

Yongtao Guan

Division of Biostatistics, Yale University, New Haven, CT 06520-8034

Phones: (203) 785-6125 (o), (305) 804-4689 (c)

E-mail: yongtao.guan@yale.edu

EDUCATION

2003 Ph.D. in Statistics. Texas A&M University.

1998 B.S. in Statistics, Minor in Economics. Peking University.

EXPERIENCE

July 2006-Present Assistant Professor, Division of Biostatistics, Yale University.

Aug. 2003-June 2006 Assistant Professor, Department of Management Science, University of Miami.

May 2005-Aug. 2005 Visiting Scholar, Department of Statistics, The Ohio State University.

Aug. 1998-Aug. 2003 Instructor and Research Assistant, Texas A&M University.

RESEARCH INTERESTS

Spatial statistics and their applications in various disciplines.

PUBLICATIONS

Papers published or accepted for publication in refereed statistical journals:

Guan, Y. (2007), "Variance Estimation for Statistics Computed from Inhomogeneous Spatial Point Processes", *Journal of the Royal Statistical Society, Series B*. To appear.

Guan, Y. and Loh, J. M. (2007), "A Thinned Block Bootstrap Variance Estimation Procedure for Inhomogeneous Spatial Point Patterns", *Journal of the American Statistical Association*. To appear.

Guan, Y. (2007), "A Marked Point Process Perspective in Fitting Spatial Point Process Models", *Journal of Statistical Planning and Inference*. To appear.

Guan, Y. (2007), "A Least-Squares Cross-Validation Bandwidth Selection Approach in Pair Correlation Estimations", *Statistics and Probability Letters*. To appear.

Guan, Y. and Afshartous, D. (2007), "Test for Independence between Marks and Points of Marked Point Processes: a Subsampling Approach", *Environmental and Ecological Statistics*. To appear.

Guan, Y. and Sherman, M. (2007), "On Least Squares Fitting for Stationary Spatial Point Processes", *Journal of the Royal Statistical Society, Series B*, 69(1), 31-49.

Guan, Y. (2007), "A Composite Likelihood Cross-Validation Approach in Selecting Bandwidth for the Estimation of the Pair Correlation Function", *Scandinavian Journal of Statistics*, 34, 336-346.

Guan, Y., Sherman, M., and Calvin J.A. (2007), “On Asymptotic Properties of the Marked Variogram Estimator of a Marked Point Process”, *Journal of Statistical Planning and Inference*, 137, 148-161.

Guan, Y. (2006), “A Composite Likelihood Approach in Fitting Spatial Point Process Models”, *Journal of the American Statistical Association*, 101, 1502–1512.

Guan, Y., Sherman, M., and Calvin J.A. (2006), “Assessing Isotropy for Spatial Point Processes”, *Biometrics*, 62, 119–125.

Guan, Y. (2006), “Tests for Independence between Marks and Points of a Marked Point Process”, *Biometrics*, 62, 126–134.

Guan, Y., Sherman, M., and Calvin J.A. (2004), “A Nonparametric Test for Spatial Isotropy Using Subsampling”, *Journal of the American Statistical Association*, 99, 810–821.

Papers submitted to or revised for refereed statistical journals:

Guan, Y. (2007), “A Goodness-of-Fit Test for Inhomogeneous Spatial Poisson Processes”, *Biometrika*. Revised.

Guan, Y. (2007), “A KPSS Test for Stationarity for Spatial Point Processes”, *Biometrics*. Revised.

Guan, Y. (2007), “Fast Block Variance Estimation Procedures for Inhomogeneous Spatial Point Processes”, *Biometrika*. Submitted.

Waagepetersen, R. and **Guan, Y.** (2007), “Two-Step Estimation for Inhomogeneous Spatial Point Processes”, *Journal of the Royal Statistical Society, Series B*. Submitted.

Guan, Y. (2006), “On Model Fitting Procedures for Inhomogeneous Neyman-Scott Processes”, *Journal of Statistical Computation and Simulation*. Submitted.

Other publications/manuscripts:

Guan, Y. and Waagepetersen, R. (2007), “Nonparametric and Parametric Estimations of the Second-Order Structure of Inhomogeneous Spatial Point Processes Using Case-Control Data”. In progress (targeting for *Journal of the American Statistical Association*).

Guan, Y. (2007), Invited “Discussion of ‘Modern Statistics for Spatial Point Processes’ by Møller and Waagepetersen”, *Scandinavian Journal of Statistics*. To appear.

Afshartous, D., **Guan, Y.**, and Mehrotra, A. (2006), “Locating U.S. Coast Guard Air Stations for Responding to Distress Calls: a Simulation and Optimization Based Methodology”, *Naval Research Logistics*. Under revision.

Brown, H. E., Diuk-Wasser, M. A., **Guan, Y.**, Caskey, S. and Fish, D. (2006), “Comparison of Three Satellite Sensors at Three Spatial Scales to Predict Larval Mosquito Presence in CT Wetlands”. Under revision.

Afshartous, D., **Guan, Y.**, Mehrotra, A., and Magnussen, J. (2004), “Optimal Deployment of Resources for the U.S. Coast Guard”, *Proceeding of the 10th International Conference on Productivity and Quality Research*, Miami, FL, Feb. 2004.

Sherman, M., **Guan, Y.**, and Calvin, J.A. (2003), “Assessing Spatial Isotropy”, in *Recent Advances and Trends in Nonparametric Statistics*, M. Akritas and D. Politis (Eds.), Elsevier (North Holland), 467–475.

GRANTS, HONORS & AWARDS

- 2008-2013 “CAREER: Advances in Theory and Methods for Modeling Inhomogeneous Spatial Point Processes”,
National Science Foundation, PI: Yongtao Guan (pending).
- 2006-2009 “Spatial Point Pattern Analysis Using Composite Likelihood”,
National Science Foundation, 13% effort, PI: Yongtao Guan.
- 2007-2009 “Integrating Earth Observation and Field Data into a Lyme Disease Model to Map and Predict Risks to Biodiversity and Human Health”,
Environmental Protection Agency, Collaborator, 10% effort, PI: Durland Fish.
- 2007-2008 “Spatial Risk Model for Ixodes Scapularis-borne Borrelia”,
Center for Disease Control, Collaborator, 5% effort, PI: Durland Fish.
- 2004 James W. McLamore Summer Research Awards in Business and Social Sciences,
University of Miami.
- 2004,5 School of Business Summer Research Grant, University of Miami.

INVITED PRESENTATIONS

Aalborg University, ASA CT Chapter Mini-Conference, Emory University,
Joint Statistical Meeting, Purdue University, University of California at Los Angeles,
University of Connecticut, University of Georgia, Yale University.

TEACHING EXPERIENCE

Applied Regression Analysis and Forecasting (MBA), evaluation score 4.7 (out of 5).
Applied Regression Analysis, average evaluation score 4.6 (out of 5).
Introduction to Business Statistics, average evaluation score 4.46 (out of 5).

PROFESSIONAL SERVICE

Referee for *Biometrics*, *Environmental and Ecological Statistics*, *Environmetrics*, *Journal of Agricultural, Biological and Environmental Statistics*, *JASA*, *Journal of Computational and Graphical Statistics*, *Statistics and Probability Letters*, *Stochastics and Stochastics Reports*.

Session chair of “Environmental and toxicological applications”, 2005 ENAR meeting.

PROFESSIONAL MEMBERSHIP

American Statistical Association.
International Biometric Society.