

# Curriculum Vitae

## Jun Zhu

### Education:

Knox College, Mathematics and Computer Science, B.A., 1994.

Johns Hopkins University, Mathematical Sciences, M.S.E., 1995.

Iowa State University, Statistics, Ph.D., 2000.

### Positions:

Teaching Assistant, Department of Mathematical Sciences, The Johns Hopkins University, 1994–1995.

Research Assistant, Department of Statistics, Iowa State University, 1995–2000.

Assistant Professor, 50% Department of Statistics and 50% Department of Soil Science, University of Wisconsin, 2000–2006.

Associate Professor, 50% Department of Statistics and 50% Department of Soil Science, University of Wisconsin, 2006–present.

### Visiting Positions:

Visiting Scholar, Department of Statistics, Ohio State University, Fall 1999.

Visiting Scholar, Institute of Statistics, Academia Sinica, Winter 2003.

Visiting Scholar, Program for Interdisciplinary Mathematics, Ecology, and Statistics, Colorado State University, Fall 2007.

### Research Interests:

Spatial Statistics and Environmental Statistics.

### Statistical Methodological Publications:

Cressie, N., Zhu, J., Baddeley, A.J., and Nair, M.G. (2000). Directed Markov point processes as limits of partially ordered Markov models. *Methodology and Computing in Applied Probability*, **2**, 5–21.

Zhu, J., Lahiri, S.N., and Cressie, N. (2002). Asymptotic inference for spatial CDFs over time. *Statistica Sinica*, **12**, 843–861.

Zhu, J., Eickhoff, J.C., and Kaiser, M.S. (2003). Modeling the dependence between number of trials and success probability in a beta-binomial–Poisson mixture distribution. *Biometrics*, **59**, 957–963.

Eickhoff, J.C., Zhu, J., and Amemiya, Y. (2004). On the simulation size and the convergence of the Monte Carlo EM algorithm via likelihood-based distances. *Statistics and Probability Letters*, **67**, 161–171.

Zhu, J., Morgan, C.L.S., Norman, J.M., Yue, W., and Lowery, B. (2004). Combined mapping of soil properties using a multi-scale tree-structured spatial model. *Geoderma*, **118**, 321–334.

Zhu, J. and Morgan, G.D. (2004). Comparison of spatial variables over subregions using a block bootstrap. *Journal of Agricultural, Biological, and Environmental Statistics*, **9**, 91–104.

- Zhu, J. and Morgan, G.D. (2004). A nonparametric procedure for analyzing repeated-measures of spatially correlated data. *Environmental and Ecological Statistics*, **11**, 431–443.
- Tracey, J.A., Zhu, J., and Crooks, K. (2005). A set of nonlinear regression models for animal movement in response to a single landscape feature. *Journal of Agricultural, Biological, and Environmental Statistics*, **10**, 1–18.
- Zhu, J., Eickhoff, J.C., and Yan, P. (2005). Generalized linear latent variable models for repeated measures of spatially correlated multivariate data. *Biometrics*, **61**, 674–683.
- Zhu, J., Huang, H.-C., and Wu, J. (2005). Modeling spatial-temporal binary data using Markov random fields. *Journal of Agricultural, Biological, and Environmental Statistics*, **10**, 212–225.
- Zhu, J. and Yue, W. (2005). A multiresolution tree-structured spatial linear model. *Journal of Computational and Graphical Statistics*, **14**, 168–184.
- Ives, A.R. and Zhu, J. (2006). Statistics for correlated data: phylogenies, space, and time. *Ecological Applications*, **16**, 20–32.
- Lahiri, S.N. and Zhu, J. (2006). Resampling methods for spatial regression models under a class of stochastic designs. *Annals of Statistics*, **34**, 1774–1813.
- Yue, W. and Zhu, J. (2006). On estimation and prediction for multivariate multiresolution tree-structured models. *Statistica Sinica*, **16**, 981–1020.
- Zhu, J. and Lahiri, S.N. (2006). Bootstrapping the empirical distribution function of a spatial process. *Statistical Inference for Stochastic Processes*, **10**, 107–145.
- Rasmussen, J.G., Møller, J., Aukema, B.H., Raffa, K.F., and Zhu, J. (2007). Bayesian inference for multivariate point processes observed at sparsely distributed times. *Journal of the Royal Statistical Society Series B*. To appear.
- Zheng, Y. and Zhu, J. (2007). Markov chain Monte Carlo for a spatial-temporal autologistic regression model. *Journal of Computational and Graphical Statistics*. To appear.
- Zhu, J., Rasmussen, J.G., Møller, J., Aukema, B.H., and Raffa, K.F. (2007). Spatial-temporal modeling of forest gaps generated by colonization from below- and above-ground bark beetle species. *Journal of the American Statistical Association*. To appear.

#### Scientific Publications:

- Morgan, G.D., MacGuidwin, A.E., Zhu, J., and Binning, L.K. (2002). Root lesion nematode (*Pratylenchus penetrans*) population dynamics over a three-year crop rotation. *Agronomy Journal*, **94**, 1146–1155.
- Morgan, G.D., Stevenson, W.R., MacGuidwin, A.E., Kelling, K.A., Binning, L.K., and Zhu, J. (2002). Plant pathogen population dynamics in potato fields. *Journal of Nematology*, **34**, 189–193.
- Ingham, S.C., Vivio, L.L., Losinski, J.A., and Zhu, J. (2004). Manual shaking as an alternative to mechanical stomaching in preparing ground meats for microbiological analysis. *Food Protection Trends*, **24**, 253–256.
- Anderson, D.A., Turner, M.G., Forester, J.D., Zhu, J., Boyce, M.S., Beyer, H., and Stowell, L. (2005). Scale-dependent summer habitat use for reintroduced elk (*Cervus canadensis*) in Wisconsin, USA. *Journal of Wildlife Management*, **69**, 298–310.
- Magle, S.B., Zhu, J., and Crooks, K. (2005). Behavioral responses to repeated human intrusion by black-tailed prairie dogs (*Cynomys ludovicianus*). *Journal of Mammalogy*, **86**, 524–530.

- Ingham, S.C., Fanslau, M.A., Engel R., Breuer, J.R., Breuer, J.E., Wright, T.H., Reith-Rozelle, J.K., and Zhu, J. (2005). Evaluation of fertilization-to-planting and fertilization-to-harvest intervals for safe use of non-composted bovine manure in Wisconsin vegetable production. *Journal of Food Protection*, **68**, 1134–1142.
- Ingham, S.C., Engel, R.A., Fanslau, M.A., Schoeller, E.L., Searls, G.A., Buege, D.R., and Zhu, J. (2005). Fate of *Staphylococcus aureus* on vacuum-packaged ready-to-eat meat products stored at 21°C. *Journal of Food Protection*, **68**, 1911–1915.
- Smithwick, E.A.H., Mack, M.C., Turner, M.G., Chapin III, F.S., Zhu, J., and Balsler, T.C. (2005). Spatial heterogeneity of ecosystem processes after severe fire in a black spruce (*Picea mariana*) forest, Alaska. *Biogeochemistry*, **76**, 517–537.
- Aukema, B.H., Carroll, A.L., Zhu, J., Raffa, K.F., Sickley, T.A., and Taylor, S.W. (2006). Landscape level analysis of mountain pine beetle in British Columbia, Canada: Spatiotemporal development and spatial synchrony within the present outbreak. *Ecography*, **29**, 427–441.
- Vander-Zanden, M.J., Joppa, L., Gilroy, D., Maxted, J.T., and Zhu, J. (2007). Predicting spawning dates of *Hucho taimen* in Mongolia: management implications. *Ecological Applications*. To appear.

#### **Book Chapters:**

- Zhu, J., Lahiri, S.N., and Cressie, N. (2001). Asymptotic distribution of the empirical CDF predictor under nonstationarity. *Spatial Statistics: Methodological Aspects and Some Applications*, Ed. M. Moore. Springer, New York, 1–26.
- Zhu, J., Wolkowski, R.P., Yue, W., and Xu, R. (2005). On spatial lattice modeling of soil properties. *Geographic Information Technologies for Environmental Soil-Landscape Modeling*, Ed. S. Grunwald. Marcel Dekker, 393–416.

#### **Book Review:**

- Zhu, J. (2006). Review of “Statistical Methods for Spatial Data Analysis” by O. Schabenberger and C. A. Gotway. *Journal of the American Statistical Association*, **101**, 389–390.

#### **Consulting and Teaching:**

- Statistical Consulting: College of Agricultural and Life Sciences (CALs), 2000–present.
- Statistics 571 (4 credits) Statistical Methods for Bioscience I, Fall 2000, 2003, 2005.
- Statistics 572 (4 credits) Statistical Methods for Bioscience II, Spring 2001, 2002, 2004, 2005, 2006.
- Statistics 575 (3 credits) Statistical Methods for Spatial Data, Fall 2001, 2002, 2004, 2006.
- Statistics 701 (3 credits) Applied Time Series Analysis, Spring 2007.
- Statistics 992 (3 credits) Statistics for Spatial Data: Theory and Methods, Spring 2003.

**Professional Service:**

Associate Editor for *Biometrics*, 2006–present.

Referee for

*Acta Biotheoretica, Annals of the Institute of Statistical Mathematics, Biometrics, Computational Statistics and Data Analysis, Ecological Applications, Ecological and Environmental Statistics, Ecology, Environmental Monitoring and Assessment, Environmetrics, Geoderma, Journal of the American Statistical Association, Journal of the American Society for Horticultural Science, Journal of Computational and Graphical Statistics, Journal of Plant Growth Regulation, Journal of Statistical Planning and Inference, Marketing Science, Mathematical Geology, Sankhya, Scandinavian Journal of Statistics, Soil Science Society of America Journal, Statistical Methodology, Statistics and Probability Letters, TEST.*

Representative of the American Statistical Association (ASA) Section on Statistics and the Environment (ENVR) to the ENAR Spring Meetings Program Committee 2006 & 2007.

Publications Chair Elect, Section on Statistics and the Environment (ENVR), American Statistical Association (ASA), 2008.