

Jun Yan

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Degrees

Ph.D., 2003, Statistics, University of Wisconsin, Madison, WI
M.A., 1998, Economics, University of Miami, Miami, FL
B.Econ., 1993, Statistics, Renmin University of China, Beijing, China

Research Interests

Dynamic Survival Models, Longitudinal Data Analysis, Bayesian Methods, Spatial Statistics, Estimating Functions
Bioinformatics, Biostatistics, Cystic Fibrosis, Econometrics, Statistical Computing, Time Series

Professional Memberships

American Statistical Association, International Biometric Society, Econometric Society

Positions

Assistant Professor, Department of Statistics and Actuarial Science, The University of Iowa, August 2003 — Present.
Statistical Consultant, CALS Statistical Consulting Lab, University of Wisconsin–Madison, July 2001 — July 2003.

Teaching Experience

Probability and Stochastic Processes I (22s:195), Fall 2006.
Mathematical Statistics II (22s:154), Spring 2007, Spring 2006, Spring 2004.
Mathematical Statistics I (22s:153), Fall 2005, Fall 2004, Fall 2003.
Applied Time Series Analysis (22s:156), Spring 2007, Spring 2005.

Collaborative Work

Inter-calibration of measures from different remote sensor systems — with a geographer at the University of Iowa
Testing concordance in clinical traits in familial studies of Inflammatory Bowel Disease — with a gastroenterologist at the University of Iowa
Parallelizing Bayesian analysis for geostatistical models with large environmental data — with a geographer and an information scientist at the University of Iowa
Comparison of fungi species abundance distributions — with a biologist at University of Wisconsin
Computing in optimal investment problems — with an actuary at the University of Iowa
A survey of spatial econometrics — with econometricians at University of Illinois – Urbana-Champaign

Publications

Refereed Journal Articles

- Yan, J., Cowles, M. K., Wang, S., and Armstrong, M. P. (2007): Parallelizing MCMC for Bayesian Spatiotemporal Geostatistical Models, *Statistics and Computing*, To appear.
- Yan, J. and Fine, J. P. (2007): Analysis of episodic data with application to recurrent pulmonary exacerbations in cystic fibrosis patients. *Journal of the American Statistical Association*, To appear.
- Stramer, O. and Yan, J. (2007): Asymptotics of an efficient Monte Carlo estimation for the transition density of diffusion processes. *Methodology & Computing in Applied Probability*, To appear.

- Stramer, O. and Yan, J. (2007): On simulated likelihood of discretely observed diffusion processes and comparison to closed-form approximation. *Journal of Computational and Graphical Statistics*, To appear.
- Yan, J. (2007): Spatial Stochastic Volatility for Lattice Data, *Journal of Agricultural, Biological, and Environmental Statistics*, 12(1): 25–40.
- Halekoh, U., Højsgaard, S., and Yan, J. (2006): The R package `geepack` for generalized estimating equations. *Journal of Statistical Software* 15(2): 1–11.
- Yan, J. and Fine, J. P. (2005): Functional association models for multivariate survival processes. *Journal of the American Statistical Association* 100(469): 184–196.
- Fine, J. P., Yan, J., and Kosorok, M. R. (2004): Temporal process regression. *Biometrika* 91(3): 683–703.
- Yan, J. and Fine, J. P. (2004): Estimating equations for association structures. *Statistics in Medicine* 23(6): 859–874.

Invited Book Chapters

- Yan, J. (2006): Multivariate modeling with copulas and engineering applications. In H. Pham (ed.), *Handbook of Engineering Statistics*, pp. 973–990, Springer.

Papers Submitted to Refereed Journals

- Yan, J.: Enjoy the joy of copulas, Submitted to *Journal of Statistical Software*.
- Yan, J. and Huang, J.: Partly Functional Temporal Regression with Semiparametric Profile Estimating Equations, Submitted to *Biometrics*.
- Yan, J. and Tamboli C.P.: Testing Concordance of Clinical Characteristics in Familial Studies with Application to Inflammatory Bowel Diseases, Submitted to *Biometrical Journal*.

Papers under Revision

- Yan, J.: A Dynamic Model with Simple Diagnosis for Asymmetry and Fat-tailness in Financial Return Data.
- Nordheim, E.V., Czedepiltz, D.L.L., Yan, J., and Wilkinson, M.R.: A Statistical Model for the Comparison of Species Abundance Distributions.

Work in Progress

- Bera, A.K., Simlai, P., and Yan, J.: Spatial Analysis: From the Beginning to the Frontier of Spatial Econometrics.
- Huang, J. and Yan, J.: Semiparametric Profile Estimating Functions and Dynamic Survival Modeling.
- Tang, Q. and Yan, J.: Optimal Investments to Minimize the Probability of Ruin in the Case of Pareto-like Claims.
- Yan, J.: Estimating Functions for Spatially Correlated Data Regression.
- Yan, J., Fine, J.P., Cheng, Y., and Lai, H.: Analysis of Disease Registry Data with Application to Cystic Fibrosis.

Software

- Yan, J.: R package `copula` on CRAN, multivariate dependence with copula.
- Yan, J.: R package `rbugs` on CRAN, fusing R with OpenBugs.
- Yan, J.: R package `som` on CRAN, self-organizing map with application to gene clustering.
- Yan, J.: R package `species` to be on CRAN, estimating the number of species.
- Yan, J. and Højsgaard, R.: R package `geepack` on CRAN, generalized estimating equation package.

Non-Refereed Publications

- Yan, J. (2004): Fusing R and BUGS through Wine. *R News* 4(2): 19–21.
- Yan, J. and Rossini, A. (2003): Building Microsoft Windows versions of R and R packages under Intel Linux. *R News* 3(1): 15–17.
- Yan, J. (2002): `geepack`: Yet another package for generalized estimating equations. *R News* 2(3): 12–14.

Book Reviews

- Yan, J. (2006): Gaussian Markov random fields: Theory and applications. Harvard Rue and Leonhard Held. *Journal of the American Statistical Association* 101(473): 388–389.

Yan, J. (2005): Analysis of multivariate survival data. Phillip Hougaard. *Journal of the American Statistical Association* 100(469): 355–356.

Yan, J. (2004): Bayesian survival analysis. Joseph G. Ibrahim, Ming-Hui Chen, and Debajyoti Sinha. *Journal of the American Statistical Association* 99(468): 1202–1203.

Yan, J. (2004): Survival analysis: Techniques for censored and truncated data (2nd ed.). John P. Klein and Melvin L. Moeschberger. *Journal of the American Statistical Association* 99(467): 900–901.

Grants

External

2006–2007: NSF — Statistical Computing Research Environments (SCREMS). \$95,000. PI: Mary Kathryn Cowles, Co-PIs: John Geweke, Jian Huang, Luke Tierney, and Jun Yan.

2006–2007: TeraGrid — Parallelizing MCMC for Bayesian Estimation and Prediction in Spatiotemporal Geostatistical Models. PI: Jun Yan, Co-PIs: Marc P. Armstrong, Mary Kathryn Cowles, Brian J. Smith, and Shaowen Wang.

2006–2007: TeraGrid — Developing GISolve as a GIScience Gateway Toolkit for Geographic Information Analysis. PI: Shaowen Wang, Co-PIs: Mary Kathryn Cowles, Marc P. Armstrong, and Jun Yan.

2004–2005: TeraGrid — Spatial Statistics Middleware for Markov-chain-Monte-Carlo Bayesian Geostatistical Models. PI: Mary Kathryn Cowles, Co-PIs: Marc P. Armstrong, Shaowen Wang, and Jun Yan.

Internal

July 2006 – June 2007, Mathematical & Physical Sciences Funding Program (MPSFP) — Partly Functional Temporal Process Regression.

January 2004 – December 2004, Mathematical & Physical Sciences Funding Program (MPSFP) — Nonparametric Inference for Nonstationary Stochastic Processes.

Awards

Innovations in Instructional Computing Award — Academic Technologies Advisory Council, University of Iowa, 2007. PI: Mary Kathryn Cowles, Co-PIs: Marc P. Armstrong, Brian J. Smith, Shaowen Wang, and Jun Yan.

Invited Talks

Spatial Stochastic Volatility, 07/12/2006, Beijing, China, Far Eastern Meeting of the Econometrics Society (FEMES) 2006. Partly Functional Temporal Process Regression, 06/28/2006, Hong Kong, China, INFORMS International Conference 2006.

Spatial Stochastic Volatility, 04/21/2006, Department of Economics, University of Illinois – Urbana-Champaign. Temporal Process Regression, 08/10/2004, Toronto, Canada, Joint Statistical Meeting.

Service

Journal Reviews

2006–2007: 1 for *Biometrika*; 1 revision for *JASA*; 1 revision for *Annals of Statistics*; 1 for *CSDA*.

2005–2006: 2 for *Annals of Statistics*; 1 for *JASA*.

2004–2005: 1 for *Statistical Sinica*; 1 for *JRSSB*.

2003–2004: 1 for *JASA*.

Departmental Service

2006–2007: Colloquium Committee (chair), M.S. Exam – Minor Committee (chair), Computer Committee

2005–2006: Colloquium Committee, M.S. Exam – Minor Committee, Search Committee, and Social Committee.

2004–2005: M.S. Exam – Minor Committee, Search Committee, and Social Committee (chair).

2003–2004: Computer Committee, M.S. Exam – Minor Committee, and Social Committee.