Curriculum Vitae

JENNIFER A. HOETING
Associate Professor
Department of Statistics
Colorado State University
Fort Collins, CO 80523
970/491-2897 (office), 491-7895 (fax)
jah@lamar.colostate.edu
www.stat.colostate.edu/∼jah

EDUCATION

Ph.D.	Statistics, University of Washington, 1994
M.S.	Statistics, University of Washington, 1991
B.S. with distinction	Statistics and Psychology, University of Michigan, 1988

ACADEMIC CAREER

2002–present	Associate Professor, Colorado State University
1994–2002	Assistant Professor, Colorado State University

RESEARCH INTERESTS

Bayesian statistics, model uncertainty and selection, spatial statistics, statistical methods in ecology.

HONORS

Outstanding Science Mentor Award, Students as Leaders in Science, Colorado State University, 2008

Colorado State University College of Natural Sciences Faculty Undergraduate Teaching Award, 2001-2002

Women in Science Initiative award to recruit women to graduate programs in the sciences, University of North Carolina, Greensboro, Fall 1999

National Science Foundation Academe/Industry Collaboration, Invited Member, 1995–1997

University of Michigan Honor Roll, 1984–1988; Honors College, 1984–1986

University of Michigan Alumni Scholarship for Excellence, 1984

PUBLICATIONS: Book

Givens, Geof H. and Jennifer A. Hoeting (2005) *Computational Statistics*, John Wiley & Sons, New York, 418 pages. Wiley bestseller in its 4th printing. Book web page with code and examples: `www.stat.colostate.edu/computationalstatistics/`

PUBLICATIONS: Peer Reviewed

Irvine, K, A. I. Gitelman, J. A. Hoeting (2007) "Spatial Designs and Properties of Spatial Correlation: Effects on Covariance Estimation," *Journal of Agricultural, Biological and Environmental Statistics*, 12:4,450-469.

Farnsworth, M. L., J. A. Hoeting, N. T. Hobbs, M. M. Conner, K. P. Burnham, L. L. Wolfe, E. S. Williams, D. M. Theobald, M. W. Miller (2007) "The Role of Geographic Information Systems in Wildlife Landscape Epidemiology: Models of Chronic Wasting Disease in Colorado Mule Deer." Veterinaira Italiana, 43:3, 571:580.

Johnson, D. S., J. A. Hoeting and N. L. Poff (2006) "Biological monitoring: A Bayesian Model for Multivariate Compositional Data," *Bayesian Statistics and its Applications*, Eds. S. K. Upadhyay, U. Singh and D. K. Dey. Anamaya publishers: New Delhi, p 270–289.

Hoeting, J. A. (2006) "Some Perspectives on Modeling Species Distributions. Discussion of article by A. E. Gelfand, J. A. Silander, S. Wu, A. Latimer, P. O. Lewis, A. G. Rebelo, M. Holder", *Bayesian Analysis*, 1:1, 93-98.

Hoeting, J. A., R. A. Davis, A. A. Merton, and S. E. Thompson (2006) "Model Selection for Geostatistical Models", *Ecological Applications*, 16(1), 87-98.

PUBLICATIONS: Peer Reviewed, continued

Farnsworth, M. L., J. A. Hoeting, N. T. Hobbs, M. W. Miller (2006) "Linking Mule Deer Movement Scales to the Spatial Distribution of Chronic Wasting Disease: A Hierarchical Bayesian Approach," *Ecological Applications*, 16(3), 1026–1036.

Reese, G. C., K. R. Wilson, J. A. Hoeting, C. H. Flather (2005) "Factors affecting the Accuracy of Predicted Species Distributions: A Simulations Experiment," *Ecological Applications*, 15:2, 554–564.

Hoeting, J. A., R. L. Tweedie and C. S. Olver (2003) "Transform Estimation of Parameters for Stage-Frequency Data," *Journal of the American Statistical Association*, 98:463, 503–514.

Johnson, D. S. and J. A. Hoeting (2003) "Autoregressive Models for Capture-Recapture Data: A Bayesian Approach," *Biometrics*, 59:340-349.

Hoeting, J. A., A. E. Raftery, and D. Madigan (2002) "Bayesian Variable and Transformation Selection in Linear Regression," *Journal of Computational and Graphical Statistics*, **11**:3, 485-507.

Heermann, D.F., J. A. Hoeting, S. E. Thompson, H. R. Duke, D. G. Westfall, G. W. Buchleiter, P. Westra, F. B. Peairs, and K. F. Fleming (2002) "Interdisciplinary Irrigated Precision Farming Research," *Precision Agriculture*, **3**, 47-61.

Hoeting, J. A., M. Leecaster, and D. Bowden (2000) "An Improved Model for Spatially Correlated Binary Responses," *Journal of Agricultural, Biological, and Environmental Statistics*, **5**:1, 102–114.

Hoeting, J. A., D. Madigan, A. E. Raftery, and C. T. Volinsky (1999) "Bayesian Model Averaging: A Tutorial (with discussion)," *Statistical Science*, **14**:4, 382–417.

Hoeting, J. A. and J. G. Ibrahim (1998) "Bayesian Predictive Simultaneous Variable and Transformation Selection in the Linear Model," *Computational Statistics and Data Analysis*, **28**, 87–103.

Hoeting, J. A. and A. Olsen (1998) "Are the fish safe to eat? Assessing mercury levels in fish in Maine lakes." In *Statistical Case Studies: A Collaboration Between Academe and Industry* (R. Peck, L. Haugh, A. Goodman, editors), pages 1–13. ASA-SIAM.

Hoeting, J. A. and A. Olsen (1998) Book for students including the chapter "Are the fish safe to eat? Assessing mercury levels in fish in Maine lakes." In *Statistical Case Studies: A Collaboration Between Academe and Industry, Student Edition* (R. Peck, L. Haugh, A. Goodman, editors), pages 1–6. ASA-SIAM.

Hoeting, J. A. (1998) "Sandbars in the Colorado River: an Environmental Consulting Project," *Statistical Science*, **13**, 9–13.

Raftery, A.E., D. Madigan, and J. A. Hoeting (1997) "Bayesian Model Averaging for Linear Regression Models," *Journal of the American Statistical Association*, **92**, 179–191.

Hoeting, J. A., D. Madigan, and A. E. Raftery (1996) "A Method for Simultaneous Variable Selection and Outlier Identification in Linear Regression," *Computational Statistics and Data Analysis*, **22**, 251–270.

PUBLICATIONS: Submitted or under revision

Hoeting, J.A. (2008) "The Importance of Accounting for Spatial and Temporal Correlation in Analyses of Ecological Data," sumitted.

Johnson, D. S. , J. A. Hoeting, and B. S. Fadely (2007) "Random Effects Graphical Regression Models for Multidimensional Categorical Data," under revision.

Park, M. S., J. A. Hoeting (2007) "Spatial Neighborhood Order Determination for Gaussian Markov Random Fields," under revision.

PUBLICATIONS: Peer Reviewed Conference Proceedings

Heermann, D.F., J. A. Hoeting, *et al.* (2000) "Irrigated Precision Farming for Corn Production," *Proc. of the Second International Conference on Geospatial Information in Agriculture and Forestry*, Lake Buena Vista, Florida, p. I-144–I-151.

Heermann, D.F., J. A. Hoeting, *et al.* (1999) "Interdisciplinary Irrigated Precision Farming Team Research." In Proc. of 2nd European Conf. on Precision Agriculture (J.V. Stafford, editor), 121–130.

Madigan, D., A. E. Raftery, C. T. Volinsky, and J. A. Hoeting (1996) "Bayesian Model Averaging." In *Integrating Multiple Learned Models (IMLM-96)*, (P. Chan, S. Stolfo, and D. Wolpert, editors), 77–83.

PUBLICATIONS: Other

Johnson, D. S. and J. A. Hoeting (2003) "Random Effects Graphical Models for Multiple Site Sampling," Technical Report 2003/15, Department of Statistics, Colorado State University.

Hoeting, J. A., R. L. Tweedie (2001) "Parameter Estimation for Models of Biological Stage-Frequency Data," Proceedings of the Graybill Conference 2001, 177-210.

Johnson, D.S., J. A. Hoeting, R. L. Tweedie (2001) "Empirical Transform Estimation of Parameters in the Monomolecular Growth Model," Technical Report 2001-5, Department of Statistics, Colorado State University.

Hoeting, J. (2002). "Methodology for Bayesian Model Averaging: An Update," Proceedings - Manuscripts of invited paper presentations, International Biometric Conference, Freiburg, Germany, 231-240.

Young, G., J. A. Hoeting, and B. G. Brown (2000). "Applying the Autologistic Function with Covariates to Estimate Aircraft Icing Fields," Preprints 15th Conference on Probability and Statistics in the Atmospheric Sciences. 8-11 May, Asheville, NC, American Meteorological Society (Boston), 50–53.

Hoeting, J. A., M. Van Caster, and D. Bowden (1997). Technical report submitted to the U.S. Forest Service. Included 3 papers: 1. An Improved Model for Spatially Correlated Binary Responses, 2. Sampling Methodology for Detecting Rare Species, 3. Temporal Modeling of Probability of Species Presence.

Hoeting, J. A. (1997) Review of *Statistics and Data Analysis* by Siegel and Morgan, *The American Statistician*, **51**, 93–94.

Hoeting, J. A., K. Varga, and B. Cluer (1997) "Predicting Colorado River Sandbar Size Using Glen Canyon Dam Release Characteristics," Technical report for the National Park Service, 54 pp.

SOFTWARE

My major papers have generally been accompanied by implementation software. For example, my 1999 *Statistical Science* paper on Bayesian Model Averaging, which has been cited more than 579 times according to Google Scholar (3/12/08), has R and S-Plus software to implement the methods described in the paper. I was the primary author of the AUTOLOGIT, BMA (for S-Plus) and SIMSEL programs listed below. Various co-authors wrote or co-wrote the other code. See my webpage for more information and to download the software: www.stat.colostate.edu/∼jah

AUTOLOGIT: S-plus software to perform Bayesian estimation for an autologistic model with covariates.

Autoregressive Models for Capture-Recapture Data: This winBUGS code performs Bayesian estimation for an AR(2) band-recovery model.

BMA: R and S-Plus software to perform Bayesian model averaging (BMA) to account for model uncertainty in linear regression models, GLMs, and survival models. In R see http://cran.r-project.org/src/contrib/Descriptions/BMA.html

Model selection for geostatistical models: R code to compute AIC and MDL for geostatistical models.

Random Effects Graphical Regression Models for Multidimensional Categorical Data: This winBUGS code can be used to perform the discrete regression graphical modeling described in the accompanying paper.

SIMSEL: A set of XLISP-STAT functions to perform Bayesian Predictive Simultaneous Variable and Transformation Selection for regression, a criterion-based approach to model selection.

Short Courses and Workshops Conducted

"Computational Statistics: Methods for Optimization and Monte Carlo Integration", Joint Statistical Meetings, one day, Seattle, WA, with G. H. Givens, full day, August 6, 2006.

"Computational Statistics: Methods for Optimization and Monte Carlo Integration with applications in R", Alaska Chapter of the American Statistical Association, Juneau, AK, with G. H. Givens, July 18 and 19, 2006.

"An Introduction to Bayesian Data Analysis," NSF funded Program for Interdisciplinary Mathematics, Ecology, and Statistics Workshop on Bayesian Methods in Wildlife Population Monitoring, 2 hours, Fort Collins, CO, June 2006.

"Computational Statistics: Methods for Optimization and Monte Carlo Integration", Joint Statistical Meetings, one day, Minneapolis, MN, with G. H. Givens, August 2005.

"Methods of integration for environmental problems in statistics: quadrature, Monte Carlo integration and Markov chain Monte Carlo methods", Computational Environmetrics Conference, sponsored by the University of Chicago and the ASA Section on Statistics and the Environment, 1/2 day, Chicago, with G. H. Givens, Oct 2004.

"Optimization methods for environmental problems in statistics: Numerical maximum likelihood, combinatorial optimization, EM Algorithm," Computational Environmetrics Conference, sponsored by the University of Chicago and the ASA Section on Statistics and the Environment, 1/2 day, Chicago, with G. H. Givens, Oct 2004.

GRANTS AND CONTRACTS

Current Grants and Contracts

1. National Science Foundation IGERT Program, "Program in Interdisciplinary Mathematics, Ecology and Statistics (PRIMES)." Proposal co-author, $2.6 million, 2003-2008
2. U.S. Department of Agriculture, "Zero inflated Poisson models for agricultural data." Sole Principal Investigator, $11,669, 2007.
3. National Science Foundation, "Landscape Configurations in Yellowstone National Park: An Alternative State Stabilized by Herbivory?"; Co-PI, $400,000, 2007-2010.
4. U.S.D.A. APHIS-WS-NWRC, "Avian Influenza Risk Assessment for the United States: Modeling Pathways of Disease Spread by Wild Birds;" Primary member of project coordinating committee (similar to a CO-PI), $500,000, April 2007-April 2008.

Submitted

National Science Foundation, "Bayesian Hierarchical Modeling of Disease Dynamics - A Case Example Using Chronic Wasting Disease," N. PI: T. Hobbs: Co-PIs: J. Hoeting, M. Miller, S. Tavener, M. Antolin; $2.5 million. Submitted 12/2007.

Completed Grants and Contracts

1. Environmental Protection Agency, "STARMAP: Applying Spatial and Temporal Modeling of Statistical Surveys to Aquatic Resources," Project P.I. for for $971,177; total grant $3 million, N.S. Urquhart and R. Davis PIs, 2001–2006.
2. U.S. Department of Agriculture, "Statistical Modeling for Farming Operations." Sole Principal Investigator, $52,540, 2001-2006.
3. National Science Foundation, "Spatial and Temporal Dynamics of Prion Disease in Wildlife: Responses to Changing Land Use." Investigator, $2.2 million, 2000-2005.
4. National Science Foundation, "New Approaches to Statistical Analysis of Ecological Data: Proposal for a Workshop." Proposal co-author, $37,975, 2003.
5. U.S. Department of Agriculture (I.F.A.F.S.), "Multi-disciplinary precision farming strategies to increase profitability and sustainability in the Western Great Plains." Investigator, $884,132, 2000–03.
6. National Science Foundation, "Methodology for Spatial Models for Binary Data." Sole Principal Investigator, $75,000, 1998–2000.
7. U.S. Department of Agriculture, "Statistical Modeling for Farming Operations." Principal Investigator (with R. A. Davis), $115,000, 1997–2000.
8. Colorado State University Career Enhancement Grant, Principal Investigator, $545, 1998.
9. Colorado State University Agricultural Experiment Station, "Interdisciplinary Research to Enhance Precision Farming Agronomic Outcomes." Investigator, $100,000, 1997–2000.
10. United States Forest Service, "Surveying and Monitoring Rare Populations." Principal Investigator (with D. Bowden), $75,000, 1995–7 .
11. Thos. Y. Pickett & Company, "Colorado Property Assessment." Principal Investigator, $2300, 1996-7.
12. Colorado State University Career Enhancement Grant, Principal Investigator, $4900, 1996.
13. National Atmospheric Deposition Program, "The impact of catch efficiency on acid deposition concentrations." Principal Investigator, $5000, 1996.
14. National Park Service, "Statistical Analysis of Aerial Photography Data Base from the GCES-II Test Flow Program." Principal Investigator, $10,650, 1995–6.

Completed Grants and Contracts, cont.

15. National Atmospheric Deposition Program, "Acid Deposition." Principal Investigator, $9000, 1995.
16. Colorado State University, "Investing in Instruction." Principal Investigator, $1000, 1995.
17. Colorado State University Diversity Career Enhancement Grant, "A Simultaneous Bayesian Method for Variable Selection, Outlier Identification, and Transformation Selection." Principal Investigator, $3800, 1995.

Invited Lectures

SAMSI Program on Environmental Sensor Networks, Durham, North Carolina, "Hierarchical Bayesian Models", January, 2008.

WNAR/IMS 2007, Irvine, California, Spatial models for ordered categorical data," June, 2007.

Joint Statistical Meetings, Seattle, WA, "Geostatistical Modeling: Model Selection and Parameter Estimation," August 2006.

Conference on Uncertainty in Ecological Analysis, Ohio State University, Columbus, "'Modeling in the Presence of Uncertainty," Invited discussant for papers by A. Gelfand and J. Breidt. April 2006.

Joint Statistical Meetings, Minneapolis, MN, "Bayesian Models for a Multivariate Discrete Response," August 2005.

International Conference on Bayesian Statistics and its Applications, Varanasi, India, "Biological monitoring: Bayesian models for a discrete multivariate response", January 2005.

Science To Achieve Results (STAR) Environmental Research Seminar, EPA Region 8, Denver, Colorado, "Colorado State University's EPA-Funded Program on Space-Time Aquatic Resources Modeling and Analysis Program (STARMAP)," May 2004 (with N.S. Urquhart).

Statistics in Ecology, NSF sponsored workshop, Jackson Hole, WY, "Model selection for geostatistical models", December, 2003.

Case Studies in Bayesian Statistics, Workshop 7, Pittsburgh, PA, discussion of Alan Gelfand's "Modeling Species Diversity Through Species Level Hierarchical Modeling," September, 2003.

International Biometrics Conference, Freiburg, Germany, 2002, "Methodology for Bayesian Model Averaging: An Update."

WNAR/IMS, Los Angeles, "Autoregressive Models For Capture-Recapture Data," 2002.

Joint Statistical Meetings, Atlanta, 2001, "Mapping Rare Plant Species using the Autologistic Model with Covariates and a Measure of Sampling Effort."

Graybill Conference, Fort Collins, CO, 2001, "Transform Estimation of Parameters for Biological Stage-Frequency Data."

Interface, Chicago 1999, "An Improved Model for Spatially Correlated Binary Responses."

National Center for Atmospheric Research, Boulder, Colorado, 1999, "Modeling Rare Species."

University of North Carolina, Greensboro, Mathematics Department, 1999 "Farming, Sandbars, and Fungi: Statistics and the Environment."

Women's Studies Science Initiative, University of North Carolina, Greensboro, "Graduate School and Beyond," 1999.

Joint Statistical Meetings, Anaheim, CA 1997, "Predictive Simultaneous Variable and Transformation Selection."

U.S.D.A. Forest Service, Rocky Mountain Research Station, "Survey and Monitoring Methods for Rare Species at Risk,"1997.

Colorado State University, McNair Minority Scholarship Program, "Graduate School: What is it really like?" 1997.

WNAR/IMS/IBS, Pullman, ID, 1996, "A New Method for Variable and Transformation Selection."

Invited Lectures, cont.

WNAR/IMS/IBS, Pullman, ID, 1996, "Sandbars in the Colorado River: a statistical consulting project."

WNAR/IMS/IBS, Pullman, ID, 1996, panel discussant on "Issues in Statistical Consulting for New Researchers."

Joint Statistical Meetings, Chicago, 1996, discussant for session "Bayesian Regression Model Specification and Implementation."

Joint Statistical Meetings, Chicago, 1996, "Are the fish safe to eat? Assessing mercury levels in fish in Maine lakes," invited poster presentation.

American Statistical Association, Colorado-Wyoming Chapter, Boulder 1995, "Using Projects in Graduate Level Methods Classes."

Departmental Seminars

Colorado State University, Natural Resources in Ecology Lab, "Spatial Modeling in Ecology," April 2008.

University of Wyoming, Department of Statistics, Laramie, Wyoming, "Clipped Latent-Variable Spatial Models for Ordinal Data," November 2007.

The Ohio State University, Department of Statistics, Columbus, Ohio, "Model Selection and Parameter Estimation for Geostatistical Models," November 2006.

Oregon State University, Department of Statistics, "Model Selection for Geostatistical Models", April 2005.

Colorado State University, Department of Mathematics, "A Statistical Model for a Multivariate Compositional Response", March 2005.

University of Otago, New Zealand, Mathematics and Statistics Department, "Statistical Models for Stream Ecology Data," March 2003.

Duke University, Institute of Statistics and Decision Sciences, Durham, N.C. 1999, "Bayesian Model Averaging for Spatial Prediction."

Colorado State University, Department of Fisheries and Wildlife Biology, discussant for "Stat Lore," 1997.

Colorado State University, Department of Computer Science, 1996, "Statistical Computing and Bayesian Model Averaging".

University of Wyoming, Department of Statistics, 1996, "Simultaneous Predictive Variable and Transformation Selection."

Colorado State University, Department of Chemical and Bioresource Engineering, 1996, "Statistics and Experimental Design. Why Bother?"

Colorado State University, Department of Statistics, 1996, "Bayesian Simultaneous Predictive Variable and Transformation Selection in the Linear Model."

Colorado State University, Department of Statistics, 1994, "Bayesian Model Averaging for Linear Regression Models."

University of Colorado, Department of Preventive Medicine and Biometrics, 1994, "Accounting for Model Uncertainty in Linear Regression."

Carnegie Mellon University, Department of Statistics, Pittsburgh, PA 1994, "Accounting for Model Uncertainty in Linear Regression."

Duke University, Institute of Statistics and Decision Sciences, Durham, N.C. 1994, "Accounting for Model Uncertainty in Linear Regression."

Contributed talks and other conference contributions

"WinBUGS Tutorial", NSF funded Program for Interdisciplinary Mathematics, Ecology, and Statistics Workshop on Bayesian Methods in Wildlife Population Monitoring, Fort Collins, CO, June 2006.

Fourth Annual Conference on Statistical Survey Design and Analysis for Aquatic Resources, Corvallis, OR, September 2005, "Geostatistical Modeling: Model Selection and Parameter Estimation," contributed talk.

Joint Statistical Meetings, Minneapolis, MN, August 2005, Statistical Methodological Developments in Natural Resources Surveys, session chair.

Conference on Statistical Survey Design and Analysis for Aquatic Resources, Corvallis, Oregon, August 2003, "Analysis and Modeling of Acid Neutralizing Capacity in the Mid-Atlantic Highlands Area," poster with B. Kellum and N.S. Urquhart.

International Workshop on Bayesian Analysis, University of California at Santa Cruz, August 2003, "Spatial Epidemiology of Chronic Wasting Disease in Colorado Mule Deer," poster with M. Farnsworth.

Joint Statistical Meetings, Indianapolis 2000, "Bayesian Model Averaging for Spatial Prediction," contributed talk.

Joint Statistical Meetings, Atlanta, 2001, "Empirical Processes, Repeated Measures and Mixed Models: Biometric Applications," session chair.

Case Studies in Bayesian Statistics Workshop 4, Pittsburgh 1997, "An Improved Model for Spatially Correlated Binary Responses," poster.

Joint Statistical Meetings, Orlando 1995, "A Bayesian Method for Simultaneous Variable and Transformation Selection in Linear Regression," contributed talk.

International Workshop on Model Uncertainty and Model Robustness, Bath, England, 1995, "Model Averaging for Linear Regression Models using Bayesian Simultaneous Variable, Outlier and Transformation Selection (SVOT)," poster with G. Gadbury.

North American Meeting of the International Society for Bayesian Analysis, Toronto, 1994, "Model Averaging and Accounting for Model Uncertainty in Linear Regression," contributed talk.

First World Conference of the International Society for Bayesian Analysis, San Francisco, 1993. "Variable Selection and Accounting for Model Uncertainty in Linear Regression," contributed talk.

TEACHING

Courses Taught at Colorado State University

ST192 First Year Seminar in the Mathematical Sciences
ST204 Statistics for Business Students
ST301 Introduction to Statistical Methods
ST304/ST340 Multiple Regression Analysis
ST309 Statistics for Engineers and Scientists
ST420 Probability and Mathematical Statistics I
ST472 Statistical Consulting
ST486 Practicum (Consulting Techniques)
ST511 Design and Data Analysis for Researchers I
ST512 Design and Data Analysis for Researchers II
ST540 Data Analysis and Regression
ST586 Practicum in Consulting Techniques
ST600 Statistical Computing
ST640 Design and Linear Models I
ST675D Bayesian Statistics
ST675K Bayesian Statistics
ST740 Models and Methodology for Spatially-Explicit Data
ST796 Advanced MCMC methods

POST-DOCTORAL SUPERVISION

Man Sik Park, 2006. Funded under Environmental Protection Agency grant, "STARMAP: Applying Spatial and Temporal Modeling of Statistical Surveys to Aquatic Resources"

Andrew Merton, May 2007–present. Funded under USDA grant, "Avian Influenza Risk Assessment for the United States: Modeling Pathways of Disease Spread by Wild Birds."

GRADUATE STUDENT SUPERVISION

CURRENT STUDENTS

Chair of current Ph.D. committee

1. Alisa Wade (co-advisor, Department of Geosciences)

Chair of current M.S. committee

1. Brett McClintock

Member of current Ph.D. committee: 6

Member of current M.S. committee: 2

FORMER STUDENTS

Chair of Ph.D. committee

1. Megan Dailey Higgs, 2007, *Clipped Latent-Variable Spatial Models for Ordered Categorical Data*. Now at Montana State University, Assistant Professor.
2. Andrew Merton, 2006, *Geostatistical Models: Model Selection and Parameter Estimation under Infill and Expanding Domain Asymptotics*, (R. Davis, co-advisor). Now Postdoctoral Researcher, Colorado State University.
3. Devin Johnson, 2003, *Bayesian Analysis of State-Space Models for Discrete Compositions*. Now at the National Marine Mammal Laboratory, Alaska Fisheries Science Center, NOAA.
4. Sandra Thompson, 2000, *Bayesian Model Averaging and Spatial Prediction*, (co-advised with R. Davis). Now at Pacific Northwest National Laboratory, Richland, Washington.
5. Molly Leecaster, 1999, *The Autologistic Model with Covariates for Sample Data and Robust Sampling Designs Using Predicted Probability of Presence* (D. Bowden, co-adviser). Now at Idaho National Engineering Laboratory.

Chair of M.S. committee

1. Laura Beri, 2008. *Detection Function Analysis for a Bowhead Whale Population*, (co-advisor with G. Givens).
2. Doug Gorman, 2008. *A Comparison of Bayesian Models for Spatially Correlated Binary Lattice Data*.
3. Stephanie Fitchett, 2007. *An Investigation of Intensity of Sampling Locations in Spatial Modeling of Stream Chemistry*, (N.S. Urquhart, co-advisor)
4. Maggie Stanislawski, 2007, *Model Choice for Agricultural Data: A Comparison of Regression-type Models to Predict Weed Counts*
5. Julia Smith, 2006, *Modeling and Predicting Median Substrate Size in Oregon and Washington Streams Utilizing Geographic Information Systems*
6. Brett Kellum, 2003, *Analysis and Modeling of Acid Neutralizing Capacity in the Mid-Atlantic Highlands Area*
7. Andrew Leach, 2003, *A Comparison of Models for Predicting Corn Yield*
8. Melea Brown, 2002, *A Regression Model for Mercury Levels in Maine and a Comparison of the Effect of Outliers on Several Variogram Estimators*
9. Devin Johnson, 2000, *Empirical Transform Estimation of Growth Curve Parameters*
10. Greg Young, 2000, *Application of the Autologistic Model with Covariates to Estimate an Icing Field*
11. Kristina Varga, 1997, *Predicting Sandbar Size for the Colorado River*

Ph.D. committee member: 11 since 1994

M.S. committee member: 26 since 1994

UNDERGRADUATE ADVISING

Undergraduate advisor for statistics majors, mathematics majors (statistics concentration), and statistics minors. 1998-present. Approximately 30 students per year.

PROFESSIONAL SERVICE

Committees

Department Committees at CSU

1. Executive Committee, Fall 2003–Fall 2006
2. Undergraduate Committee:
   Chair, 1998–present.
   Member, 1997–1998
3. Faculty Hiring Committee:
   (a) 1996–1997, Department Chairman search
   (b) 1999–2000, Associate/Full Professor position search
   (c) 1998–1999, Assistant Professor position search
   (d) 1999–2000, Assistant Professor position search
   (e) 2001–2002, Assistant Professor position search (2 positions)
   (f) 2004–2005, Assistant Professor position search
4. Chair of Distance Program Coordinator search committee, 2005-2006
5. Graduate Screening Committee, 1996–1997
6. Seminar Organizer, 1998
7. Internship/Job Search Coordinator 1995–present. Evaluate resumes and provide assistance to Statistics graduate and undergraduate students seeking internships and permanent positions. Organize career panels and career related seminars targeted for Statistics students

College of Natural Sciences Committees at CSU

1. Women in Natural Science, Grants and Awards Committee, 2007–present
2. CNS committee on PRISM (CSU's Plan for Researching Improvement and Supporting Mission), 2006–present
3. Natural Sciences Learning Task Force, 2004–2005
4. Committee for Determining Future Directions in Undergraduate Education, Chair of sub-committee on interdisciplinary programs, 2001–2002
5. Department of Mathematics Undergraduate Committee, member 2000–present
6. Undergraduate Committee, 2002-present

University and Other Committees at CSU

1. National Science Foundation IGERT, Program in Interdisciplinary Mathematics, Ecology and Statistics (PRIMES)
   (a) PRIMES Council, 2003–present
   (b) Post-doc Hiring Committee: 2003-4
   (c) Seminar Organizing Committee, 2003–2005
   (d) Minority Participation Committee, 2003–2005
2. Hiring committee for the National Acid Deposition Program (NADP) through CSU's Natural Resources Ecology Laboratory (NREL), Fall, 1996
3. Hiring committee for the Department of Computer Science, 2004-2005
4. University Review Committee for the Department of Economics, Fall 2005

PROFESSIONAL SERVICE, cont

Conference Organization

Conference Organizer

Joint Statistical Meetings Program Committee 2006, Institute of Mathematical Statistics Contributed Session Organizer

Computational Environmetrics Workshop, American Statistical Association, Section on Statistics and the Environment, Chicago, IL, October 2004

Graybill Conference: Spatial Statistics – Agricultural, Ecological, and Environmental Applications, Fort Collins, CO, June 2004

Session organizer

Statistical Methods for Monitoring our Aquatic Resources, Joint Statistical Meetings, invited section of Section on Statistics and the Environment, August 2005

Bayesian Solutions to Challenging Problems in Ecology, Joint Statistical Meetings, invited section of the Bayesian Statistics Section, August 2004

Editorial Boards

Associate Editor, *Journal of the American Statistical Association*, 2001–2006.

Grant Review Boards

National Institutes of Health (November, 2001)

National Institutes of Health (July, 2002)

National Institutes of Health (April, 2003)

Grant Refereeing

National Science Foundation

Manuscript Refereeing

The American Statistician
American Journal of Mathematical and Management Sciences
Bayesian Analysis
Canadian Journal of Statistics
Communications in Statistics
Computational Statistics and Data Analysis
Ecological Applications
Journal of Agricultural, Biological and Environmental Statistics,
Journal of the American Statistical Association
Journal of Computational and Graphical Statistics
Journal of Statistical Planning and Inference
Journal of Econometrics
Journal of the Royal Statistics Society B
Psychological Methods
Scandinavian Journal of Statistics
Statistics and Computing
Technometrics
U.S. Department of Agriculture
U.S. Forest Service

Professional offices

American Statistical Association, Section on Statistics and the Environment, Publications chair (elected), 2005 and 2006

International Biometric Society, Western North American Region (WNAR), Representative At-Large (elected), 2006-2008

Officer Nomination Committee, International Society for Bayesian Analysis, 2006

Lindley Prize Committee (for innovative research in Bayesian statistics), International Society for Bayesian Analysis, 2007-8

Professional memberships

American Statistical Association

International Society for Bayesian Analysis

International Biometrics Society