David S. Stoffer

Department of Statistics
University of Pittsburgh
Pittsburgh, PA 15260

Phone: [412] 624-8496
Fax: [412] 648-8814
Email: stoffer@pitt.edu
Web: www.stat.pitt.edu/stoffer

Academic Degrees

B.A., Mathematics, 1975: San Diego State University, San Diego, CA

Ph.D., Statistics, 1982: University of California, Davis, CA

Positions Held

Professor, Department of Statistics (Formerly the Department of Mathematics and Statistics), Faculty of Arts and Sciences, University of Pittsburgh, 1992 – Present; Associate Professor, 1988 – 1992; Assistant Professor, 1982 – 1988.

Professor, Department of Biostatistics, Graduate School of Public Health, University of Pittsburgh, 1992 – Present; Associate Professor 1988 – 1992.

Program Director, Statistics Program, National Science Foundation, Arlington, VA, 2008 – Present.

Visiting Professor, Department of Statistics, Chinese University of Hong Kong, 2006.

Visiting Professor, Cuban Neuroscience Center, Havana, Cuba, 2002.

Visiting Professor, Department of Statistics, Stanford University, 1999.

Visiting Professor, Division of Statistics, University of California, Davis, 1999.

Visiting Professor, Graduate School of Business, University of Chicago, 1992 – 1994.

Visiting Professor, Institute of Mathematics and Statistics, University of São Paulo, Brazil, 1990.

Visiting Professor, Department of Statistics, Carnegie Mellon University, 1989.

Awards

Fellow, American Statistical Association, 2006.

Recipient of the American Statistical Association's Outstanding Statistical Application Award, 1989.

Research award from the Earle C. Anthony Fund, University of California Committee on Fellowships and Graduate Scholarships, 1980 – 1981.

Funded Research

Space-Time Modeling in the Presence of Incomplete Data: Faculty Grant from the Faculty of Arts and Sciences, University of Pittsburgh, 1983, $2500.

Analysis of Non-Gaussian Time Series in the Time and Frequency Domains: University of Pittsburgh Office of Research, 1987, $2700.

Walsh-Fourier Analysis of Discrete-Valued Time Series: National Center of Health Statistics, 1988 – 1989, $9000.

Analysis of Nonlinear Time Series: Centers for Disease Control through a cooperative agreement with the Association of Schools of Public Health, 1989 – 1990, $35,000.

Alcohol Use During Pregnancy: National Institute on Alcohol Abuse and Alcoholism Grant AA 06390, (co-investigator), 1989 – 1990, $245,087.

Alcohol Use During Pregnancy: A Longitudinal Study: National Institute on Alcohol Abuse and Alcoholism Grant AA06666, (co-investigator), 1990 – 1993, $667,847; 1994 – 1998, $376,708; 1998 – 2002.

An Epidemiological Study of Prenatal Marijuana Exposure: National Inst. on Drug Abuse Grant DA03874, (co-investigator) 1989 – 1992, $925,663; 1992 – 1996, $1,290,855; 1997 – 2001, $414,147.

Analysis of Space-Time Data: University of Pittsburgh Office of Research, 1990, $6400.

Walsh-Fourier Analysis and Categorical Time Series: National Science Foundation Grant DMS 9000522, 1990 – 1992, $38,000.

Prenatal Cocaine Use: A Longitudinal Epidemiologic Study: National Institute on Drug Abuse Grant DA03874, (co-investigator), 1991 – 1995, $503,410.

Spectral Analysis of Categorical Time Series: National Security Agency Grant MDA904-92-H-3012, 1992-1994, $30,382.

The Spectral Envelope: National Science Foundation Grant DMS 94-04343, 1994 – 1997, $59,000.

Effects of Prenatal Cocaine Use: 7-Year Follow Up: National Institute on Drug Abuse Grant DA08916, (co-investigator), 1995 – 1999, $143,168.

Tobacco: Prenatal Effects and Adolescent Use: National Institutes of Health, (co-investigator), 1998 – 2001, $17,000.

Expanding the Spectral Envelope: National Science Foundation Grant DMS 97-03720, 1997 – 2001, $150,000.

Statistical Methods in the Frequency Domain: National Science Foundation Grant DMS-0102511, 2001 – 2004, $270,000.

Time Series Analysis and Applications: National Science Foundation Grant DMS-0405038, 2004 – 2008, $450,000.

Collaborative Research: The Analysis of Time Series Collected in Experimental Designs; National Science Foundation Grant DMS-0706723, 2007 – 2008, $322,665.

Statistical Methods for Dependent Data: National Science Foundation Grant DMS-0805050, 2008 – ; Suspended during my tenure at NSF.

Publications

Books

1. Shumway, R.H. & Stoffer, D.S. *Time Series Analysis and Its Applications*, New York: Springer. March, 2000. *Webpage:* www.stat.pitt.edu/stoffer/tsa.html

2. Shumway, R.H. & Stoffer, D.S. *Time Series Analysis and Its Applications: With R Examples (2nd ed)*, New York: Springer. May, 2006. *Webpage:* www.stat.pitt.edu/stoffer/tsa2

Probability and Statistics

3. An Approach to Time Series Smoothing and Forecasting Using the EM Algorithm. *Journal of Time Series Analysis*, 3, 253 – 264; Shumway & Stoffer, 1982. download

4. Maximum Likelihood Fitting of STARMAX Models to Incomplete Space-Time Series Data. In *Time Series Analysis*: *Theory and Practice* 6, eds. O.D. Anderson, J.K. Ord, and E.A. Robinson, North Holland, Amsterdam, 283 – 296; Stoffer, 1985.

5. Central Limit Theorems for Finite Walsh-Fourier Transforms of Weakly Stationary Time Series. *Journal of Time Series Analysis,* 6, 261 – 267; Stoffer, 1985.

6. Estimation and Identification of Space-Time ARMAX Models in the Presence of Missing Data. *Journal of the American Statistical Association,* 81, 762 – 772; Stoffer, 1986. download

7. A Walsh-Fourier Approach to the Analysis of Binary Time Series. In *Time Series and Econometric Modelling*; pp. 147 – 163, MacNeill, Ian B. (ed.) and Umphrey, Gary J. (ed.). Hingham, MA: Reidel; Stoffer & Panchalingam, 1987.

8. Moving Average Models with Bivariate Exponential and Geometric Distributions. *Journal of Applied Probability*, 24, 48 – 61; Langberg & Stoffer, 1987.

9. Walsh-Fourier Analysis of Discrete-Valued Time Series. *Journal of Time Series Analysis,* 8, 449 – 467; Stoffer, 1987. download

10. Bivariate Exponential and Geometric Autoregressive and Autoregressive - Moving Average Models. *Advances in Applied Probability*, 20, 798 – 821; Block, Langberg & Stoffer, 1988. download

11. A Walsh-Fourier Analysis of the Effects of Moderate Maternal Alcohol Consumption on Neonatal Sleep-State Cycling. *Journal of the American Statistical Association*, 83, 954 – 963; Stoffer, Scher, Richardson, Day & Coble, 1988.

    ◈ *This paper won the American Statistical Association's Outstanding Statistical Application Award for 1989.*

12. Multivariate Walsh-Fourier Analysis. *Journal of Time Series Analysis*, 11, 57 – 73; Stoffer, 1990.

13. Regression From Another Angle. *Communications in Statistics: Theory and Methods*, 19, 4269 – 4290; Sampson & Stoffer, 1990.

14. Time Series Models for Non-Gaussian Processes. In *Topics in Statistical Dependence*, eds: H. Block, A. Sampson, T. Savits, *Institute of Mathematical Statistics Lecture Notes-Monograph Series*, 16, 69 – 84; Block, Langberg & Stoffer, 1991.

15. Bootstrapping State Space Models: Gaussian Maximum Likelihood Estimation & the Kalman Filter. *Journal of the American Statistical Association,* 86, 1024 – 1033; Stoffer & Wall, 1991. download

    ◈ *The algorithm presented in this paper is implemented in the Gauss package TSM v1.2, Time Series and Wavelets for Finance.*

16. Walsh-Fourier Analysis and Its Statistical Applications [Comments/Rejoinder: p480-485]. *Journal of the American Statistical Association,* 86, 461 – 479; Stoffer, 1991. download

17. Reply to comments on "Walsh-Fourier Analysis and Its Statistical Applications". *Journal of the American Statistical Association,* 86, 483 – 485; Stoffer, 1991.

18. Dynamic Linear Models With Switching. *Journal of the American Statistical Association,* 86, 763 – 769; Shumway, Stoffer, 1991. Correction: 87, p. 913, 1992. download

19. A Monte Carlo Approach to Nonnormal and Nonlinear State Space Modeling. *Journal of the American Statistical Association,* 87, 493 – 500; Carlin, Polson, & Stoffer, 1992. download

20. Missing Data Modifications of the Ljung-Box-Pierce Portmanteau Statistic for Time Series Regression. *Statistics and Probability Letters*, 13, 391 – 396; Stoffer & Toloi, 1992. download

21. Spectral Analysis for Categorical Time Series: Scaling and the Spectral Envelope. *Biometrika*, 80, 611 – 622; Stoffer, Tyler & McDougall, 1993. download

22. Spectral Analysis of DNA Sequences (with Discussion). *Bulletin of the International Statistical Institute*, Bk I, pp 345 – 361; Discussion: Bk IV, pp 63 – 69; Stoffer, Tyler, McDougall & Schachtel, 1994.

23. Optimal Transformations and the Spectral Envelope for Real Valued Time Series. *Journal of Statistical Planning and Inference*, 57, 195 – 214; McDougall, Stoffer & Tyler, 1997. download

24. Matching Sequences: Cross Spectral Analysis of Categorical Time Series. *Biometrika*, 85, 201 – 213; Stoffer & Tyler, 1998. download

25. Detecting Common Signals in Multiple Time Series Using the Spectral Envelope. *Journal of the American Statistical Association*, 94, 1341 – 1356; Stoffer, 1999. download

26. The Spectral Envelope and Its Applications. *Statistical Science*, 15, 224 – 253; Stoffer, Tyler & Wendt, 2000. download

27. Localized Spectral Envelope. *Resenhas*, 4, 363 – 381; Stoffer & Ombao, 2000.

28. Evolutionary Spectral Envelope via Tree Based Adaptive Segmentation. In *Proceedings of the 2nd International Symposium on the Frontiers of Time Series Modeling*, T. Higuichi and G. Kitagawa (eds). Institute of Statistical Mathematics; Stoffer & Ombao, 2001.

29. A State Space Approach to Bootstrapping Conditional Forecasts in ARMA Models. *J. Time Series Anal.*, 23, 733 – 752; Wall & Stoffer, 2002.

30. Nonparametric Frequency Detection and Optimal Coding in Molecular Biology. In *Modeling Uncertainty: An Examination of Stochastic Theory, Methods, and Applications*. Moshe Dror, Pierre L'Ecuyer, Ferenc Szidarovszky (eds). Boston: Kluwer Academic Publishers. Chapter 7, pp 129 – 154; Stoffer, 2002.

31. Local Spectral Envelope: An Approach Using Dyadic Tree Based Adaptive Segmentation. *Annals of the Institute of Statistical Mathematics*, 54, 201 – 223; Stoffer, Ombao & Tyler, 2002. download

32. Fitting local spectra to time-varying processes. ASA Proceedings of the Joint Statistical Meetings, 3548 – 3550 American Statistical Association (Alexandria, VA); Rosen & Stoffer, 2003.

33. Online Analysis of Seismic Signals. In *Time Series Analysis and Applications to Geophysical Systems*, eds: D.R. Brillinger, E. Robinson, and F. Schoenberg. New York: Springer-Verlag, IMA Series, v139, 53 – 72; Ombao, Heo & Stoffer, 2004.

34. Resampling in State Space Models. Chapter 9, in *State Space and Unobserved Component Models Theory and Applications*, eds. Andrew Harvey, Siem Jan Koopman, and Neil Shephard. Cambridge University Press; Stoffer & Wall, 2004. download

35. Discrimination and Classification of Nonstationary Time Series using the SLEX Model. *Journal of the American Statistical Association*, 763 – 774; Huang, Ombao & Stoffer, 2004. download

36. Spatio-Temporal Modeling for Biosurveillance Using a Spatially Constrained State Space Model. Chapter 13 in *Handbook of Time Series Analysis: Recent Theoretical Developments and Applications*, Björn Schelter, Matthias Winterhalder, Jens Timmer (Eds). Berlin: Wiley; Stoffer & Katzoff, 2006.

37. Automatic Estimation of Multivariate Spectra via Smoothing Splines. *Biometrika*, 335 – 345; Rosen & Stoffer, 2007. download

38. An Innovations-Based Transition Model for Longitudinal Analysis with Estimation in the Presence of Missing Data. *Statist. Med.*, 26, 3330 – 3341; Koru-Sengul, Stoffer & Day, 2007. download

39. Automatic Local Spectral Envelope. In *Functional and Operatorial Statistics*, Ch 40, pp263-272. Sophie Dabo-Niang (ed), Frédéric Ferraty (ed). Heidelberg: Physica-Verlag; Rosen & Stoffer, 2008.

40. A Stochastic Volatility Mixture Model: Estimation in the Presence of Irregular Sampling via Particle Methods and the EM Algorithm (with J. Kim). *Journal of Time Series Analysis*, 29, 811 – 833; Kim & Stoffer, 2008. download

41. Local Spectral Analysis via a Bayesian Mixture of Smoothing Splines. *Journal of the American Statistical Association*, 104, 249 – 262; Rosen, Stoffer & Wood, 2009. download

42. Stoffer, D.S., Han, S., Qin, L. & Guo, W. (2009). Smoothing Spline ANOPOW. *Journal of Statistical Planning and Inference*, in press.

Book Reviews

43. *Introduction to Multiple Time Series Analysis* (2nd ed.) by Helmut Lütkepohl, Berlin: Springer - Verlag. *Journal of the American Statistical Association*, 89, 1138 – 1139, 1994.

44. *Elements of Multivariate Time Series Analysis* by Gregory C. Reinsel, New York: Springer-Verlag. *Journal of the American Statistical Association*, 89, 1138 – 1139, 1994.

45. *Introduction to Multiple Time Series Analysis* (2nd ed.) by Helmut Lütkepohl, Berlin: Springer - Verlag. *Metrika*, 42, 445 – 446, 1995.

46. *Introduction to Spectral Analysis* by Percival & Walden, Cambridge: Cambridge University Press. *Journal of the American Statistical Association*, 92, 1226, 1997.

47. *Wavelets: An Analysis Tool* by M. Holschneider, Oxford: Oxford University Press. *Journal of the American Statistical Association*, 92, 1215, 1997.

48. *Applied Wavelet Analysis with S-PLUS* by Andrew Bruce and Hong-Ye Gao, New York: Springer. *Journal of the American Statistical Association*, 92, 1656, 1997.

49. *Elements of Multivariate Time Series Analysis* (2nd ed.) by Gregory C. Reinsel, New York: Springer-Verlag. *Journal of the American Statistical Association*, 92, 1656, 1997.

50. *Statistics for Petroleum Engineers and Geoscientists* by J.L. Jensen, L.W. Lake, P.W.M. Corbett, and D.J. Goggin; New Jersey: Prentice Hall. *Journal of the American Statistical Association*, 1998.

51. *Statistical Visions in Time: A History of Time Series Analysis 1662 – 1938* by Judy L. Klein; Cambridge: Cambridge University Press. *Journal of the American Statistical Association*, 1998.

52. *Fourier Analysis of Time Series: An Introduction* (2nd ed.) by P. Bloomfield, New York: Wiley. *Journal of the American Statistical Association*, 2000.

53. *Time Series Analysis by State Space Methods* by J. Durbin and S.J. Koopman, Oxford: Oxford University Press. *Automatica*, 2003.

Interdisciplinary

54. M. Scher, G. Richardson, P. Coble, N. Day, **D. Stoffer**. The Effects of Prenatal Alcohol and Marijuana Exposure: Disturbances in Neonatal Sleep Cycling and Arousal. *Pediatric Research*, 24, 101 – 105, 1988.

55. N. Day, D. Jasperse, G. Richardson, N. Robles, U. Sambamoorthi, P. Taylor, M. Scher, **D. Stoffer**, and M. Cornelius. Prenatal Exposure to Alcohol: Effects on Infant Growth and Morphologic Characteristics. *Pediatrics*, **84**, 536 – 541, 1989.

56. N. Day, G. Richardson, N. Robles, U. Sambamoorthi, P. Taylor, M. Scher, **D. Stoffer**, D. Jasperse, M. Cornelius. The Effect of Prenatal Alcohol Exposure on Growth and Morphology of the Offspring at Eight Months of Age. *Pediatrics*, **85**, 748 – 752, 1990,.

57. H.W. Gordon and **D.S. Stoffer**. Ultradian Rhythms of Right and Left Hemisphere Function. *International Journal of Neuroscience*, **47**, 57 – 65, 1989.

58. N. Day, N. Robles, G. Richardson, D. Geva, P. Taylor, M. Scher, **D. Stoffer**, M. Cornelius, L. Goldschimdt. The Effects of Moderate Prenatal Alcohol Use on the Growth of Children at Three Years of Age. *Alcoholism: Clinical and Experimental Research*, **15**, 67 – 71, 1991.

59. H.W. Gordon, **D.S. Stoffer**, and P.A. Lee. Ultradian Rhythms in Specialized Cognitive Function. *Journal of Clinical and Experimental Neuropsychology*, **12**, 1990.

60. N. Day, U. Sambamoorthi, G. Richardson, N. Robles, P. Taylor, D., Y. Jhon, M. Scher, **D. Stoffer**, M. Cornelius, and D. Jasperse. Prenatal Marijuana Use and Neonatal Outcome. *Neurotoxicology and Teratology*, **13**, 329 – 334, 1991.

61. N. Day, L. Goldschimdt, N. Robles, G. Richardson, M. Cornelius, P. Taylor, D. Geva, and **D. Stoffer**. Prenatal Alcohol Exposure and Offspring Growth at Eighteen Months of Age: The Predictive Validity of Two Measures of Drinking. *Alcoholism: Clinical and Experimental Research*, **15**, 914 – 918, 1991.

62. Geva, D. and **D.S. Stoffer**. Prenatal alcohol exposure and offspring growth at 18 months of age: The predictive validity of two measures of drinking. *Alcohol Clin. Exp. Res.* 15(6):914 – 918, 1991.

63. D. Geva, L. Goldschmidt, **D. Stoffer**, and N. Day . A Longitudinal Analysis of the Effect of Prenatal Alcohol Exposure on Growth. *Alcoholism: Clinical & Experimental Research*, **17**, 1124 – 1129, 1993.

64. N. Day, G. Richardson, L. Goldschmidt, N. Robles, P. Taylor, **D. Stoffer**, M. Cornelius, and D. Geva. The Effect of Prenatal Marijuana Exposure on the Cognitive Development of Offspring at Age Three. *Neurotoxicology & Teratology*, **16**, 169 – 175, 1994.

65. H.W. Gordon, **D.S. Stoffer**, and P.A. Lee. Ultradian Rhythms in Performance on Tests of Specialized Cognitive Functions. *International Journal of Nueroscience*, **83**, 199 – 211, 1995.

66. L. Goldschmidt, G. Richardson, **D. Stoffer**, D. Geva, and N. Day. Prenatal Alcohol Exposure and Offspring School Achievement at Age Six: A Nonlinear Fit. *Alcoholism: Clinical and Experimental Research*, **20**, 455 – 461, 1996.

67. S. Truschel, E. Wang, W. G. Ruiz, **D. Stoffer**, M. Zeidel, , and G. Apodaca. Stretch-mediated Exocytosis of Discoidal Vesicles in Urinary Bladder Epithelium. *Molecular Biology of the Cell*, **11**, 497A – 497A 2573 Suppl. S, 2000.

68. S. Truschel, E. Wang, W. G. Ruiz, S-M. Leung, R. Rojas, J. Lavelle, M. Zeidel, **D. Stoffer**, and G. Apodaca. Stretch-regulated Exocytosis/Endocytosis in Bladder Umbrella Cells. *Molecular Biology of the Cell*, **13**, 830 – 846, 2002.

69. Zhu Z, He X, Johnson, C, Stoops, J, Eaker A, **Stoffer, D.S.**, Bell, A, Zarnegar, R, DeFrances, M. PI3K is negatively regulated by PIK3IP1, a novel p110 interacting protein. *Biochem Biophys Res Commun.*, **358**, 66 – 72. 2007.

Invited Talks (since 2000)

Genentech Inc., Biostatistics Seminar Series, San Francisco, CA, 2000.

Second International Symposium on Frontiers of Time Series Modeling: Nonparametric Approach to Knowledge Discovery, Nara, Japan, Dec 2000.

Ohio State University, Department of Statistics Seminar Series, Jan 2001.

US-Japan Joint Time Series Conference, Kyoto & Tokyo, Japan, June 2001.

University of Chicago, Department of Statistics Seminar Series, Feb 2002.

Institute for Mathematics and its Applications Workshop on Geophysics, Nov 2001.

Joint Statistical Meeting, New York, 2002.

Conference in Honor of J. Durbin, Free University of Amsterdam, Aug 2002.

University of Illinois, Department of Statistics Seminar Series, Oct 2002 and Oct 2003.

Cuban Neuroscience Center, Havana, Cuba, May 2003.

Center for Genetic Engineering and Biotechnology (CIGB), Havana, Cuba, May 2003.

Swiss-French Universities Winter Seminar Series, Villars, Switzerland, Dec 2003.

University of Pennsylvania Biostatistics Seminar Series, 2004.

International Workshop on Recent Advances in Time Series Analysis, Cyprus - Session Organizer, 2004.

Time Series Workshop, Kaiserslautern, Germany, 2005.

Time Series Workshop, Waseda University, Japan, 2006.

Chinese University of Hong Kong, Department of Statistics Seminar Series, 2006.

Johns Hopkins, Department of Biostatistics Seminar Series, 2006.

Escola de Modelos de Regressão, Salvador, Brazil, 2007

International Biometric Society Eastern North American Region (ENAR), Atlanta, 2007

Colloquium on Time Series at the Occasion of Pedro A. Morettin's 65th Anniversary, Campos do Jordão, Brazil, 2007.

Penn State University, Department of Statistics Seminar Series, 2007.

International Workshop on Recent Advances in Time Series Analysis, Cyprus, 2008.

First International Workshop on Functional and Operatorial Statistics, University Paul Sabatier, Toulouse, France, 2008.

Joint Statistical Meeting, Denver, 2008.

Texas A&M University, Department of Statistics Seminar Series, 2009.

Columbia University, Workshop: Time Series Analysis in Neuroimaging, 2009.

Rutgers University, Department of Statistics Seminar Series, 2009.

Other Professional Activities

Departmental Editor, *Journal of Forecasting*, 1999-Present.

Associate Editor, *Annals of the Institute of Statistical Mathematics*, 2003-Present.

COPSS Snedecor Awards Committee member representing ASA, 2002 – 2006.

COPSS Snedecor Awards Committee Chairman, 2005.

Associate Editor, *Journal of the American Statistical Association*, Review Section, 1996-1999.

Associate Editor, *Journal of Forecasting*, 1989 – 1999.

Member of the NSF Statistics and Probability Program's Screening Panel, 2001, 2004.

Member of the NSF Panel on CAREER Awards, 2005, 2006.

Co-organizer, US-Japan Joint Time Series Conference, Kyoto, Japan, 2001.

Host and Co-organizer, NSF/NBER Seminar on Time Series, University of Pittsburgh, September, 1991.

Session Organizer, IMS/ENAR Joint Regional Meeting, Philadelphia, PA, 1993.

Expert Witness: Civil Action 91-0706, US District Court - Western District of Pennsylvania, Bohler-Uddeholm, et al. v Ellwood Group, et al. (1996).

Expert Witness: Civil Action 96 CIV 0671 (BSJ), US District Court - Southern District of New York, Whittlesey v Espy, et al. (1996).

Directed Research

Thurumani Panchalingam, Master's of Science in Applied Statistics, 1985. *Estimation of the Walsh-Fourier Spectral Density for Binary Time Series*.

Maryanne Frabotta, Master's of Science in Applied Statistics, 1987. *Bootstrapping the Kalman Filter*.

Gloria Ikosi, Master's of Science in Applied Statistics, 1990. *Aspects of Spatial Modeling*.

David A. Wendt, Ph.D., 1999. *Spectral Analysis of Categorical Random Fields*. David was a Mellon Fellow (AY99), and also received a grant from NASA to support his research.

Laura Pulgarin, MS in Applied Statistics, 2001. *Applied Comparison Between GARCH and Stochastic Volatility Models*.

Hsaio-Yun Huang, Ph.D., 2003. *Discrimination and Classification of Nonstationary Time Series using the SLEX Model*.

Tulay Sengul, Ph.D., 2004. *The Time-varying Autoregressive Model with Covariates for the Analysis of Longitudinal Data with Missing Values.*

Jeongeun Kim, Ph.D., 2005. *Parameter Estimation in Stochastic Volatility Models with Missing Data using Particle Methods and the EM Algorithm.*

Mark Gamalo, Ph.D., 2006. *Bounded Influence Approaches To Constrained Mixed Vector Autoregressive Models.*

Sangdae Han, Ph.D., 2008. *Comparing Spectral Densities In Replicated Time Series By Smoothing Spline Anova.*

Heywook Jeong, Ph.D. In progress.