

# LILY WANG

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## ACADEMIC HISTORY

### Education

- Ph.D. & M.S. in Statistics, Michigan State University 2007  
(Advisor: Professor Lijian Yang)
- M.S. in Applied Mathematics, Tongji University, Shanghai, China 2003
- B.E., Tongji University, Shanghai, China 2000

### Academic Positions Held

- Associate Professor, Dept. of Statistics, Iowa State University 2014–
- Associate Professor, Dept. of Statistics, University of Georgia 2013–2014
- Assistant Professor, Dept. of Statistics, University of Georgia 2007–2013

### Other Professional Experience

- ASA/NSF/BLS Senior Research Fellow, Bureau of Labor Statistics  
Washington, DC 2010–2011

### Honors, Awards, and Recognitions

- National Science Foundation (NSF) Grant (single PI) 2013–2016
- M. G. Michael Research Award, University of Georgia (\$3,000) 2012–2013
- Teaching Academy Fellow, University of Georgia 2011–2012
- Invited Poster Presentation (Featured on the Amstat News, July 2012) MAY 2012  
18th Coalition for National Science Funding Exhibition & Reception on Capitol Hill
- National Science Foundation (NSF) Grant (co PI) 2011–2014
- ASA/NSF/BLS Senior Research Fellowship (\$77,000) 2010–2011
- Travel Award, SAMSI Workshop on Analysis of Object Data 2010
- National Science Foundation (NSF) Grant (single PI) 2009–2013
- Travel Award, IMS Young Researcher Conference 2009
- Young Researcher Award, UFL 11th Annual Winter Workshop 2009
- Travel Award, NISS/ASA Writing Workshop held in Denver, Colorado 2008
- Chinese Government Award for Outstanding Students Abroad (\$5,000) 2007
- Dissertation Fellowship, Michigan State University 2007
- Graduate School Fellowship, Michigan State University 2006
- Laha Award, Institute of Mathematical Statistics 2006

- Young Researcher Fellowship, UFL 8th Annual Winter Workshop 2006
- NSF Travel Support, NISS/SAMSI Workshop 2005
- Teaching Fellowship, Michigan State University SPRING 2005
- Excellent Graduate Student First Prize, Tongji University 2001
- Excellent Graduate Award, Tongji University 2000
- Excellent Undergraduate Student First Prize, Tongji University 1998–2000

## SCHOLARLY ACTIVITIES

### Research Interests

- Non-/semi- parametric methods
- Analysis of time series with complex features
- Survey sampling
- Longitudinal/functional data analysis
- Variable selection and dimension reduction
- Financial econometrics

### Publications

- Peer-Reviewed/Refereed Journal Articles
- [1] Cao, G., **Wang, L.**, Li, Y. and Yang, L. (2015). Oracle-efficient confidence envelopes for covariance functions in dense functional data. *Statistica Sinica*. In press DOI:10.5705/ss.2014.182
  - [2] Wang, G. and **Wang, L.** (2015). Spline estimation and variable selection for single-index prediction models with diverging number of index parameters. *Journal of Statistical Planning and Inference*, 162, 1–19.
  - [3] Gu, L., **Wang, L.**, Härdle, W. and Yang, L. (2014). Simultaneous confidence corridor for varying coefficient regression with sparse functional data. *Test*. 23(4), 806–843.
  - [4] **Wang, L.**, Wang, S. and Wang, G. (2014). Variable selection and estimation for longitudinal survey data. *Journal of Multivariate Analysis*, 130, 409–424.
  - [5] **Wang, L.**, Xue, L., Qu, A. and Liang, H. (2014). Estimation and model selection in generalized additive partial linear models for correlated data with diverging number of covariates. *The Annals of Statistics*, 42(2), 592–624.
  - [6] Lai, M. J. and **Wang, L.** (2013). Penalized bivariate splines for regression. *Statistica Sinica*, 23(3), 1399–1417.
  - [7] Ma, S., Song, Q. and **Wang, L.** (2013). Simultaneous variable selection and estimation in semiparametric modeling of longitudinal/clustered data. *Bernoulli*, 19(1), 252–274.
  - [8] Cao, G., Wang, J., **Wang, L.** and Todem, D. (2012). Spline confidence bands for functional derivatives. *Journal of Statistical Planning and Inference*, 142(6), 1557–1570.
  - [9] **Wang, L.**, Feng, C., Song, Q. and Yang, L. (2012). Efficient semiparametric GARCH modeling of financial volatility. *Statistica Sinica*, 22(1), 249–270.

- [10] **Wang, L.**, Liu, X., Liang, H. and Carroll, R. J. (2011). Estimation and variable selection for generalized additive partial linear models. *The Annals of Statistics*, 39(4), 1827–1851.
- [11] **Wang, L.** and Wang, S. (2011). Nonparametric additive model-assisted estimation for survey data. *Journal of Multivariate Analysis*, 102(7), 1126–1140.
- [12] **Wang, L.** (2011). A nonparametric analysis on the environmental Kuznets curve. *Environmetrics*, 22(3), 420–430.
- [13] Liu, X., **Wang, L.** and Liang, H. (2011). Estimation and variable selection for semi-parametric additive partial linear model. *Statistica Sinica*, 21(3), 1225–1248.
- [14] Gao, L. and **Wang, L.** (2011). Security price responses to unexpected earnings: a nonparametric investigation. *Statistical Methods and Applications*, 20(2), 241–258.
- [15] **Wang, L.** and Yang, L. (2010). Simultaneous confidence bands for time series prediction function. *Journal of Nonparametric Statistics*, 22(8), 999–1018.
- [16] **Wang, L.** (2009). Single-index model-assisted estimation in survey sampling. *Journal of Nonparametric Statistics*, 21(4), 487–504.
- [17] **Wang, L.** and Yang, L. (2009). Spline estimation of single-index models. *Statistica Sinica*, 19(2), 765–783.
- [18] Huang, X., **Wang, L.**, Yang, L. and Kravchenko, A. N. (2008). Management effects on relationships of crop yields with wetness index and precipitation. *Agronomy Journal*, 100(5), 1463–1471.
- [19] **Wang, L.** and Yang, L. (2007). Spline-backfitted kernel smoothing of nonlinear additive autoregression model. *The Annals of Statistics*, 35(6), 2474–2503.
- [20] **Wang, L.** and Liang, H. (2004). Strong uniform convergence for the improved estimator of the regression function under  $\varphi$ -mixing Conditions. *Metrika*, 59(3), 245–261.
- [21] Liang, H. and **Wang, L.** (2001). Convergence rates in the law of large numbers for B-valued random elements. *Acta Mathematica Scientia, Series B*, 21(2), 229–236.

- Other Publications

- [1] **Wang, L.** (2007). Polynomial spline smoothing for nonlinear time series. PhD dissertation, Michigan State University.

### Grants Received

- National Science Foundation DMS-1542332 (DMS-1309800)  
Sole Principal investigator (\$99,999) 08/15/2013–07/31/2016  
*Statistical Inference for Functional Data in Time Series and Survey Sampling: Theory and Methods*
- National Science Foundation DMS-1106816  
Co-investigator (PI: Xiao Song, \$149,966) 08/01/2011–07/31/2014  
*Novel nonparametric methods for prognosis studies with missing covariates*
- The M. G. Michael Award  
Sole Principal investigator (\$3,000) 07/01/2013–06/30/2014  
*Quantile regression analysis of data from complex surveys*
- National Science Foundation DMS-0905730  
Sole Principal investigator (\$100,200) 07/01/2009–06/30/2013  
*Nonparametric estimation with applications to large and complex survey data*

- ASA/NSF/BLS Senior Research Fellowship  
Sole Principal investigator (\$77,000) 08/01/2010–08/14/2011  
*Flexible and Robust Estimation for Complex Survey Sampling*
- Provost Travel Funds JUN 2012  
— to attend the Fourth International Conference on Establishment Surveys in Montreal, Canada (\$2,500)
- Provost Travel Funds JUN 2012  
— to attend the ICES IV Conference in Montréal, Canada (\$2,500)
- Provost Travel Funds SEP 2010  
— to attend the Joint Statistical Meetings in Vancouver, Canada (\$2,340)
- US Census Bureau, contract SUMMER 2010  
Sole Principal investigator (\$5,000)
- UGA President's Venture Fund MAR 2009  
— to attend ICSA Applied Statistics Symposium, in San Francisco, CA (\$2,114)

### Professional Membership

- **Elected Member**, International Statistical Institute 2008–
- Member, American Statistical Association 2007–
- Member, International Chinese Statistical Association 2007–

### Supervision of Student Research

- Major Advisor/Co-Advisor for ISU PhD students  
— Xinyi Li Current
- Major Advisor/Co-Advisor for UGA PhD students  
— Guannan Wang (Assistant Professor at College of William & Mary) 2015  
— Cong Feng (Senior Statistician at Capital One) 2012
- Major Advisor for UGA MS students  
— Siyan Hu 2011
- POS Committee Member for ISU PhD students  
Natalia da Silva, Chenhui Liu, Zhixia Ma, Seho Park, Didem Sari, Kimberly Vanous, Leilei Zhang, Wei Zhang.
- Advisory Committee Member for UGA PhD students  
Sandra Addo, Wenting Fan, Haileab Tesfe Hilafu, Hejiao Hu, Adam Jaeger, Xinyu Liu, Debin Qiu, Wenhui Sheng, Jin Tang, Wenbo Wu, Kun Xu, Yuan Xue, Yuhang Xu, Amy Vaughan.
- Advisory Committee Member for UGA MS students  
Na Hao, Sebastain Nde Awondo, Mitch Muhlheim, Andrew Anderson, Li Li, Qianqian Tang, Kan Bao, Nathan Lekahal.

### Editorship or Editorial Board Member

- **Co-editor** for Sankhya Series B 2012–

### Presentations

- **Invited Colloquium/Seminar Talks**

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- College of Public Health, University of Iowa OCT 22, 2015
  - Iowa Social Science Research Center, University of Iowa APR 29, 2015
  - ISU Big Data seminar series, Iowa State University APR 24, 2015
  - ISU Big Data seminar series, Iowa State University DEC 3, 2014
  - Department of Mathematical Sciences, University of Texas at Dallas MAR 28, 2014
  - Department of Statistics, Iowa State University FEB 12, 2014
  - Department of Mathematics and Statistics, Auburn University NOV 8, 2013
  - Department of Applied Math, Tongji University JUN 24, 2013
  - Department of Statistics, University of Georgia JAN 8, 2013
  - Department of Statistics, University of Georgia FEB 15, 2012
  - US Bureau of Labor Statistics, Washington, DC JUL 14, 2011
  - US Bureau of Labor Statistics, Washington, DC MAR 3, 2011
  - Department of Statistics, Purdue University JAN 28, 2011
  - Department of Statistics, Oregon State University JAN 24, 2011
  - Department of Math, Stat & Computer Science, UIC NOV 23, 2010
  - Department of Mathematics, University of Georgia OCT 12, 2010
  - US Census Bureau, Washington, DC JUL 12–16, 2010
  - Department of Biostatistics and Bioinformatics, Emory JAN 29, 2009
  - Department of Mathematical Sciences, Clemson University OCT 30, 2008
  - Department of Mathematics, Georgia Institute of Technology OCT 29, 2008
  - Department of Statistics, University of Georgia OCT 28, 2008
  - Department of Statistics, University of Georgia SEP 18, 2007
  - Computational Systems Biology Lab, University of Georgia AUG 30, 2007
  - Department of Mathematics, College of William and Mary FEB 17–19, 2007
  - School of Industrial & Systems Engineering, Georgia Tech FEB 14–16, 2007
  - Department of Statistics, George Washington University FEB 11–13, 2007
  - Department of Statistics, Penn State University FEB 7–9, 2007
  - Department of Statistics, University of Georgia FEB 4–6, 2007
  - Department of Statistics, Colorado State University JAN 28–30, 2007
  - Department of Statistics, Indiana University JAN 25–27, 2007
  - Department of Mathematics, University of Kansas JAN 21–23, 2007
  - Department of Math & Stat, California State, Long Beach JAN 11–13, 2007
  - Department of Management Science, University of Miami DEC 10–11, 2006
  - Department of Statistics & Probability, Michigan State OCT 24, 2006
  - Department of Statistics, Texas A&M University OCT 5, 2006
- **Invited Conference Presentations** (\*: invited discussant)
- ICSA Applied Statistics Symposium, JUN 15–18, 2014, Portland, OR.

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- The Second Taihu International Statistics Forum, JUL 6–8, 2013, Suzhou, China.
  - Graybill Conference on Modern Survey Statistics, JUN 9–12, 2013, Fort Collins, Colorado.
  - The fourth International Conference on Establishment Surveys (ICES-IV), JUN 11–14, 2012, Montréal, Quebec, Canada.
  - Workshop on Biostatistics and Bioinformatics, MAY 4–6, 2012, Atlanta, GA.
  - ICSA Applied Statistics Symposium, JUN 26–29, 2011, New York City.
  - SRCOS 2011 Summer Research Conference, JUN 5–8, 2011, McCormick, SC.
  - SAMSI Workshop, SEP 11–15, 2010, Research Triangle Park, NC.
  - Joint Statistical Meetings, JUL 31–AUG 5, 2010, Vancouver, BC, Canada.
  - ICSA Applied Statistics Symposium, JUN 20–23, 2010, Indianapolis, IN.
  - ICSA Applied Statistics Symposium\*, JUN 20–23, 2010, Indianapolis, IN.
  - Joint Statistical Meetings\*, AUG 2–7, 2009, Washington, DC.
  - Twelfth Meeting of New Researchers in Statistics and Probability, JUL 28–31, 2009, Baltimore, MD.
  - ICSA Applied Statistics Symposium, JUN 21–24, 2009, San Francisco, CA.
  - Symposium on New Directions in Asymptotic Statistics, MAY 15–16, 2009, Athens, GA.
  - ICSA Applied Statistics Symposium, JUN 14–17, 2006, Storrs, CT.
  - The 38th Symposium of the Interface of Statistics, Computer Science and Applications, MAY 24–27, 2006, Pasadena, CA.
  - **Contributed/Topic Contributed Conference Presentations** (\*: topic contributed)
    - Eastern North American Region Meeting\*, MAR 16–19, 2014, Baltimore, MA.
    - Eastern North American Region Meeting\*, MAR 9–13, 2013, Orlando, FL.
    - Eastern North American Region Meeting\*, APR 1–4, 2012, Washington, DC.
    - Joint Statistical Meetings\*, AUG 2–7, 2009, Washington, DC.
    - Joint Statistical Meetings, AUG 2–7, 2008, Denver, CO.
    - Joint Statistical Meetings, AUG 6–10, 2006, Seattle, WA.
    - The 69th IMS Annual Meeting, JUL 30–AUG 4, 2006, Rio de Janeiro, Brazil.
  - **Conference Poster Presentations**
    - Coalition for National Science Funding Exhibition & Reception on Capitol Hill, MAY 15, 2012, Washington, DC. [*Prominently featured on the Amstat News, July 2012*]
    - University of Florida Winter Workshop, JAN 8–10, 2009, Gainesville, FL.
    - University of Florida Winter Workshop, JAN 14–16, 2006, Gainesville, FL.
    - NISS/SAMSI workshop on Financial Mathematics, Statistics and Econometrics, SEP 18–21, 2005, RTP, NC.
  - **Conference/Workshop Attendance**
    - NISS/SAMSI Cell Suppression Workshop, MAY 14, 2012, Washington, DC.
    - 2012 Academic Affairs Faculty Symposium, MAR 23–24, 2012, Unicoi, GA.

- SRCOS 2009 SUMMER Research Conference, JUN 7–10, Jekyll Island, GA.
- Proposal Writing Workshop: Write Winning Grants, JUN 17–18, 2009, Athens, GA.
- SUMMER school on “Multivariate Splines and Their Applications”, MAY 11–22, 2009, Athens, GA.
- NISS/ASA Writing Workshop, AUG 3–6, 2008, Denver, CO.

## TEACHING EXPERIENCE

### Courses Taught @ ISU

- STAT 401, Statistical Methods for Research Workers SPRING 2015
- STAT 551, Times Series Analysis FALL 2014

### Course Development @ UGA

- STAT 6210 Introduction to Statistical Methods I FALL 2012
- STAT 8920 Statistical Research & Professional Practice I FALL 2010
- STAT 6360 Statistical Software Programming SPRING 2010

### Courses Taught @ UGA (\*: new course; \*\*: new teaching materials)

- STAT 4/6290 Non-parametric Statistics SPRING 2014
- STAT 5020 Capstone Course II SPRING 2014
- STAT 4/6240 Sampling and Survey Methods FALL 2013
- STAT 5010 Capstone Course I FALL 2013
- STAT 4/6360 Statistical Software Programming SPRING 2013
- STAT 4/6240 Sampling and Survey Methods FALL 2012
- STAT 6210\*\* Introduction to Statistical Methods I FALL 2012
- STAT 4/6360 Statistical Software Programming SPRING 2012
- STAT 4/6240 Sampling and Survey Methods FALL 2011
- STAT 8910 Graduate Student Seminar FALL 2011
- STAT 8920 Statistical Research & Professional Practice I FALL 2011
- STAT 6210 Statistical Methods I FALL 2010
- STAT 8920\* Statistical Research & Professional Practice I FALL 2010
- STAT 6360\* Introduction to SAS and R SPRING 2010
- STAT 4/6290 Non-parametric Statistics SPRING 2010
- STAT 6210 Statistical Methods I FALL 2009
- STAT 4/6290 Non-parametric Statistics SPRING 2009
- STAT 6210 Statistical Methods I FALL 2008
- STAT 6210 Statistical Methods I FALL 2008
- STAT 8910 Graduate Student Seminar FALL 2008
- STAT 6210 Statistical Methods I FALL 2007

**Courses Taught @ MSU**

- STT 430 Introduction to Probability and Statistics SUMMER 2007
- STT 200 Statistical Methods SUMMER 2004 & 2005

**PUBLIC SERVICES****Service To Governmental Agencies**

- ASA/NSF/BLS Senior Research Fellow 2010–2011

**OTHER SERVICES****Service to the Department @ ISU**

- Member of Computation Advisory Committee 2015–2016
- Chair of Seminar Committee SPRING 2015
- Member of Search Committees 2014–2015
- Member of Advisory Committee to the Chair 2014–2015

**Service to the Department @ UGA**

- Member of Graduate Committee 2008–2009, 2011–2014
- Co-Chair of Seminar Committee 2008–2009, 2011–2012, 2013–2014
- Member of Undergraduate Committee 2010–2011, 2012–2013
- Member of Mentoring Committee 2010–2013
- Member of Research Development Committee 2009–2010
- Member of Computing Committee 2007–2008

**Journal Editing Services**

- Co-editor for Sankhya Series B 2012–

**Journal Referee Services** (more than 60 articles)

Annals of Statistics (5), Annals of Applied Statistics (1), Annals of Management Science (1 article) , Bernoulli (1), Biometrics (4), Communications in Statistics (2), Computational Statistics and Data Analysis (2), Electronic Journal of Statistics (5), International Journal of Environmental Studies (1), Journal of American Statistical Association (11), Journal of Business and Economic Statistics (2), Journal of Computational and Graphical Statistics (2), Journal of the Korean Statistical Society (2), Journal of Nonparametric Statistics (5), Journal of Multivariate Analysis (5), Journal of Probability and Statistics (1), Journal of Statistical Planning and Inference (5), Sankhya B (6), Statistica Sinica (5), Statistics and Its Interface (1), Statistics & Probability Letters (3), Survey Methodology (1), The American Statistician (2).

**Grant Reviews**

- Proposal Reviewer, ISU Presidential Initiative for Interdisciplinary Research for Data Driven Science 2015



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- Panel Reviewer, National Science Foundation, Arlington, VA 2014
  - Proposal Reviewer, National Security Agency 2014
  - Proposal Reviewer, National Security Agency 2012
  - Proposal Reviewer, University of Toledo Internal Grants 2011
  - Proposal Reviewer, National Security Agency 2010

### **Other Professional Services**

- Invited Session Organizer, 2015 Joint ICSA Symposium and Graybill Conference 2015
- Invited Session Organizer, International Workshop on  
— “Non- and Semiparametric Volatility and Correlation Models” 2014
- Invited Session Organizer, Eastern North American Region Meeting 2014
- Invited Session Organizer, 2013 ICSA and ISBS Joint Statistical Conference 2013
- Topic Contributed Session Organizer, Joint Statistical Meetings 2013
- Invited participant, 2012 Coalition for NSF Exhibition and Reception 2012
- Invited Session Organizer and Chair, Joint Statistical Meetings 2012
- Contributed Session Chair, Eastern North American Region Meeting 2012
- Committee Member, ASA Nonparametric Student Paper Competition 2012
- Contributed Session Chair, Joint Statistical Meetings 2012
- Invited Session Chair, Annual ICSA Applied Statistics Symposium 2011
- Invited Session Organizer, Annual ICSA Applied Statistics Symposium 2010
- Invited Session Chair, Annual ICSA Applied Statistics Symposium 2009
- Local Committee Member/Invited Session Chair  
Symposium on New Directions in Asymptotic Statistics 2009