SERGE GUILLAS (as of October 2009)

Department of Statistical Science
University College London
Gower Street
London WC1E 6BT
United Kingdom

Office phone: (+44 20) 7679 1867
Fax: (+44 20) 7383 4703
E-mail: serge@stats.ucl.ac.uk

EDUCATION

University Paris VII (Denis Diderot)	Mathematics	B.S.	1992
University Paris XI (Orsay-Paris Sud)	Mathematics	M.S.	1993
University Paris XI (Orsay-Paris Sud)	Mathematics	Agrégation	1995
University Paris VI (Pierre et Marie Curie)	Statistics	M.S.	1998
University Paris VI (Pierre et Marie Curie)	Statistics	Ph.D.	2001
University of Chicago	Statistics	Post doctoral	2002-2004

PROFESSIONAL EXPERIENCE

Associate Professor (UK Reader), Department of Statistical Science, University College London (UCL), UK, 2009-

Assistant Professor (UK Lecturer), Department of Statistical Science, University College London (UCL), UK, 2007-2009

Assistant Professor, School of Mathematics, Georgia Institute of Technology, USA, 2004-2007

Postdoctoral Research Associate, Center for Integrating Statistical and Environmental Science (CISES) and Department of Statistics, University of Chicago, USA, 2002-2004

Instructor, Ecole des mines de Douai (engineering school), France, 1996-2002

INTERNATIONAL AWARD

US EPA 2005 Stratospheric Ozone Protection Award (member of Ozone Science Tiger Team)

FELLOWSHIPS

Visiting Professorship, École Normale Supérieure de Cachan, France, June 2009

Visiting Professorship, Université Charles-de-Gaulle-Lille 3, France, September 2008

Visiting Fellow, Newton Institute for Mathematical Sciences, Cambridge University, UK, June 2008

New Researcher Fellow, Statistical and Applied Mathematical Sciences Institute (SAMSI), USA, 2006-2007

PROFESSIONAL SERVICE

Referee for *The American Statistician, Les Annales de l'I.S.U.P., Journal of Statistical Planning and Inference, Journal of the Royal Statistical Society Series B, Journal of Environmental Management, Journal of Computational and Graphical Statistics, Computational Statistics and Data Analysis, Chemosphere, Journal of Geophysical Research-Atmospheres, Journal of Atmospheric and Solar-Terrestrial Physics, Journal of Multivariate Analysis, Journal of Nonparametric Statistics, Proceedings of the Royal Society Series A, Risk Analysis, Simulation Modelling Practice and Theory.*

Natural Sciences tutor, UCL-Statistical Science, 2009-

Study abroad and affiliate students tutor, UCL-Statistical Science, 2008-

Departmental champion, EPSRC-UCL-Bridging the Gaps: Sustainable Urban Spaces, 2008-

Member, Departmental Research Committee, UCL-Statistical Science, 2008-

Seminar organizer, UCL-Statistical Science, 2007-2009

Invited contributor to the 2006 World Meteorological Organization/United Nations Environment Programme (WMO/UNEP) Ozone Assessment.

Group leader, Air quality working group, SAMSI, USA, Fall 2006

Co-organizer, CISES Seminar, University of Chicago, USA, 2003-2004

Elected member, national faculty committee, Ecoles des mines engineering schools, France, 2001-2002

GRANTS

Open program, Staff Exchange Program & Escalator Fund, EPSRC-UCL-Bridging the Gaps: Sustainable Urban Spaces, 2008 & 2009

London Mathematical Society, overseas invitation grant, 2008 &2009

Faculty Development Grant, Georgia Tech Foundation, 2006

US EPA STAR Grant, Center for Integrating Statistical and Environmental Science, University of Chicago (Co-I), 2004-2007

French Environment Agency grant (LCSQA), "Statistical methods for the prediction of pollution peaks", 2000

PUBLICATIONS

1. Guillas S., Non-causality and functional discretization, limit theorems for ARHX(1) processes [in French], *C. R. Acad. Sci. Paris*, **331**, Série I, 91-94, 2000.

2. Guillas S., Rates of convergence of autocorrelation estimates for autoregressive Hilbertian processes, *Statistics and Probability Letters*, **55**, n.3, 281-291, 2001.

3. Damon J., Guillas S., The inclusion of exogenous variables in functional autoregressive ozone forecasting, *Environmetrics*, **13**, 759-774, 2002.

4. Guillas S., Doubly stochastic Hilbertian processes, *Journal of Applied Probability*, **39**, n.3, 566-580, 2002.

5. Guillas S., Stein M.L., Wuebbles D.J., Xia J., Using chemistry-transport modeling in statistical analysis of stratospheric ozone trends from observations, *Journal of Geophysical Research - Atmospheres*, **109**, D22303, doi:10.1029/2004JD005049, 2004.

6. Damon J., Guillas, S., Estimation and simulation of autoregressive Hilbertian processes with exogenous variables, *Statistical Inference for Stochastic Processes*, **8**, 185-204, 2005.

7. Fernández de Castro B., Guillas S., González Manteiga W., Functional samples and bootstrap for predicting sulfur dioxide levels, *Technometrics*, **47**, 2, 212-222, 2005.

8. Guillas S., Tiao G.C., Wuebbles D.J., and Zubrow A., Statistical diagnostic and correction of a chemistry-transport model for the prediction of total column ozone, *Atmospheric Chemistry and Physics*, **6**, 525-537, 2006.

9. Miller A.J., Cai A., Tiao G.C., Wuebbles D.J., Flynn L.E., Yang S.K., Weatherhead E.C., Fioletov V., Petropavlovskikh I., Meng X.L., Guillas S., Nagatani R.M. and Reinsel G.C., Examination of ozonesonde data for trends and trend changes incorporating solar and arctic oscillation signals, *Journal of Geophysical Research - Atmospheres*, **111**, D13305, doi:10.1029/2005JD006684, 2006.

10. Guillas, S., discussion of the paper "Parameter Estimation for Differential Equations: A Generalized Smoothing Approach" by Ramsay, Hooker, Campbell and Cao, *Journal of the Royal Statistical Society, Series B*, **69** (5), 741-796, 2007.

11. Guillas S., Bao J., Choi Y., Wang Y. Statistical correction and downscaling of chemical transport model ozone forecasts over Atlanta, *Atmospheric Environment*, **42** (6), 1338-1348, 2008.

12. Draghicescu D., Guillas S. and Wu W.B. Quantile curve estimation and visualization for non-stationary time series, *Journal of Computational and Graphical Statistics*, **18**(1), 1-20. doi:10.1198/jcgs.2009.0001, 2009.

13. Dabo-Niang S., Guillas S. Functional semiparametric partially linear model with autoregressive errors, in press, *Journal of Multivariate Analysis*, 2009.

14. Rougier, J., Guillas, S., Maute, A., Richmond, A. D., Expert Knowledge and Multivariate Emulation: The Thermosphere-Ionosphere Electrodynamics General Circulation Model (TIE-GCM), to appear, *Technometrics*, 2009.

15. Guillas, S., Lai, M.-J., Bivariate Splines for Spatial Functional Regression Models, to appear in *Journal*

of Nonparametric Statistics, 2009.

16. Guillas, S., J. Rougier, A. Maute, A.D. Richmond, C.D. Linkletter, Bayesian calibration of the Thermosphere-Ionosphere Electrodynamics General Circulation Model (TIE-GCM), to appear in *Geoscientific Model Development (GMD)*, 2009.

Submitted or in revision:

16. Guillas S., Youn, D., Wuebbles. D.J. Analysis of the Effectiveness of the Montreal Protocol using chemistry transport modelling, submitted, 2009.

17. Guillas, S., Bakare, A., Morley, J., Simons R., Functional autoregressive forecasting of long-term seabed evolution, submitted, 2009.

In preparation:

18. Guillas, S., Bakare, A., Morley, J., Simons R., Data-Driven Statistical Method for Morphodynamic Characterisation and Prediction, in preparation.

19. Ettinger B., Lai, M.-J., Guillas, S., Bivariate Splines for Ozone Concentration Forecasting, in preparation.

INVITED PRESENTATIONS over 2005-2009 (in the USA except when mentioned)

Seminar, University Paris 6, France. June 2005

Seminar, Institut Pierre Simon de Laplace-CNRS, France. June 2005

Seminar, Ecole Nationale des Ponts et Chaussées, France. June 2005

World Conference on Computational Statistics & Data Analysis, Cyprus, 28-31 October, 2005

ISYE Statistics Seminar, Georgia Tech. November 2005

12th International Conference on Statistics, Combinatorics, Mathematics and Applications, Auburn, AL, December 2-4, 2005

Research Horizons Seminar, Georgia Tech, February 2006.

European Geosciences Union, General Assembly 2006, Vienna, Austria, April 2006.

Seminar. Universidad de Santiago de Compostela, Spain, June 2006.

Multivariate Methods in Environmetrics, Chicago, IL, October 2006.

2006-07 Education and Outreach Program SAMSI Two-Day Undergraduate Workshop, Research Triangle Park, NC, November 2006.

Seminar, CISES, University of Chicago, February 2007.

SAMSI/MUCM Mid-Program Workshop, SAMSI, Research Triangle Park, NC, April 2007.

Seminar, Applied mathematics, University of Georgia, April 2007.

SAMSI/NCAR Workshop on Application of Random Matrices Theory and Methods, National Center for Atmospheric Research, Boulder, CO, May 2007.

Transition Workshop, SAMSI, Research Triangle Park, NC, May 2007.

SAMSI/NCAR Workshop on Application of Statistics to Numerical Models: New Methods and Case Studies, National Center for Atmospheric Research, Boulder, Colorado, May 2007.

6th Spatial Econometrics and Statistics workshop, Dijon, France, June 2007.

The 27th Annual International Symposium on Forecasting, New York City, June 2007.

Seminar, Statistics, University of Georgia, August 2007.

Platinum Jubilee Conference of the Indian Statistical Institute, Kolkata, India, January 2008.

Seminar, University of Bristol, UK, May 2008.

Joint Meeting of the Statistical Society of Canada and the Société Française de Statistique, Ottawa, Canada, May 2008.

Seminar, Newton Institute for Mathematical Sciences, Cambridge University, UK, June 2008.

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

Seminar, Université Charles-de-Gaulle-Lille 3, France, September 2008.

Seminar, University of Southampton, UK, November 2008.

Seminar, London School of Economics and Political Science (LSE), UK, November 2008.

Seminar, Applied Mathematics, University College London, UK, March 2009.

NSF Workshop, Uncertainty Quantification for Complex Interacting systems, Los Angeles, April 2009.

Seminar, Einaudi Institute for Economics and Finance (EIEF), Rome, Italy, April 2009.

Seminar, École Normale Supérieure de Cachan, France, June 2009.

Meeting on Environmental and Spatial Statistics, University of Southampton, UK, June 2009.

IMS-China International Conference on Statistics and Probability, Weihai, China, July 2009.

UCL Johnston-Lavis Colloquium 2009: Climate Forcing of Geological and Geomorphological Hazards, London, UK, September 2009.

TEACHING EXPERIENCE

University College London, 2007-
 Introduction to Practical Statistics
 Computing for Practical Statistics

Georgia Tech, 2004-2007
 [Graduate] Linear Statistical Models, Spring 2006
 [Graduate] Special Topics (with E. di Lorenzo). Environmental Data Analysis, Fall 2005
 Introduction to Linear Algebra for Calculus, Fall 2005
 [Graduate] Multivariate Statistical Analysis, Spring 2005, 2007
 Introduction to Linear Algebra for Calculus, Fall 2004

University of Chicago
 Elementary Statistics, Fall 2003

Ecole des mines de Douai, 1996-2002
 Time series; Theory of distributions; Introduction to stochastic processes; Statistics; Applied mathematics; Calculus, Linear algebra and probability

Lycée de Montreuil, 1995-1996
 High school mathematics

Military Academy, Paris, 1993-1994
 Calculus, Linear algebra

GRADUATE AND UNDERGRADUATE STUDENTS SUPERVISED

Farha Al-Kuwari (UCL-Ph.D Statistics), 2009-
Markella Panagi (UCL-MSc Statistics), 2009
Ting Yu, Na Wang (UCL-MSc Statistics), 2008
Jinghui Bao (M.S. Statistics): Spring 2006. Project (Math 8900)
Erich Brownlow (B.S. Discrete Mathematics): Spring 2007 Project (Math 8900)
Spence Whitehead (Ph.D. ECE): Spring 2007. Senior Project (Math 4080)
Ph.D. Committee: C. Shim (06/2006), J. Wei (05/2007)