

JONATHAN R. STROUD

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EDUCATION

Ph.D., Statistics, Duke University, 1999.
M.S., Statistics, Duke University, 1996.
B.A., Mathematics, Boston University, 1994.

PROFESSIONAL EXPERIENCE

2015– Associate Professor of Statistics, McDonough School of Business, Georgetown University.
2010–2015 Associate Professor, Department of Statistics, George Washington University.
2008-2010 Assistant Professor, Department of Statistics, George Washington University.
2001-2008 Assistant Professor, Department of Statistics, The Wharton School, University of Pennsylvania.
2003-2008 Faculty Associate, Penn Institute for Urban Research, University of Pennsylvania.
May 2003/4 Visitor, National Center for Atmospheric Research, Boulder, Colorado.
1999–2001 Postdoc, Department of Statistics, University of Chicago.
1999–2001 Postdoc, Environmental Research Division, Argonne National Laboratory.
1997–1999 Research Assistant, Finance Department, Fuqua School of Business, Duke University.

GRANTS

Co-Principal Investigator, 2003–2007, the *Center for Integrating Statistical and Environmental Sciences* at the University of Chicago, funded by the Environmental Protection Agency (EPA). Project Amount: \$6.2 Million. Developed statistical algorithms for combining numerical models with satellite data. Collaborated with geophysicists from the National Oceanic and Atmospheric Administration (NOAA), Argonne National Laboratory and the University of Michigan.

CONSULTING

Consultant for the Royal Bank of Scotland (Foreign Exchange Desk), Summer 2008. Developed stochastic volatility jump-diffusion models for high-frequency exchange rate data, and derived new particle filtering algorithms for sequential estimation of volatility, jumps and parameters.

RESEARCH INTERESTS

Bayesian Statistics, State space models, MCMC, Particle filters, Finance, Stochastic volatility, Spatio-temporal models, Data assimilation.

SELECTED PUBLICATIONS

Katzfuss, M., Stroud, J. R. and Wikle, C. K. (2019) “Ensemble Kalman methods for high-dimensional hierarchical dynamic space-time models.” Accepted for publication, *Journal of the American Statistical Association*.

Stroud, J. R., Stein, M. L. and Lysen, S. (2017) “Bayesian and maximum likelihood estimation of Gaussian processes observed on an incomplete lattice.” *Journal of Computational and Graphical Statistics*, 26, 108-120.

Stroud, J. R. and Johannes, M. S. (2014) “Bayesian modeling and forecasting of 24-hour high-frequency volatility.” *Journal of the American Statistical Association*, 109, 1368-1384.

Stroud, J. R., Stein, M. L., Lesht, B. M., Schwab, D. J., and Beletsky, D. (2010) “An ensemble Kalman filter and smoother for satellite data assimilation.” *Journal of the American Statistical Association*, 105, 978-990.

Johannes, M. S., Polson, N. G., and Stroud, J. R. (2009) “Optimal filtering of jump diffusions: extracting latent states from asset prices.” *Review of Financial Studies*, 22, 2559-2599.

Polson, N. G., Stroud, J. R., and Müller, P. (2008) “Practical filtering with sequential parameter learning.” *Journal of the Royal Statistical Society, Series B*, 70, 413-428.

Weinberg, J., Brown, L. D., and Stroud, J. R. (2007) “Bayesian forecasting of an inhomogeneous Poisson process with applications to call center data.” *Journal of the American Statistical Association*, 102, 1185-1199.

Brandt, M. W., Goyal, A., Santa-Clara, P., and Stroud, J. R. (2005) “A simulation approach to dynamic portfolio choice with an application to learning about return predictability.” *Review of Financial Studies*, 18, 831–873.

Stroud, J. R., Müller, P., and Polson, N. G. (2003) “Nonlinear state-space models with state-dependent variances.” *Journal of the American Statistical Association*, 98, 377–386.

Stroud, J. R., Müller, P., and Sansó, B. (2001) “Dynamic models for spatiotemporal data.” *Journal of the Royal Statistical Society, Series B*, 63, 673–689.

INVITED LECTURES AT CONFERENCES

Joint Statistical Meetings, Denver, CO, August 2019.

ICSA Conference, Tianjin, China, July 2019.

TIES Workshop, Guanajuato, Mexico July 2018.

TIES Workshop, Bergamo, Italy, July 2017

International Statistical Institute Meeting, Marrakech, Morocco, July 2017.

Joint Statistical Meetings, Chicago, IL, August 2016.

International Society for Bayesian Analysis, 13th World Meeting, Cagliari, Sardinia, Italy, June 2016.

9th International Conference on Computational and Financial Econometrics, London, UK, December, 2015.

Workshop on Data Assimilation, National Center for Atmospheric Research, Boulder, CO, May 2015.

Seminar on Bayesian Inference in Econometrics and Statistics, Washington University, St. Louis, March, 2015.

Eastern Sectional Meeting of the American Mathematical Society, Georgetown University, March, 2015.

Meeting of the International Environmetrics Society, Guangzhou, China, December 2014.

International Society for Bayesian Analysis, 12th World Meeting, Cancun, Mexico, May 2014.

QuantValley/QMI Annual Research Conference, NYSE, New York, NY, June 2013.

ISBA Regional Conference on Bayesian Theory & Applications, Varanasi, India, January 2013.

International Indian Statistical Science Conference, Chennai, India, January 2013.

International Society for Bayesian Analysis, 11th World Meeting, Kyoto, Japan, June 2012.

International Society for Business and Industrial Statistics, Bangkok, Thailand, June 2012.

Symposium on the Interface of Computing Science and Statistics, Houston, TX, May 2012.

Yeditepe International Research Conference on Bayesian Learning, Istanbul, Turkey, June 2011.
Joint Statistical Meetings, Vancouver, Canada, August 2010.
Symposium of the International Chinese Statistical Association, Indianapolis, IN, June 2010.
Keynote Talk, Workshop on Data Assimilation in the Geosciences, Texas A&M University, Oct. 2009.
Joint Statistical Meetings, Washington, DC, August 2009.
SAMSI Workshop on Sequential Monte Carlo Methods, Research Triangle Park, NC. September 2008.
Joint Statistical Meetings, Denver, CO, August 2008.
Joint Statistical Meetings, Salt Lake City, UT, August 2007.
International Symposium on Forecasting, New York, NY, June 2007.
SAMSI/NCAR Workshop on Random Matrices, Boulder, CO, May 2007.
Joint Statistical Meetings, Seattle, WA, August 2006.
Stern-Wharton Conference on Statistics in Business, New York, NY, April 2006.
International Biometric Society/ENAR Meetings, Tampa, FL, March 2006.
Workshop on Continuous-Time Parameter Estimation, Edinburgh, Scotland, December 2005.
Joint Statistical Meetings, Minneapolis, MN, August 2005.
SAMSI Workshop on Sequential Data Assimilation, Research Triangle Park, NC, June 2005.
SAMSI Workshop on Fusing Geophysical Models with Data, Boulder, CO, June 2005.
Fourth Workshop on Bayesian Inference in Stochastic Processes, Varenna, Italy, June 2005.
Second Latin American Congress on Bayesian Statistics, San Jose, Mexico, February 2005.
INFORMS Meetings, Denver, CO, October 2004.
Joint Statistical Meetings, Toronto, Canada, August 2004.
Meeting of the International Environmetrics Society, Portland, ME, June 2004.
International Conference on Statistics, Combinatorics & Related Areas, Portland, ME, October 2003.
Joint Statistical Meetings, San Francisco, CA, August 2003.
International Biometric Society/ENAR Meetings, Tampa, FL, March 2003.
Conference on State Space & Unobserved Component Models, Amsterdam, Netherlands, August 2002.
International Society for Bayesian Analysis, 6th World Meeting, Crete, Greece, May 2000.

DEPARTMENTAL SEMINARS

Cornell University, Operations, Technology and Information Management, May, 2018.
Georgetown University, Operations and Information Management, January, 2015.
Chinese Academy of Sciences, Institute of System Sciences, Beijing, China, December, 2014.
Georgetown University, Operations and Information Management, November, 2014.
University of New Mexico, Department of Mathematics and Statistics, October, 2014.
Western Michigan University, Department of Statistics, November 2012.
University of Maryland-College Park, Weather and Chaos Working Group, March 2012.
George Washington University, Department of Statistics, November 2009.
University of Colorado-Denver, Department of Mathematical Sciences, February 2008.
Hunter College, Department of Mathematics and Statistics, February 2008.
University of Georgia, Department of Statistics, February 2008.
George Washington University, Department of Statistics, February 2008.
Georgetown University, Department of Mathematics, February 2008.
Texas A&M University, Department of Statistics, January 2008.
University of Illinois at Urbana-Champaign, Department of Statistics, September 2007.
Pennsylvania State University, Department of Statistics, November 2006.
Los Alamos National Laboratory, Statistics Group, Los Alamos, NM, January 2006.
University of Chicago, Center for Integrating Statistics & Environmental Sciences, Nov. 2005.
Johns Hopkins University, Department of Biostatistics, April 2005.
National Center for Atmospheric Research, May 2004.

University of California, Santa Cruz, Department of Applied Math and Statistics, April 2004.
Purdue University, Department of Statistics, April 2004.
University of Chicago, Center for Integrating Statistics & Environmental Sciences, March 2004.
Brown University, Department of Biostatistics, January 2004.
National Center for Atmospheric Research, May 2003.
Pennsylvania State University, Department of Statistics, April 2002.
University of Pennsylvania, Wharton School, Department of Statistics, April 2002.
University of Pennsylvania, Wharton School, Department of Statistics, March 2001.
University of California, Los Angeles, Department of Statistics, February 2001.
University of California, Santa Barbara, Department of Statistics, February 2001.
Texas A&M University, Department of Statistics, February 2001.
University of Michigan, School of Business, February 2001.
University of Chicago, Graduate School of Business, February 2001.
University of Missouri, Department of Statistics, February 2001.
AT&T Laboratories, Statistics Group, February 2001.
Florida State University, Department of Statistics, February 2001.
Iowa State University, Department of Statistics, January 2001.
Argonne National Laboratory, Environmental Research Division, October 2000.
Secretaría del Medio Ambiente, Mexico City, Mexico, September 2000.
Universidad Simón Bolívar, CESMa, Caracas, Venezuela, June 2000.
University of Chicago, Graduate School of Business, May 2000.
National Center for Atmospheric Research, February 1999.
Ohio State University, Department of Statistics, February 1999.