizing Antibiotic Resistance in Colorado* (PI: R. Gonzales; Co-PIs: K. Corbett, K. Kafadar), \$823,457

2002-2005: Grant Award, National Oceanic and Atmospheric Association, *The Potential for the Emergence of Dengue Fever in the Southwestern United States along the U.S./Mexico Border*, (PI: C. Janes; Co-PIs: K. Kafadar, M. Hayden), \$438,317

2004: Contract, Colorado Department of Public Health and Environment: *Statistical and GIS Methods for Detecting Aberrations of Disease Incidence in Space and Time* (PI: A. James Ruttenber; Co-PIs: K. Kafadar, R. Mareno, D. Thomas), \$365,000.

2005: Contract, Colorado Department of Public Health and Environment: *Mathematical Statistics Research Assistant for Automated Surveillance and Outbreak Detection Systems Project* (PI: K. Kafadar), \$5,165.

2006-2008: Grant Award W911NF-05-1-0490, Army Research Office: *Data-Based Detection of Potential Terrorist Attacks: Statistical and Graphical Methods* (PI: K. Kafadar), \$260,000.

2007-2008: Grant, National Science Foundation, DMS 05-27090, *Advances in Experimental Particle Physics through Statistical Methodology and Data Analysis* (PI: K. Kafadar), \$99,998.

2005: Contract, Colorado Department of Public Health and Environment: *Automated Surveillance and Outbreak Detection Systems Project* (PI: K. Kafadar), \$8,775.

2006: Grant Award, American Statistical Association Strategic Funding Initiative, *Expert Panel on Detection of Aberrations in Surveillance Data*, (PI: K. Kafadar; Co-PI: Ronald Fricker, Naval Postgraduate School), \$10,000.

2006: Subcontract (PI: K. Kafadar), *Statistical Analysis for "Measurement in Community-Based Services for a Homeless Population"* (PI: Paul F. Cook, Ph.D.; Co-PI: Jennifer Perlman, Ph.D.), \$25,000 (pending).

2006-2010: Grant Proposal, National Institutes of Health, *Computational Methods for Proteomic Profiling in Cancer* (PI: Kathryn Resing, University of Colorado-Boulder), \$357,000 (pending).

### **Other Indicators of Scholarship**

Invited participant, *1991: Strategic Planning Workshop for Statistical and Epidemiological Methods in Public Health*, Atlanta.

1995: Invited participant, *NSF Collaboration Project between Industry and University*, California State Polytechnic University, San Luis Obispo.

1998-1999: Invited participant, *Guidelines for Reporting Meta Analyses in Randomized Clinical Trials and in Epidemiological Studies*, Atlanta.

NSF Statistics Grants Review Panel, December 1994, 1995, 1998, 2000, 2001, 2004.

External Review Committee, Statistics Program, University of Utah.

Guest faculty affiliate, Los Alamos National Laboratory, TSA-1 Statistics Group, Summer 2000-2003.

Guest researcher, National Cancer Institute, Biometry Research Group, Summer 1994--2005.

Guest researcher, National Institute of Standards and Technology, 2003-2006.

External Review Committee, Dept of Applied Statistics, Bowling Green State Univ.

### **Professional Organizations**

1977-present Member, American Statistical Association (Fellow, 1994)

1978-present Member, Institute of Mathematical Statistics

1993-present Member, Colorado-Wyoming Chapter of the ASA

1997-present Member, American Society for Quality

2007-present Member, International Statistics Institute

### **Professional Service**

1982-1983 Methodology Chairman, Washington Statistical Society

1983-1985 Executive Board, ASA Section on Physical Engineering & Sciences

1986-1988 Secretary, ASA Section on Statistical Graphics (Elected)

1992-1993 Member, ASA Committee on Certification of Statisticians

1994-1996 Publication Liason Officer, ASA Section on Statistical Computing (Elected)

1995-1996 Continuing Education Representative for ASA Statistical Graphics Section

1996,2001 Technical Program Committee, *Symposium on the Interface: Computer Science and Statistics*

1996-1997 Technical Program Chair, ASA Section on Physical Engineering & Sciences (Elected)

1995-2001 Colorado-Wyoming Chapter Representative to ASA

1997-1999 Chair-Elect, Chair, Past-Chair, ASA Section on Statistical Computing

2000 Member, Review Committee, Statistics Program, University of Utah

1998-2001 Executive Board, ASA Section on Physical Engineering & Sciences

2000-2001 Mary G. Natrella Scholarship Award Committee

2000-2001 Member, ASA Electronic Publications Task Force Committee

2000-2001 Technical Program Committee, *SIAM Meeting on Applied Mathematics*

Oct 2001 Organizer, *EDA in the 21st Century*, CU-Denver, 27 Oct 2001

2003-2005 Chair, *Technometrics* Management Committee

- 2003-2004 National Academy of Science Committee on Scientific Assessment  
of Bullet Lead Elemental Composition Comparison
- 2003-2008 National Academy of Science Committee on Applied and Theoretical Statistics
- 2003-2005 Publications Representative, American Statistical Association Board of Directors
- 2003-2004 Chair, ASA Electronic Publications Task Force
- 2003-2004 Technical Program Chair, ASA-IMS Spring Research Conference, May 19-21, 2004
- 2004-2005 Chair, ASA Biopharmaceutical Journal Task Force
- 2005 External Review Committee, Dept of Appl Stat & Oper Res, Bowling Green State Univ
- 2005-2007 Chair, ASA Outstanding Applications Award Committee
- 2006-2007 Chair, ASA Advisory Committee for *Statistics in Biopharmaceutical Research*
- 2006-2007 Chair, COPSS Award Committee (member, 2004)
- 2006-2008 Member, ASA Gertrude Cox Award Committee
- 2005-2006 Technical Program Committee, 38th Interface Symposium, Pasadena
- 2006-2008 National Academy of Science Committee on National Statistics (CNSTAT)
- 2006-2008 Member, Executive Council, Institute of Mathematical Statistics
- 2006-2008 National Academy of Science Committee on Identifying the Needs  
of the Forensic Science Community
- 2007-2009 Publications Chair, International Statistics Institute

### **Editorial Service**

- 1986-1997 Associate Editor, *Technometrics*
- 1993-1995 Associate Review Editor, *Journal of the American Statistical Association*
- 1994-2005 Associate Editor, *Statistics in Medicine*
- 1998-Present Associate Editor, *Computational Statistics and Data Analysis*
- 1996-1998 Review Editor, *Journal of the American Statistical Association*
- 1998-2001 Editor (Editor-Elect, 1998), *Technometrics*
- 2005-2007 Associate Editor, *JASA -- Theory & Methods*
- 2007-2009 Associate Editor, *Annals of Applied Statistics*

### **University Service**

- 1993-2005 Health Sciences Liason
- 1993-2006 Statistics Colloquium Organizer
- 1998-2007 Director, Statistics Consulting Service
- 1993-1995 Undergraduate Committee
- 1994-1995 Comprehensive Review Committee
- 1996-1997 Department Colloquium Organizer
- 1994-2001 Search Committee (Chairman, 1999-2001)
- 1995-1999 Graduate Committee
- 1998-2000 Merit Committee
- 2005-2006 Search Committee
- 2006-2007 Co-chair, Search Committee

### **Related Experience**

Summer 1975: IBM Research, San Jose: Analysis of discrete time events

Summer 1976: Center at Oregon for Behavioral Education, University of Oregon: Statistical analysis of psychology experiments

Summer 1977: World Bank, Washington D.C.: Validation of software systems; creation of detailed documentation; econometric modeling

December 1989: Visiting Research Scientist, Department of Statistics, Princeton University

1988--2000: Consultant, *OEA, Inc., Denver*: Manufacturer of automotive safety products and cartridge-actuated devices used in aircraft escape systems, Denver

1996: *United States Geological Survey, Lakewood*: Lectures on Statistical Quality Control; Sampling inspection plans for map digitization process.

1996--present: Consultant, *Thomas Y. Pickett and Co., Denver*: Property assessments in Denver counties.

1999--present: Consultant, *Environmental Research Associates, Denver*: Chemical measurement analysis.

1999: Consultant, *Denver Investment Advisors, Inc., Denver*: Analysis of marketing variables for investment strategies.

2000: Consultant, *U.S. National Labor Relations Board*: Sample survey of employee records

### **Research and Academic Interests**

Robust methods and exploratory data analysis with applications to physical and biological sciences

Statistical methodology for spatial data (signal extraction in two dimensions, mathematics of nonlinear smoothers, data reduction techniques)

Statistical graphics and visual displays of quantitative information

Instrument performance and measurement processes

Statistical methodology for randomized cancer screening trials

### **Professional Activities** (since 1989):

Seminar, *Statistical calibration of a vector demodulator*, Statistics Dept, Univ of Edinburgh, April 1989.

Invited discussant, *Measurement quality case studies*, Joint Statistical Meetings, Washington, D.C., 1989.

Invited seminar, *An analysis of cancer death rates using an adjustment for urbanization*, San Diego State University, September 1989 and Centers for Disease Control, November 1989.

Invited lectures, *Using the bootstrap in biostatistics*, Department of Epidemiology and Biostatistics, Emory University, May 1990.

Contributed poster, *Analysis of aberrations in public health surveillance data* (with D.F. Stroup), American Statistical Association, August 1990.

Contributed paper, *Analysis of AIDS incidence data by clustering trends* (with J.M. Karon), Symposium on Surveillance and Intervention Strategies, Atlanta, December 1990.

Seminar, *An adjustment to U.S. lung cancer mortality: A simple adjustment for urbanization* (with J.W. Tukey), University of Colorado Health Sciences Center, Denver, March 1991, and Arizona Cancer Center, Tucson, April 1991.

Contributed paper, *An evaluation of two-dimensional smoothers via simulation*, Symposium on the Interface: Computer Science & Statistics, Seattle, April 1991; Washington Statistical Society, June 1991.

Invited discussant, *Multivariate exploratory data analysis* (C. Weihs), Gordon Research Conference on Statistics in Chemistry and Chemical Engineering, New Hampton, July 1991.

Invited discussant, *Statistical graphics in computing environments*, Joint Statistical Meetings, Atlanta, August 1991.

Invited paper, *Identifying high-risk environments: Geographical analysis of U.S. lung cancer mortality*

(with J.W. Tukey), Joint Statistical Meetings, Atlanta, August 1991, and Statistics Department, Carnegie Mellon University, October 1992.

Invited paper, *Clustering AIDS incidence trends in metropolitan statistical areas*, Department of Biostatistics, University of California, San Francisco, April 1991, and American Public Health Association Annual Meeting, Atlanta, November 1991.

Invited speaker, *The use of statistics in R&D: past, present, and future*, Statistics and Probability Workshop, Delaware Chapter of the American Statistical Association, May 1992.

Moderator, *Multivariate process quality control* (J. MacGregor), Gordon Research Conference on Statistics in Chemistry and Chemical Engineering, New Hampton, July 1992.

Invited discussant, *Some success stories in statistical graphics*, Joint Statistical Meetings, Boston, 1992.

Invited participant, *Workshop on dynamic displays of disease data*, Carnegie Mellon, Oct 1-3, 1992.

Invited seminar, *Trends in prostate cancer mortality: An application of spatial smoothers on mortality rates*, Washington Statistical Society and Division of Cancer Prevention and Control, National Cancer Institute, November 1992.

Invited seminar, *Choosing among spatial smoothers in practice*, University of Colorado at Denver and Colorado State University, January 1993.

Contributed paper, *A data-analytic approach for estimating lead time and screening benefit based on survival curves in randomized clinical trials* (with P.C. Prorok), NIH Biostatisticians Conference, National Institutes of Health, January 1993.

Contributed paper, *Computer simulation experiments for randomized screening trials* (with P.C. Prorok), Symposium on the Interface: Computer Science and Statistics, San Diego, April 1993.

Session organizer, *Smoothing in data analysis: A tutorial of methods and applications*, Joint Statistical Meetings, San Francisco, August 1993.

Invited discussion leader, *Meaningful graphical displays in manufacturing*, Joint Statistical Meetings, San Francisco, August 1993.

Statistics seminar, *Randomized screening trials: Lead time, benefit time, and variance estimation* (with P.C. Prorok), Department of Mathematics, University of Colorado-Denver, November 1993.

Invited seminar, *Two-dimensional smoothing, with an application to U.S. prostate cancer mortality rates*, Dept. of Statistics, George Mason University, Fairfax VA, December 1993.

DCPC Colloquium, *A data-analytic approach for estimating lead time and screening benefit based on survival curves in randomized clinical trials* (with P.C. Prorok), Division of Cancer Prevention and Control, National Cancer Institute, Bethesda, Maryland, January 1994.

Invited seminar, *Geographic displays of prostate cancer mortality: Smoothing for public health data*, Geographic Cartography Seminar Series, National Center for Health Statistics, January 1994.

Invited speaker, *Estimating the difference in location parameters of two survival curves, with applications to screening* (with P.C. Prorok), Symposium on Future Directions in Robust Methods and Data Analysis, Princeton, June 1994.

Invited paper, *Estimating lead time and benefit time in randomized cancer screening trials* (with P.C. Prorok), Joint Statistical Meetings, Toronto, August 1994.

Invited session organizer, *Hidden Markov Models*, Joint Statistical Meetings, Toronto, August 1994.

Invited paper, *An application of nonlinear regression in R&D: A case study from the electronics industry*, Fall Technical Conference, Birmingham, October 1994.

Invited seminar, *Estimating lead time and benefit time in randomized cancer screening trials* (with P.C. Prorok), RAND Corporation, Santa Monica, December 1994.

Invited paper, *Geographical trends in cancer mortality: Using spatial smoothers and methods for adjustment*, Medical Mapping Conference, Tampa, February 1995.

Invited seminar, *Statistical methodology for randomized cancer screening trials*, Applied Mathematics, University of Colorado, Boulder, April 1995.

Invited paper, *Geographical Trends in Cancer Mortality: Using Spatial Smoothers and Methods for Adjustment*, Symposium in honor of John W. Tukey, Princeton, June 1995.

Session chair, *Nonparametric regression*, Joint Statistical Meetings, Orlando, August 1995.

Invited seminar, *An application of nonlinear regression in R&D: A case study from the electronics industry*, Department of Mathematics, Colorado School of Mines, September 1995.

Invited seminar, *Smoothing geographical data, particularly rates of disease*, Department of Statistics, Iowa State University, March 1996.

Invited paper, *Modeling printed circuit board yields*, ASA Colorado-Wyoming Chapter Spring Meeting, April 1996.

Invited seminar, *Smoothing geographical data, particularly rates of disease*, Department of Statistics, Iowa State University, March 1996.

Invited paper, *Modeling printed circuit board yields* (with L. Denby), ASA Colorado-Wyoming Chapter Spring Meeting, April 1996.

Invited paper, *Statistical modeling in cancer screening*, Western North Atlantic Regional Meeting, Pullman, June 1996.

Organizer and Moderator, *New directions for Markov Chain Monte Carlo*, Sydney International Statistical Congress, Sydney, July 1996.

Roundtable discussion leader, *Collaboration between academic and industrial statisticians*, Joint Statistical Meetings, Chicago, August 1996.

Special contributed poster, *Case studies in industry* (with L. Denby), Joint Statistical Meetings, Chicago, August 1996.

Invited paper, *Homology and clustering of regulatory cancer genes and non-regulatory genes based on intronic regions* (with D.L. Hall and A.L. Malkinson), Statistics in the Sciences, Halifax, August 1996.

Invited seminar, *Geographic trends in cancer mortality: Using spatial smoothers and methods for adjustment*, Department of Statistics, Kansas State University, December 1996.

Course instructor, *Exploratory Data Analysis* (with Sallie Keller-McNulty), CDC-ATSDR Symposium on Statistical Methods in Public Health, Atlanta, January 28, 1997.

Invited paper (plenary), *Simultaneous smoothing and adjusting mortality rates in U.S. counties: Melanoma in White Females and White Males*, CDC-ATSDR Symposium on Statistical Methods in Public Health, Atlanta, January 29, 1997.

Invited symposium, *Lead Time and Benefit in Randomized Screening Trials*, ASA Cincinnati Chapter and University of Cincinnati, March 1997.

Invited presenter, *Nonlinear Smoothing and Adjustment of Cancer Rates*, Workshop on Spatial Epidemiology, Vancouver, B.C., May 1997.

Invited lecture, *A Whirlwind View of Exploratory Data Analysis*, CDC-ATSDR EIS Officers Training,

Atlanta, July 17, 1997.

Invited talk, *Statistical Issues in Screening Methodology*, Institute for Mathematical Applications, University of Minnesota, July 24, 1997.

Discussant, *Statistical Methods for Standards (with V.N. Nair)*, International Statistics Institute, Istanbul, August 1997.

Speaker, *Some simple tools in Exploratory Data Analysis*, CU-Denver Statistics Seminar, Sept 17, 1998.

*A new paradigm for hypothesis testing and confidence intervals*, CU-Denver Seminar, April 1, 1998.

*Geographical Trends in Cancer Mortality: Using Spatial Smoothers and Methods for Adjustment*. Duke University, October 17, 1998; ASA Cleveland Chapter, Case Western Reserve University, October 29, 1998; Southern Methodist University, November 20, 1998.

Moderator, Workshop on Large Data Sets, University of Waterloo, May 6-8, 1999.

Moderator, Gordon Research Conference, Statistics in Chemistry & Chemical Engineering, July 1999.

Moderator, *Technometrics* Invited Paper Sessions, Spring Research Conference, June 3, 1999 (Minneapolis); Joint Statistical Meetings, August 10, 1999 (Baltimore); Fall Technical Conference, October 23, 1999 (Houston).

Seminar, *Length biased sampling in reliability applications*, TSA-1 Statistics Group, Los Alamos National Laboratory, March 21, 2000.

Seminar, *Estimating lead time and benefit time in randomized cancer screening trials*, Virginia Polytechnic Institute, March 30, 2000.

Invited presenter, *Trends in research and science in Technometrics*, ASA-IMS-SIAM Summer Research Conference, Williamsburg, June 5, 2000.

Invited presenter, *Simulating survival probabilities of a Mars lander*, Symposium in honor of John Tukey, Princeton, New Jersey, June 16, 2000.

Moderator, *Technometrics* Invited Paper Sessions, Spring Research Conference, June 29, 2000 (Seattle); Joint Statistical Meetings, August 15, 2000 (Indianapolis); Fall Technical Conference, October 13, 2000 (Minneapolis).

Invited speaker, *Statistical issues in randomized screening trials: comparable case groups*, Division of Cancer Prevention and Control, National Cancer Institute, September 6, 2000.

Invited presenter, *A two-dimensional robust nonlinear smoother, with applications to environmental data*, Fourth International Conference on Environmetrics & Chemometrics, Las Vegas, Sept 19, 2000.

Seminar, *The effect of length biased sampled sojourn times in evaluating randomized cancer screening trials*, Department of Statistics, Southern Methodist University, October 6, 2000.

Seminar, *A two-dimensional robust nonlinear smoother, with applications to environmental data*, Geophysical Statistics Project Group, National Center for Atmospheric Research, November 3, 2000.

Seminar, *A two-dimensional robust nonlinear smoother*, Department of Mathematics, University of Cincinnati, November 15, 2000.

Seminar, *The effect of Length biased sampled sojourn times in evaluating randomized cancer screening trials*, Department of Statistics, Rice University, November 20, 2000.

Seminar, *The impact of John Tukey on statistics and data analysis*, University of Colorado-Denver, February 16, 2001.

Organizer/Chair, *Technometrics Invited Session*, Spring Research Conference, Roanoke, June 19, 2001.

Invited discussant, *The false discovery rate for statistical problems in chemistry* (Y. Benjamini), Gordon Research Conference for Statistics in Chemistry and Chemical Engineering, July 22, 2001.

Invited speaker, *John Tukey and Robustness*, Joint Statistical Meetings, Atlanta, Georgia, August 12, 2001.

Organizer and Chair, *Technometrics Invited Session*, Joint Statistical Meetings, Atlanta, Georgia, August 13, 2001.

Invited speaker, *In memoriam: John Tukey*, International Statistics Institute, Seoul, Korea, August 18, 2001.

Organizer and Chair, *Technometrics Invited Session*, Fall Technical Conference, Toronto, Ontario, October 15, 2001.

Contributed paper, *Simulating survival probabilities of a lander mission on Mars*, Army Research Conference, Santa Fe, October 24-26, 2001.

Organizer and Chair, *A Memorial Symposium in honor of John W. Tukey*, Denver, Colorado, October 27, 2001.

Invited seminar, *Measuring the effect of length biased sampling when the variable being sampled is unobserved*, Department of Statistics, Iowa State University, April 6, 2002.

Invited participant, *The role of the mathematical sciences in counterterrorism*, Workshop at the National Academy of Sciences, April 26-27, 2002.

Invited participant, *Future directions for statistics*, National Science Foundation Workshop, May 6-8, 2002.

Invited speaker, *Problems in the analysis of microarray data*, ICORS Robustness Conference, Vancouver, B.C., May 15, 2002.

Roundtable discussion leader, *Methods for estimating the effect of length biased sampling*, Joint Statistical Meetings, New York City, August 6, 2002.

Contributed paper, *Statistical classification based on contours*, Army Research Conference, Raleigh, October 30-November 1, 2002.

Contributed paper, *Temporal trends in gene expression in the murine mammary gland in late pregnancy and early lactation* (with Kathe Bjork, Margaret C. Neville, Tzulip Phang), Butcher Symposium, Broomfield, Colorado, November 2-3, 2002.

Plenary address, *Computational Methods in Medical Decision Making: To Screen or Not to Screen?* CDC-ASTDR Symposium on Statistical methods in Public Health, Atlanta, Georgia, January 21-23, 2003.

Invited seminar, *Analysis of cDNA microarray data*, Department of Mathematics, College of William and Mary, February 25, 2003.

Invited seminars, *Simulating survival probabilities of a lander mission on Mars* and *Analysis of cDNA microarray data*, Arizona State University, March 22-23, 2003.

Invited Seminar, *Transformations, background estimation, and process effects in the statistical analysis of microarrays*, Biometry Research Group, National Cancer Institute, March 30, 2003.

Invited Seminar, *Transformations, background estimation, and process effects in the statistical analysis of microarrays*, Department of Statistics, Virginia Tech, April 29, 2003.

Invited speaker, *Two-dimensional smoothers: Headbanging and the Triangle Smoother*, ICORS Conference on Robust Methods, Antwerp, Belgium, July 2003.

Invited speaker, *Model Extrapolation: Three Applications from the Physical Sciences*, Joint Statistical Meetings, San Francisco, California, August 2003.

Invited Seminar, *Transformations, background estimation, and process effects in the statistical analysis of*

*microarrays*, Department of Mathematics, Colorado School of Mines, September 5, 2003.

Special Session on Microarrays, *Transformations and background estimation in the statistical analysis of microarrays*, Applied Statistics Conference, Napa, California, October 30, 2003.

Contributed paper, *Multivariate equivalence tests with lognormal distributions*, Applied Statistics Conference, Napa, California, October 31, 2003.

Invited speaker, *Statistical Process Control in Disease Surveillance*, DIMACS Working Group on Adverse Event/Disease Reporting, Surveillance, and Analysis II, Rutgers University, New Jersey, February 19-20, 2004 (<http://dimacs.rutgers.edu/Workshops/AdverseEvent2/index.html>)

Invited seminar, *Length-biased sampling in randomized screening trials*, University of Florida, March 2004.

Invited speaker, *Statistical Analysis of Bullet Lead*, Spring Meeting of ASA Colorado-Wyoming Chapter, April 2004.

Invited speaker, *Visualizing "Exotic" and "Typical" Internet Traffic Data*, Joint Statistical Meetings, Toronto, August 2004.

Invited speaker, *Late Breaking Session: Forensic Analysis and Statistics*, Joint Statistical Meetings, Toronto, August 2004.

Invited speaker, *Graphical Displays of Internet Traffic Data*, CompStat'04, Prague, August 2004.

Invited speaker, *Visualizing "Exotic" and "Typical" Internet Traffic Data*, George Mason University, November 19, 2004.

Invited speaker, *Using Graphical Displays to Monitor Internet Traffic Data for Potential Cyberattacks*, Workshop on Statistics for Counterterrorism, New York University, November 20, 2004.

Invited speaker, *Statistical methods for analyzing microarray experiments*, Dept of Statistics, Iowa State University, Ames, Iowa, December 2004.

Invited speaker, *Statistical Tests for Bullet Lead Comparisons*, Rice University and Texas AM University, April 2005.

Plenary Address, *Statistical Tests for Bullet Lead Comparisons*, Twelfth Annual Spring Research Conference, June 2005.

Topics contributed paper, *Summarizing Internet Traffic Data for Detecting Cyberattacks* (with D.G. Marchette), Joint Statistics Meetings, Minneapolis, August 2005.

Invited seminar, *Summarizing Internet Traffic Data for Detecting Cyberattacks* (with D.G. Marchette and E.J. Wegman), Department of Statistics, Iowa State University, October 2005.

Contributed paper, *Summarizing Internet Traffic Data for Detecting Cyberattacks* (with D.G. Marchette and E.J. Wegman), 11th Army Conference on Applied Statistics, Monterey, California, October 2005.

Invited seminar, *Statistical Tests for Bullet Lead Comparisons*, Department of Statistics, North Carolina State University, March 21, 2006.

Topics contributed paper, *Letter value plots*, Interface Symposium, Pasadena, May 2006; Joint Statistics Meetings, Seattle, August 2006.

Seminar, *Length biased sampling in randomized screening trials*, Statistics Colloquium, CU-Denver, September 2006.

Seminar, *Measuring the effect of Length biased sampling*, Mathematical Sciences Section, National Security Agency, September 19, 2006.

Contributed paper, *Letter value plots*, Army Conference on Applied Statistics, Raleigh, October 2006.

Invited seminar, *Statistical Tests for Bullet Lead Comparisons*, Department of Statistics, Florida State University, December 7, 2006.

Seminar, Length biased sampling in randomized screening trials, Department of Statistics, Texas AM University, January 22, 2007.

Presentation, Statistical issues for NRC's Bullet Lead Committee, Committee on National Statistics, Irvine, February 9, 2007.

Invited seminar, *Statistical Tests for Bullet Lead Comparisons*, Department of Mathematics, Butler University, March 7, 2007.

Bernard Flury Lecture, *Statistical Tests for Bullet Lead Comparisons*, Department of Statistics, Indiana University, March 8, 2007.

**Courses taught at CU-Denver:**

Fall 1993:

- Math 6381 Graduate mathematical statistics I
- Math 4387 Statistical Methods I

Spring 1994:

- Math 6382 Graduate mathematical statistics II
- Math 5330 Statistical consulting workshop

Fall 1994:

- Math 6027 Robust methods
- Math 3800 Probability and Statistics for Engineers

Spring 1995:

- Math 5330 Statistical consulting workshop
- Math 4820 Introduction to mathematical statistics
- Math 4926 Independent Study (Kim Mouty)

Fall 1995:

- Math 4027 Exploratory Data Analysis (new course)
- Math 6381 Graduate mathematical statistics I
- Math 4926 Independent Study (Kim Mouty)

Spring 1996:

- Math 6382 Graduate mathematical statistics II
- Math 5330 Statistical consulting workshop
- Math 4926 Independent Study (Joseph Stasiak)

Fall 1996:

- Math 7926 Independent Study (Markus Emsermann)

Spring 1997:

- Math 5330 Statistical consulting workshop

Fall 1997:

- Math 6381 Graduate mathematical statistics I
- Math 7926 Readings: Sampling Theory

Spring 1998:

- Math 6382 Graduate mathematical statistics II
- Math 7926 Readings: Functional Data Analysis

Fall 1998:

- Math 4027 Exploratory Data Analysis
- Math 6926 Readings: Advanced methods in EDA
- Math 7926 Independent Study (Arnold Levinson)

Spring 1999:

- Math 4820 Introduction to Mathematical Statistics
- Math 7926 Readings: Advanced Statistical Methods

Fall 1999:

- Math 6381 Graduate mathematical statistics I
- Math 7926 Readings: Jackknife and Bootstrap

Spring 2000:

- Math 6382 Graduate mathematical statistics II

Math 5387 Math Clinic: Survivability of Mars Lander

Fall 2000:

Math 7926 Readings: Methods for data mining

Spring 2001:

Math 4820 Introduction to Mathematical Statistics

Math 6388 Statistical Methods II

Fall 2001:

Math 6926 Readings: Bioinformatics (co-instructors: Greenberg, Briggs)

Spring 2002:

Math 5394 Experimental Design

Math 5330 Statistics Consulting Workshop

Fall 2003:

Math 6381 Graduate mathematical statistics I

Spring 2004:

Math 6382 Graduate mathematical statistics II

Fall 2004:

Math 5060 Exploratory Data Analysis

Math 5776 Math Clinic: Detecting abnormal events in disease data

Spring 2005:

Math 7926: Readings in Advanced methods for EDA

Fall 2005:

Stat 590b Exploratory Data Analysis (Iowa State University)

Spring 2006:

Math 6382 Mathematical Statistics II

Fall 2006:

Math 5060 Exploratory Data Analysis

Math 5396 Bayesian Statistics

**List of Students and titles of M.S. theses/Ph.D. dissertations (Primary adviser)**

- Carol Siegel, M.P.H. (UCHSC), February 1996: *Geographic analysis of Bordetella pertussis infection in an urban area: A tool for health services planning*
- Deborah Leigh Hall, Ph.D. (UCHSC), August 1996: *Methodology to determine homology and clustering as applied to intronic regions of regulatory cancer genes and non-regulatory genes*
- Jennifer Newman, M.S. (UCD), June 1996: *An introduction to genetic statistics and an examination of non-random mating populations*
- Caroline Bublitz, M.S. (UCD), December 1996: *Multiple Comparison Procedures with Unequal Variances*
- Jean M. Ethredge, M.S. (UCD), December 2000: *Calculating the Effect of Length Biased Sampling on Screen-Detected Cases in Randomized Controlled Screening Trials*
- Constance L. Tull, M.S. (UCD), December 2001: *A spectral analysis of astrophysical data*
- Tressa Fowler, M.S. (UCD), December 2002: *Bootstrap Confidence Intervals for the Binomial Parameter: How Good is their Coverage When the Sample Size is a Poisson Random Variable?*

- Martin Straley, M.S. (UCD), December 2002 (project).
- Andy Kim, M.S. (UCD), June 2006: Statistical process control procedures applied to disease incidence data from Colorado Department of Public Health and the Environment.
- Olga Pillitteri, M.S. (UCD), June 2007
- Mark Werner, Ph.D. (UCD), June 2003: *Methods for the identification of multivariate outliers in large data sets.*
- Gregory Lobser, Ph.D. (UCD), June 2006: *Classification of Continuous Shape Data.*
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**BIBLIOGRAPHY - Karen Kafadar**

30 March 2007

**Publications: Refereed Journals**

1. Kafadar, K.: A biweight approach to the one-sample problem. *Journal of the American Statistical Association* 77, 416-424, 1982.
2. Kafadar, K.: Using biweights in the two-sample problem. *Communications in Statistics (Theory and Methods)* 11(17), 1883-1901, 1982.
3. Kafadar, K.: The efficiency of the biweight as a robust estimator of location. *NBS Journal of Research* 88 (2), 105-116, 1983.
4. Kafadar, K., Rice, J.A., Spiegelman, C.H.: One-sided trimming in small samples with asymmetric contamination. *Communications in Statistics (Theory and Methods)* 12(4), 477-496, 1983.
5. Kafadar, K.: Appendix to: Measurement assurance program for transmittance standards for spectrophotometer linearity testing: Preparation and calibration (K. Eckerle, J. Hsia, V. Widener). *NBS Journal of Research* 88(1), 25-36, 1983.
6. Kafadar, K., Eberhardt, K.R.: Statistical analysis of some gas chromatographic measurements. *NBS Journal of Research* 88(1), 37-46, 1983.
7. Filliben, J.J., Kafadar, K., Shier, D.R.: Testing for homogeneity of two-dimensional surfaces. *Mathematical Modelling* 4, 167-189, 1983.
8. Suehle, J.S., Linholm, L.W., Kafadar, K.: Minimum test chip sample size selection for characterizing process parameters. *IEEE Transactions on Electron Devices* 31(2), 257-263, 1984.
9. Gaver, D.P., Kafadar, K.: A retrievable recipe for inverse  $t$ . *American Statistician* 38(4), 308-311, 1984.
10. Kafadar, K.: Monte carlo swindle. In: *Encyclopedia of Statistical Sciences, Volume 5* (Johnson, N.L., Kotz, S., Read, C., Eds.). Wiley: New York, 1985, pp. 617-618.
11. Kafadar, K.: Notched box-and-whisker plot. *Encyclopedia of Statistical Sciences, Volume 6* (Johnson, N.L., Kotz, S., Read, C., Eds.). Wiley: New York, 1985, pp. 367-370.
12. Kafadar, K.: One-wild distribution. *Encyclopedia of Statistical Sciences, Volume 6* (Johnson, N.L., Kotz, S., Read, C., Eds.). Wiley: New York, 1985, pp. 426-427.
13. Kafadar, K., Spiegelman, C.H.: An alternative to ordinary q-q plots: Conditional q-q plots. *Computational Statistics and Data Analysis* 4, 167-184, 1986.
14. Kafadar, K.: Gaussian white-noise generation for digital signal synthesis. *IEEE Transactions on Instrumentation and Measurement* IM-35(4), 492-495, 1986.
15. Kafadar, K.: Robust-resistant line. *Encyclopedia of Statistical Sciences, Volume 8* (Johnson, N.L., Kotz, S., Read, C., Eds.). Wiley: New York, 1988, pp. 169-170.
16. Kafadar, K.: Slash Distribution. *Encyclopedia of Statistical Sciences, Volume 8* (Johnson, N.L., Kotz, S., Read, C., Eds.). Wiley: New York, 1988, pp. 510-511.
17. Kafadar, K.: Stem-and-leaf display. *Encyclopedia of Statistical Sciences, Volume 8* (Johnson, N.L., Kotz, S., Read, C., Eds.), Wiley: New York, 1988, pp. 761-763.
18. Kafadar, K., Plouse, L.M.: Circuit design using statistical data analysis. *Hewlett Packard Journal*, 12-17, June, 1988.
19. Kafadar, K.: Statistical calibration of a vector demodulator. *Hewlett Packard Journal*, 18-25, June, 1988.
20. Kafadar, K.: Twicing. *Encyclopedia of Statistical Sciences, Volume 9* (Johnson, N.L., Kotz, S., Read, C., Eds.). Wiley: New York, 1988, p.366.

21. Kafadar, K., J.W. Tukey. A Bidec  $t$  table. *Journal of the American Statistical Association* 83, 532-539, 1988.
22. Fong, S., Perkins, S., Kafadar, K., Gessner, P., Zimmermann, U.: Development of microfusion techniques to generate human hybridomas. *Journal of Immunological Methods* 134: 35-42, 1990.
23. Kafadar, K., Stroup, D.F.: Analysis of aberrations in public health surveillance data: Estimating variances on correlated samples. *Statistics in Medicine* 11: 1551-1568, 1992.
24. Kafadar, K., Karon, J.M.: An analysis of AIDS incidence data by clustering trends, *Statistics in Medicine* 12: 311-326, 1993.
25. Stroup, D.F., Wharton, M., Kafadar, K., Dean, A.G.: An evaluation of a method for detecting aberrations in public health surveillance data, *American Journal of Epidemiology* 137: 373-380, 1993.
26. Kafadar, K., Tukey, J.W.: U.S. cancer death rates: A simple adjustment for urbanization. *International Statistics Review* 61(2): 257-281, 1993.
27. Kafadar, K., Prorok, P.C.: A data-analytic approach for estimating lead time and screening benefit based on survival curves in randomized clinical trials, *Statistics in Medicine* 13(5/6/7), 569-586, 1994.
28. Kafadar, K.: Invited comment: Imrey, Peter B., Statistical Values, Quality, and Certification, *The American Statistician* 48(2), 79-82, 1994.
29. Kafadar, K.: An application of nonlinear regression in R&D: A case study from the electronics industry, *Technometrics* 36(3), 237-248, 1994.
30. Kafadar, K.: Choosing among two-dimensional smoothers in practice. *Computational Statistics and Data Analysis* 18, 419-439, 1994.
31. Kafadar, K., Prorok, P.C.: Computer simulation experiments for randomized screening trials. *Computational Statistics and Data Analysis* 23, 263-291, 1996.
32. Kafadar, K., Freedman, L.S., Goodall, C.R., Tukey, J.W.: Urbanicity-related trends in lung cancer mortality in U.S. counties, White Females and White Males, 1970-1987. *International Journal of Epidemiology*, 25(5), 918-932, 1996.
33. Kafadar, K.: Smoothing geographical data, particularly rates of disease. *Statistics in Medicine* 15:23, 2539-2560, 1996.
34. Kafadar, K.: Geographic trends in prostate cancer mortality: An application of spatial smoothers and the need for adjustment, *Annals of Epidemiology* 7(1), 25-35, 1997.
35. Kafadar, K., Prorok, P.C.: Estimating the difference in location parameters of two survival curves with applications to screening. *Journal of Statistical Planning and Inference*, 57(2), 165-179, 1997.
36. Siegel, Carol; Davidson, Arthur; Kafadar, Karen; Norris, Jill M.; Todd, James; Steiner, John: Geographic analysis of *Bordetella pertussis* infection in an urban area: A tool for health services planning. *American Journal of Public Health* 87(12), 2202-2203, Dec 1997.
37. Kafadar, K.: Geographical Trends in Cancer Mortality: Nonlinear Smoothers and Indirect Adjustment, *The Practice of Data Analysis: Essays in Honor of John W. Tukey* (ed. D.R. Brillinger, L.T. Fernholz, S. Morgenthaler), Princeton University Press, 1997, 217-234.
38. Kafadar, K., Prorok, P.C., Smith, P.J.: An estimate of the variance of estimators for lead time and screening benefit in randomized cancer screening trials. *Biometrical Journal* 40(7):801-821, 1998.
39. Goodall, C.R., Kafadar, K., Tukey, J.W.: Computing and using rural versus urban measures in statistical applications, *The American Statistician* 52(2), 101-111, 1998.
40. Kafadar, K., Morris, M.D.: Discussion of "Consulting: Real problems, real interactions, real outcomes," by Tweedie et al. *Statistical Science* 13(1), February 1998, 25-29.

41. Curran-Everett, D., Taylor, S., Kafadar, K.: Fundamental concepts in statistics: Elucidation and illustration, *Journal of Applied Physiology* 85(3): 775-786, 1998 (invited review).
42. Hall, D.L., Kafadar, K., Malkinson, A.W.: Statistical Methodology for Assessing Homology of Regulatory Cancer Genes and Non-regulatory Genes Based on Intronic Regions, *Canadian Journal of Statistics* 26(3), 455-465.
43. Kafadar, K.: Simultaneous smoothing and adjusting mortality rates in U.S. counties: Melanoma in White Females and White Males. *Statistics in Medicine* 18:3167-3188, 1999.
44. Kafadar, K.: Forty years of *Technometrics*: Past, Present, and Future. *Technometrics* 42(1), 2-4, 2000.
45. Kafadar, K.: In Memoriam: John W. Tukey, 1915-2000. *Technometrics* 43(3), 251-255, 2001.
46. Lund, Robert B., Seymour, Lynne, Kafadar, K.: Temperature Trends in the United States, *Environmetrics* 12, 673-690, 2001.
47. Brown, E.R., MaWhinney, S., Young, B., Johnson, S. Kuritzkes, D., Kafadar, K. and Jones, R.H.: Improving the fit of bivariate smoothing splines when estimating longitudinal immunological and virological markers in HIV patients with individual antiretroviral treatment strategies. *Statistics in Medicine* 20:2489-2504, 2001.
48. Kafadar, K.; Horn, P.S.: Smoothing. In: *Encyclopedia of Environmetrics, Volume 4* (Abdel H. El-Shaarawi and Walter W. Piegorsch, editor), Wiley, pp. 2014-2020 (2002).
49. Horn, P.S.; Kafadar, K.: Trimming and Winsorization. In: *Encyclopedia of Environmetrics, Volume 4* (Abdel H. El-Shaarawi and Walter W. Piegorsch, editor), Wiley, pp. 2264-2267 (2002).
50. Kafadar, K.; Morris, M.D.: Nonlinear smoothers in two dimensions for environmental data. *Chemometrics and Intelligent Laboratory Systems* 60,113-125, 2002.
51. Kafadar, K.: The influence of John Tukey's work in Robust Methods for Chemometrics and Environmetrics, *Chemometrics and Intelligent Laboratory Systems* 60:127-134 (2002).
52. Piasecki, Melissa P.; Antonuccio, David O.; Steinagel, Gerri M.; Kohlenberg, Barbara S.; Kafadar, Karen: Penetrating the blind in a study of an SSRI, *Journal of Behavior Therapy and Experimental Psychiatry* 33:234-238 (2002).
53. Kafadar, K., Prorok, P.C.: Alternative definitions of comparable case groups and estimates of lead time and benefit time in randomized cancer screening trials, *Statistics in Medicine* 22: 83--111 (2003).
54. Kafadar, K.; Phang, Tzulip: Transformations, Background Estimation, and Process Effects in the Statistical Analysis of Microarrays, *Computational Statistics and Data Analysis* 44(1-2), 313-338 (2003).
55. Kafadar, K.: John Tukey and Robustness. *Statistical Science* 18(3), 319-331 (2003).
56. Beall, Jeffrey; Kafadar, K.: The effectiveness of copy cataloging at eliminating typographical errors in shared bibliographic records, *Library Resources & Technical Services* 48(2):92-101 (April 2004).
57. Kafadar, K.; Wegman, E.J.: Graphical displays for internet traffic data. *Proceedings of CompStat 2004*, 158-170 (refereed), 2004.
58. Kafadar, K.; Prorok, Philip C.: Computational Methods in Medical Decision Making: To Screen or Not to Screen? *Statistics in Medicine* 24: 569-581 (2005).
59. Corbett, Kitty K.; Gonzales, Ralph; Leeman-Castillo, Bonnie A.; Flores, Estavan; Maselli, Judy; Kafadar, Karen: Appropriate antibiotic use: Variation in knowledge and awareness by hispanic ethnicity and language, *Preventive Medicine* 40(1): 162-169 (2005).
60. Gonzales, Ralph; Corbett, Kitty K.; Leeman-Castillo, Bonnie A.; Glazner, Judith; Erbacher, Kathleen; Darr, Carol A.; Wong, Shale; Maselli, Judith H.; Sauaia, Angela; Kafadar, Karen: The 'Minimizing Antibiotic Resistance in Colorado' Project: Impact of Patient Education in Improving

Antibiotic Use in Private Office Practices, *Health Services Research* 40(1), 101-116 (2005).

61. "Microarray Experiments," in *The Encyclopaedic Companion to Medical Statistics*, Hodder Arnold, 222-224 (2005).
62. "Screening Studies," in *The Encyclopaedic Companion to Medical Statistics*, Hodder Arnold, 315-317 (2005).
63. Beall, Jeffrey; Kafadar, Karen: The Proportion of NUC Pre-56 Titles Represented in OCLC World-Cat, *College & Research Libraries* 66(5), 431-435 (2005).
64. Kafadar, Karen; Wegman, Edward J.: Visualizing "typical" and "exotic" Internet traffic data. *Computational Statistics and Data Analysis* 50, 3721-3743 (2006).
65. Spiegelman, Clifford H.; Kafadar, Karen: Data Integrity and the Scientific Method: The Case of Bullet Lead Data as Forensic Evidence (with discussion), *Chance* 19(2), 17-25.
66. Saha, Nilanjan; Watson, Layne T.; Kafadar, Karen; Onufriev, Alexey; Ramakrishnan, Naren; Vasquez-Robinet, Cecilia; Watkinson, Jonathan: A General Probabilistic Model of the PCR Process, *Applied Mathematics and Computation* 182(1), 232--243 (2006).

#### **Accepted for Publication (to appear)**

67. Kafadar, K.: "John Tukey," in *Encyclopedia of Biosciences*.
68. Beall, Jeffrey; Kafadar, Karen: Measuring Typographical Errors' Impact on Retrieval in Bibliographic Databases, *Cataloging & Classification Quarterly Festschrift* (invited).
69. Saha, Nilanjan; Watson, Layne T.; Kafadar, Karen; Ramakrishnan, Naren; Onufriev, Alexey; Rao Mane, Shrinivas; Vasquez-Robinet, Cecilia: Validation and Estimation of Parameters for a General Probabilistic Model of the PCR Process, *Journal of Computational Biology*.

#### **Submitted for Publication**

70. Werner, Mark; Kafadar, K.: Identification of Multivariate Outliers in Large Data Sets. Submitted to *Journal of Computational and Graphical Statistics*.

#### **In preparation**

71. Kafadar, K.; Prorok, P.C.: Effect of length-biased sampled sojourn times on the survival distribution in randomized cancer screening trials.
72. Kafadar, K.; Gojanovic, A.: Simulating survival probabilities of a Mars lander.
73. Bailey, B.; Kafadar, K.; Ticknor, L.: Combining microarray experiments.
74. Gonzales, Ralph; Corbett, Kitty K.; Wong, Shale; Glazner, Judith; Gershman, Kenneth; Deas, Ann; Leeman-Castillo, Bonnie A.; Maselli, Judith H.; Severt-Kuhlmann, Ann; Wigton, Robert S.; Flores, Estevan; Kafadar, Karen: "Get Smart Colorado": Impact of a Mass Media Campaign to Improve Antibiotic Use," *Journal of the American Medical Association*.
75. Kafadar, K.; Wegman, E.J.; Banks, D.L.; Scott, D.W.; Keller-McNulty, S.: Statistical issues in Data Acquisition, Analysis of Massive Data Streams, and Networks, *Statistical Science*.
76. Hofmann, Heike; Kafadar, Karen; Wickham, Hadley: Letter value plots.
77. Bjork, K.E.; Kafadar, K.: Simulating gene expression data for validation and identification of differential expression.

#### **Book Chapters**

1. Kafadar, K. and Eberhardt, K.R.: Some basic statistical methods for chromatographic data. Chapter 1 in *Advances in Chromatography, Volume 24* (Eds. J.C. Giddings, E. Grushka, J. Cazes, P.R.

- Brown). Marcel Dekker: New York, 1984, pp. 1-34.
2. Kafadar, K.: Designing experiments in research and development: Four case studies. Chapter 2 in *Design of Experiments with Applications in Physical Sciences and Industry* (Ed. S. Ghosh). Marcel Dekker: New York, 1990, pp. 35-72.
  3. Kafadar, K., Andrews, J.S.: Investigating the occurrence of health effects and hazards in the community. Chapter 5 of *Statistics in Public Health: Quantitative Solutions to Public Health Problems* (Eds. D.F. Stroup, S.L. Teutsch), Oxford University Press, New York, 1998, 93-122 (invited).
  4. Denby, L., Kafadar, K., Land, T.: Modeling circuit board yields. Chapter 17 in *Statistical Case Studies: A Collaboration Between Academe and Industry*, (Eds. R. Peck, L.D. Haugh, A. Goodman), Society for Industrial and Applied Mathematics, Philadelphia, 1998, 217-234.
  5. Kafadar, K., Spiegelman, C.S.: Statistical Analysis of Bullet Lead, Appendix H in *Weighing the Evidence: Forensic Analysis of Bullet Lead*,
  6. Kafadar, K.: Appendices E,F,G,I. In: *Weighing the Evidence: Forensic Analysis of Bullet Lead*, (Kenneth O. MacFadden, Chairman), National Research Council, The National Academies Press (ISBN 0-309-09079-2), 2004. (<http://books.nap.edu/catalog/10924.html>). Related news article: [www.msnbc.msn.com/id/4231717](http://www.msnbc.msn.com/id/4231717)

#### **Technical reports, Papers in Proceedings and Non-refereed Journals**

1. Cox, L.H., Johnson, M.M., Kafadar, K.: Exposition of statistical graphics technology. *Proceedings of the ASA Statistical Computing Section 1982*, Cincinnati, 55-56.
2. Kafadar, K.: Graphical displays in the RF/Microwave measurement industry. *Proceedings of the National Computer Graphics Association 1986*, Anaheim, 677-684.
3. Kafadar, K.: Digital signal synthesis tools model real-world environments. *Electronic Design News*, 239-248, November 12, 1987.
4. Kafadar, K.: A clearer view of the data: Smoothing scatterplots with applications to measurement processes. *Proceedings of the Measurement Science Conference 1988*, Riverside, 283-291.
5. McHenry, E. and Kafadar, K.: Statistical calibration assures accurate vector measurements, *Measurement Science News*, March 1988, 70-76.
6. Geographical Trends in Cancer Mortality: Using Spatial Smoothers and Methods for Adjustment, *Proceedings of the International Symposium on Computer Mapping in Epidemiology and Environmental Health*, eds. Robert T. Aangeenbrug, Paul A. Leaverton, Thomas J. Mason, Graham A. Tobin, World Computer Graphics Foundation, Alexandria, Virginia, April 1997, 82-95.
7. Horn, P.S., and Kafadar, K.: An R-squared for Robust Regression. *Proceedings of the 1995 Joint Statistical Meetings Section on Statistical Computing*, American Statistical Association, 1996.
8. Kafadar, K.: Two dimensional smoothing: Procedures and applications to engineering data. Technical Report No.87, Center for Computational Mathematics, University of Colorado at Denver, 1996.
9. Denby, L. and Kafadar, K.: Modeling printed circuit board yields. *Proceedings of the 1996 Joint Statistical Meetings Section on Physical Engineering and Sciences*, American Statistical Association, 1997.
10. Emsermann, M. and Kafadar, K.: Smoothing non-Gaussian data in two dimensions, *Proceedings of the 29th Symposium on the Interface*, Houston, May 1997.
11. Brown, E.R., MaWhinney, S., Young, B., Johnson, S. Kuritzkes, D., Kafadar, K. and Jones, R.H.: Modeling the dynamics in plasma viral load and CD4+ lymphocyte count as a response to treatment changes. XII International Conference on AIDS, Geneva, 1998: 43473.
12. Kafadar, K.: On the job as a statisticians, *Stats Magazine* 21 (Winter 1998), 22-23.

13. Chair's corner, *Statistical Computing and Graphics Newsletter*, February 1999 and August 1999.
14. Kafadar, K.; Chang, Insung; Duran, David; Ethredge, Jean; Gojanovic, Anthony; Tilford, William; Tremayne, Ashley; Uyyasathian, Chariya; Werner, Mark: *Survivability of the Mars Lander*. Technical Report No.113, Center for Computational Mathematics, University of Colorado at Denver, 2000.
15. Kafadar, K.: John Tukey and Robustness. Proceedings of the Annual Meeting of the American Statistical Association, August 5-9, 2001 (Atlanta).
14. Kafadar, K. (adviser); Kim, A.K.; Al-Ramuaizan, S.; Ayalya, C.; Been, A.; Chen, J.; Cook, J.; Duarte, G.; Durso, C.; Gonzales, J.; Huynh, C.; Huynh, T.; Lashuk, I.; Wagner, D.; Sanabria, S.: *Evaluation of statistical methods for detecting disease clusters in space and time*, Technical Report No.219, Center for Computational Mathematics, University of Colorado at Denver, 2004.
- 15 Saha, Nilanjan; Watson, Layne T.; Kafadar, Karen; Onufriev, Alexey; Ramakrishnan, Naren; Vasquez-Robinet, Cecilia; Watkinson, Jonathan: A General Probabilistic Model of the PCR Process. Technical Report TR-04-06, Computer Science, Virginia Tech, 2004.

### Book Reviews

1. *Robust Inference* (M.L. Tiku, W.Y. Tan, N. Balakrishnan: Marcel Dekker, New York, 1987). *Journal of the American Statistical Association* 83, 270-271, 1988.
2. *Robust Regression and Outlier Detection* (Rousseeuw, P.J., and Leroy, A.M.: Wiley: New York, 1987, 329 pp.). *Journal of the American Statistical Association* 84(406), 617-618, 1989.
3. *Configural Polysampling: A Route to Practical Robustness* (Stephan Morgenthaler and John W. Tukey, Eds.: Wiley: New York, 1991), *Journal of the American Statistical Association* 89(425), 355-356, (March 1994).
4. *Time Series Prediction: Forecasting the Future and Understanding the Past*. Andreas S. Weigend and Neil A. Gershenfeld, eds., Addison-Wesley, 1994. *Journal of the American Statistical Association* 89(427), p.1149-50 (September 1994).
5. *Nonlinear Modeling and Forecasting*, Martin Casdagli and Stephen Eubank, Santa Fe Institute, 1992. *Journal of the American Statistical Association* 89(428), p.1569 (December 1994).
6. *The Collected Works of John W. Tukey, Volume VIII: Multiple Comparisons, 1948-1953*. Henry I. Braun, Editor, Chapman & Hall, 1994. *Journal of the American Statistical Association* 89(428), p.1569 (Dec 1994).
7. *Outliers in Statistical Data, 3rd Edition*, Vic Barnett and Toby Lewis, Wiley, 1994. *Journal of the American Statistical Association* 90(429), p.395 (March 1995).
8. *Developments in Time Series Analysis in Honor of Maurice B. Priestly*, T.S. Rao, Ed., Chapman and Hall, 1993. *Journal of the American Statistical Association* 90(430), 810 (June 1995).
9. *Aspects of Uncertainty: A Tribute to D.V. Lindley*, Eds. P.R. Freedman, A.F.M. Smith, Wiley 1994. *Journal of the American Statistical Association* 90(431), 1136 (September 1995).
10. *Statistical Methods for Physical Science*, Eds. J.L. Stanford, S.B. Vardeman, Academic Press, 1994. *Journal of the American Statistical Association* 90(431), 1136 (September 1995).
11. *Time Series, 3rd Edition*. Sir Maurice Kendall and J. Keith Ord, Edward Arnold Publishing, 1990. *Journal of the American Statistical Association* 90(432), 1492-1493 (December 1995).
12. *Time Series, Volumes I and II*, Andrew Harvey, Editor; Edward Elgar Publishing Ltd., 1994. *Journal of the American Statistical Association* 90(432), 1493 (December 1995).
13. *Analysis of Economic Time Series: A Synthesis*, Marc Nerlove, David M. Grether, Jose L. Carvalho, Academic Press, 1995. *Journal of the American Statistical Association* 91(434), 916 (June 1996).
14. *Clinical Trials Dictionary*, Curtis L. Meinert, Johns Hopkins University Press, 1996. *Journal of the American Statistical Association* 91(435), 1380 (September 1996).

15. *CRC Standard Mathematical Tables and Formulae, 30th Ed.* Daniel Zwillinger, Editor; CRC Press, 1996. *Journal of the American Statistical Association* 91(436), 1755 (December 1996).
16. *Cambridge Dictionary of Statistics in the Medical Sciences*, Brian S. Everitt, Cambridge University Press, 1995. *Journal of the American Statistical Association* 92(437), (March 1997).
17. *Green, Brown, and Probability*, Kai Lai Chung, World Scientific Publishing, 1995. *Journal of the American Statistical Association* 92(437), (March 1997).
18. *CRC Handbook of Tables for the Use of Order Statistics in Estimation*, H.L. Harter and N. Balakrishnan, CRC Press, 1996. *Journal of the American Statistical Association* 92(437), (March 1997).
19. *Understanding Medical Research: A Practitioner's Guide*, J.L. Garb, Little, Brown, and Co. 1996. *Journal of the American Statistical Association* 92(438), 798 (June 1997).
20. *Time Series Models in Econometrics, Finance, and Other Fields*, D. R. Cox, D. V. Hinkley & O. E. Barndorff-Nielsen, eds., Chapman and Hall 1996. *Journal of the American Statistical Association* 92(438), 799 (June 1997).
21. *Numerical Algorithms with C/Fortran*, G.E. Mullges & F. Uhlig, Springer 1996. *Journal of the American Statistical Association* 92(438), 800-801 (June 1997).
22. *Statistics and Manufacturing with Subthemes in Environmental Statistics, Graphics and Imaging*, M.E. Meyer and J.L. Rosenberger, eds., Interface Foundation 1995. *Journal of the American Statistical Association* 92(438), 800 (June 1997).
23. *Statistics of Quality*, S. Ghosh, W.R. Schucany, W.B. Smith, eds., Marcel Dekker 1997. *Journal of the American Statistical Association* 92(438), 800 (June 1997).
24. *Festschrift for Lucien Le cam: Research Papers in Probability and Statistics*, D. Pollard, E. Torgersen, G.L. Yang, eds., Springer-Verlag 1997. *Journal of the American Statistical Association* 92(440), 1651 (Dec 1997).
25. *Matrix Analysis for Statistics*, James R. Schott, Wiley 1996. *Journal of the American Statistical Association* 92(440), 1653 (Dec 1997).
26. *Encyclopedia of Statistical Sciences, Updated Volume 1*, S. Kotz, C. Read, D. Banks, eds., Wiley 1997. *Journal of the American Statistical Association* 92(440), 1653-4 (Dec 1997).
27. *Discrete Multivariate Distributions*, N.L. Johnson, S. Kotz, N. Balakrishnan, Wiley 1997. *Journal of the American Statistical Association* 92(440), 1654 (Dec 1997).
28. *Geographical and Environmental Epidemiology: Methods for Small Area Studies*, P. Elliott, J. Cuzick, D. English, R. Stern, eds., Oxford University Press, 1996. *Journal of the American Statistical Association* 92(440), 1654-5 (Dec 1997).
29. *The Craft of Scientific Writing, 3rd edition*, Michael Alley, Springer 1996, and *Handbook of Writing for the Mathematical Sciences*, Nicholas J.. Higham, SIAM, 1993. *Journal of the American Statistical Association* 92(440), 1655 (Dec 1997).
30. *Methods for Statistical Data Analysis of Multivariate Observations, 2nd ed.*, R. Gnanadesikan, Wiley 1997. *Journal of the American Statistical Association* 92(440), 1656 (Dec 1997).
31. *Encyclopedia of Statistical Sciences, Update Volume 2*, S. Kotz, N.L. Johnson, D. Banks eds., Wiley 1997. *Journal of the American Statistical Association* 93(443), 1250 (Sept 1998).
32. Neyman, Constance Reid, Springer, 1998, *Journal of the American Statistical Association* 93(443), 1250 (Sept 1998).
33. *Recent Advances in Descriptive Multivariate Analysis*, T. Wojtek., J. Krzanowski, Academic Press, 1995. *Journal of the American Statistical Association* 93(443), 1251 (Sept 1998).
34. *Handbook of Statistics, Volume 3: Time Series: Frequency Domain*, D.R. Brillinger, ed., Elsevier Science, 1983. *Journal of the American Statistical Association* 93(443), 1251 (Sept 1998).

35. Sampling Inspection Tables: Single and Double Sampling Plans, Second Edition, H.F. Dodge, H.G. Romig. *Journal of the American Statistical Association* 93(443), 1252 (Sept 1998).
36. *Modern Applied Statistics Using S-Plus, 2nd ed.*, W. Venables, B. Ripley, Springer-Verlag, 1998. *The American Statistician* 86-87 (Feb 1999; with James Koehler)
37. Practical Handbook of Spatial Statistics, Sandra L. Arlinghaus, CRC Press, 1996. *Journal of the American Statistical Association* 94(445), 341 (Mar 1999).
38. *Statistics: Concepts and Controversies, 4th ed.*, David S. Moore, W.H. Freeman and Co., 1997. *The American Statistician*, 53(2), 170 (May 1999).
39. *Statistical Process Control: The Deming Paradigm and Beyond, Second Edition*, James R. Thompson and Jacek Kornoacki, Chapman and Hall, 2001. *Technometrics* 45(1), 103-105 (February 2003).
40. *Testing for Normality*, Henry C. Thode, Jr., Marcel Dekker, 2002. *Journal of the American Statistical Association* 98(463), 765 (September 2003).