

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
Statistical Computing, Biostatistics, Public Health Applications, Econometrics

Professional Memberships

American Statistical Association, International Biometric Society, Econometric Society

Positions

Assistant Professor, Department of Statistics, University of Connecticut, August 2007 — Present.
Assistant Professor, Department of Statistics and Actuarial Science, The University of Iowa, August 2003 — July 2007.
Statistical Consultant, CALS Statistical Consulting Lab, University of Wisconsin–Madison, July 2001 — July 2003.

Teaching Experience

Mathematical Statistics I/II (315/316), Fall 2007/Spring 2008.
Statistical Methods (220), Spring 2008.
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.

Publications

Refereed Journal Articles

- Smith, B. J., Yan, J., and Cowles, M. K. (2008): Unified geostatistical modeling for data fusion and spatial heteroskedasticity with R package ramps. *Journal of Statistical Software* 25(10): 1–21.
- Yan, J. and Fine, J. P. (2008): Analysis of episodic data with application to recurrent pulmonary exacerbations in cystic fibrosis patients. *Journal of the American Statistical Association* 103: 498–510.
- Yan, J. and Huang, J. (2008): Partly functional temporal process regression with semiparametric profile estimating functions. *Biometrics* In press.
- 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*, 9(4): 483–496.
- 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*, 16(3): 672–691.
- Yan, J. (2007): Enjoy the joy of copulas. *Journal of Statistical Software*, 21(4): 1–21.
- Yan, J. (2007): Spatial Stochastic Volatility for Lattice Data. *Journal of Agricultural, Biological, and Environmental Statistics*, 12(1): 25–40.
- Yan, J., Cowles, M. K., Wang, S., and Armstrong, M. P. (2007): Parallelizing MCMC for Bayesian Spatiotemporal Geostatistical Models. *Statistics and Computing*, 17(4): 323–335.

- Yan, J. and Tamboli, C. P. (2007): Testing concordance of clinical characteristics in familial studies with application to inflammatory bowel diseases. *Biometrical Journal* 49(6): 840–853.
- 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., Fine, J. P., Cheng, Y., and Lai, H. (2008): Analysis of Disease Registry Data with Application to Cystic Fibrosis. Submitted to *Biometrics*.
- Yan, J. and Gebremichael, M. (2008): Estimating True Rainfall from Satellite Rainfall Products. Submitted to *Atmospheric Research*.
- Cowles, M. K., Yan J. and Smith B. J. (2008): Reparameterized and Marginalized Posterior and Predictive Sampling for Complex Bayesian Geostatistical Model. Submitted to *Journal of Computational and Graphical Statistics*.
- Guan, Y. and Yan, J. (2008): Variance Estimation of Statistics Arising from Inhomogeneous Temporal Point Processes and Application in Residual Analysis. Submitted to *Biometrics*.
- Kojadinovic, I. and Yan, J. (2008): A Goodness-of-Fit Test for Multivariate Multiparameter Copulas Based on Multiplier Central Limit Theorems. Submitted to *Statistics and Computing*.
- Kojadinovic, I. and Yan, J. (2008): Fast Goodness-of-fit Test. Submitted to *JASA*.
- Kojadinovic, I. and Yan, J. (2008): Tests of serial independence for multivariate time series based on a Möbius decomposition of the independence empirical copula process. Submitted to *The Annals of Statistical Mathematics*.

Software

- Smith, B.P., Yan, J. and Cowles, M.K.: R package `ramps` on CRAN, reparametrized and marginalized posterior sampling.
- Yan, J. and Kojadinovic I.: R package `copula` on CRAN, multivariate dependence with copula.
- Yan, J.: R package `tpr` on CRAN, temporal process regression.
- 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

- January 2008 – December 2008, Faculty Large Grant, University of Connecticut.
- January 2008 – May 2008, Multidisciplinary Environmental Research Award, Center for Environmental Sciences and Engineering, University of Connecticut.
- 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

- Tests of Serial Independence for Multivariate Time series Based on a Möbius Decomposition of the Independence Empirical Copula Process, 06/21/2008, Renmin University of China, International Statistics Forum 2008.
- Partly functional temporal process regression with semiparametric profile estimating functions, 01/29/2008, Division of Biostatistics, Yale University.
- 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

- 2007–2008: 1 revision for *Annals of Statistics*; 1 for *Computational Statistics*, 1 for *International Journal of Forecasting*, 1 for *Statistics in Medicine*.
- 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

- 2008–2009: Library/Tech Reports Committee, Biostatistics Program Development Committee, Social Committee.
- 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.