

Curriculum Vitae

Wenbin Lu, Ph.D.
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Education

May, 2003	Columbia University, New York, NY	Ph.D. in Statistics Dissertation: Semiparametric cure models and related topics. Advisor: Professor Zhiliang Ying
May, 2001	Columbia University, New York, NY	M.A. in Statistics
July, 1999	Peking University, Beijing, China	B.S. in Statistics

Positions and Employment

2009 - present	Associate Professor	Department of Statistics, North Carolina State University
2003 - 2009	Assistant Professor	Department of Statistics, North Carolina State University
2007 - 2008	Faculty Fellow	SASMSI, Research Triangle Park, NC.
2001 - 2003	Research Assistant	Department of Statistics, Columbia University
1999 - 2001	Teaching Assistant	Department of Statistics, Columbia University

Other Experience and Professional Memberships

2001 - Present	Member, American Statistical Association (ASA)
2006 - Present	Member, Institute of Mathematical Statistics (IMS)
2001 - Present	Member, International Biometric Society (ENAR)
2003 - Present	Member, International Chinese Statistical Association (ICSA)

Honors and Awards

2004 - 2005	Faculty Research and Professional Development Award, NCSU
1999 - 2003	Faculty Fellowship, Columbia University
1999	Outstanding Undergraduate Award, Peking University
1996 - 1997	BaoJie Outstanding Student Award, Peking University
1995 - 1996	MinDe Outstanding Student Award, Peking University

Research Interests

1. Statistical methods in clinical trials
2. Survival analysis
3. Variable selection and high dimensional data analysis
4. Longitudinal data analysis
5. Semiparametric inference
6. Statistical genetics

Publications and Technical Reports

Refereed Journal Publications:

1. Wenbin Lu and Zhiliang Ying (2004). On semiparametric transformation cure models. *Biometrika*, **91**, 331-343.
2. Wenbin Lu (2005). Marginal regression of multivariate event times based on linear transformation models. *Lifetime Data Analysis*, **11**, 389-404.
3. Wenbin Lu and Yu Liang (2006). Empirical likelihood inference for linear transformation models. *Journal of Multivariate Analysis*, **97**, 1586-1599.
4. Wenbin Lu and Anastasios Tsiatis (2006). Semiparametric transformation models for case-cohort Study. *Biometrika*, **93**, 207-214.
5. Mengling Liu, Wenbin Lu and Yongzhao Shao (2006). Interval mapping of quantitative trait loci for time-to-event data with the proportional hazards mixture cure model. *Biometrics*, **62**, 1053-1061.
6. Mengling Liu, Wenbin Lu and Yongzhao Shao (2006). Mixture cure model with an application to interval mapping of quantitative trait loci. *Lifetime Data Analysis*, **12**, 421-440.
7. Hao Helen Zhang and Wenbin Lu (2007). Adaptive-LASSO for Cox's proportional hazards model. *Biometrika*, **94**, 1-13.
8. Wenbin Lu (2007). Tests of independence for censored bivariate failure time data. *Lifetime Data Analysis*, **13**, 75-90.
9. Wenbin Lu and Hao (Helen) Zhang (2007). Variable selection for proportional odds model. *Statistics in Medicine*, **26**, 3771-3781.
10. Wenbin Lu and Yu Liang (2008). Analysis of competing risks data with missing cause of failure under additive hazards model. *Statistica Sinica*, **19**, 219-234.
11. Wenbin Lu (2008). Nonparametric maximum likelihood estimation in the proportional hazards cure model. *Annals of the Institute of Statistical Mathematics*, **60**, 545-574.
12. Wenbin Lu and Limin Peng (2008). Semiparametric analysis of mixture regression models with competing risks data. *Lifetime Data Analysis*, **14**, 231-252.
13. Mengling Liu, Wenbin Lu and Yongzhao Shao (2008). A monte carlo approach for change-point detection in the Cox proportional hazards model. *Statistics in Medicine*, **27**, 3894-3909.
14. Lexin Li and Wenbin Lu (2008). Sufficient dimension reduction with missing predictors.

- Journal of the American Statistical Association*, **103**, 822-831.
15. Wenbin Lu and Lexin Li (2008). Boosting method for nonlinear transformation models with censored survival data. *Biostatistics*, **9**, 658-667.
 16. Yu Liang, Wenbin Lu and Zhiliang Ying (2009). Joint modeling and analysis longitudinal data with informative observation times. *Biometrics*, **65**, 377-384.
 17. Wenbin Lu (2009). Efficiency comparison between mean and log-rank tests with recurrent event time data. *Science in China Series A: Mathematics*, **52**, 1169-1180.
 18. Mengling Liu, Wenbin Lu, Chi-hong Tseng (2009). Cox regression in nested case-control studies with auxiliary covariates. *Accepted by Biometrics*.
 19. Wenbin Lu (2010). Efficient estimation for accelerated failure time model with a cure fraction. *Statistica Sinica*, **20**, 661-674.
 20. Jung-Ying Tzeng, Wenbin Lu, Mark W. Farnen, Youfang Liu and Patrick F. Sullivan (2010), Haplotype-based Pharmacogenetic Analysis for Longitudinal Quantitative Traits in the Presence of Dropout. *Journal of Biopharmaceutical Statistics*, special issue on "Statistical Genomics in Clinical Trials", **20(2)**, 334-350.
 21. Wenbin Lu and Hao Helen Zhang (2010), On Estimation of Partially Linear Transformation Models. *Journal of the American Statistical Association*, **105**, 683-691.
 22. Justin H. Shows, Wenbin Lu and Hao Helen Zhang (2010), Sparse Estimation and Inference for Censored Median Regression. *Journal of Statistical Planning and Inference*, **140**, 1903-1917.
 23. Hao Helen Zhang, Wenbin Lu and Hansheng Wang (2010), On Sparse Estimation for Semiparametric Linear Transformation Models, *Journal of Multivariate Analysis*, **101**, 1594-1606.
 24. Mengling Liu, Wenbin Lu, Roy E. Shore and Anne Zeleniuch-Jacquotte (2010), Cox Regression Model with Time-Varying Coefficients in Nested Case-Control Studies. *Biostatistics*, **11**, 693-704.
 25. Wenbin Lu and Lexin Li (2010), Sufficient Dimension Reduction for Censored Regressions. *Biometrics*, accepted.
 26. Lei Pang, Wenbin Lu and Huixia Judy Wang (2010), Variance Estimation in Censored Quantile Regression via Induced Smoothing. *Computational Statistics and Data Analysis*, accepted.

Collaborative Work:

1. Yixin Cai, Mo-Yuen Chow, Wenbin Lu and Lexin Li (2009), Statistical Feature Selection from Massive Data in Distribution Fault Diagnosis. *The IEEE Transactions on Power Systems*, accepted.
2. Yixin Cai, Mo-Yuen Chow, Wenbin Lu and Lexin Li (2010), Evaluation of Distribution Fault Diagnosis Algorithms using ROC Curves. *The Proceedings of 2010 IEEE Power Systems Engineering General Meeting*, accepted.

Technical Reports:

1. Hao (Helen) Zhang and Wenbin Lu (2006). Variable selection via penalized likelihood with adaptive penalty. Technical report 2594, Department of Statistics, NCSU.

2. Mengling Liu and Wenbin Lu (2007). Semiparametric marginalised model for longitudinal data with nonignorable dropout. Technical report.
3. Nelson, E. C., Lu, W. B. and Ghosh, S. K. (2009). A Bayesian semiparametric accelerated failure time cure model for censored data. In preparation.
4. Lu, W. B. and Liu, M. L. (2009). Efficient estimation for the accelerated failure time model with interval censored data. In revision.

Professional Activities

Session Organizer and Chair, 2007 ICSA Applied Statistics Symposium
Local Research Group on Data Mining, Group member, 2005-2006.
Session Chair, 2005, 2006, 2009 ENAR Spring Meeting
Session Chair, 2004, 2005, 2008 Joint Statistical Meetings

Referee Service

- Associate Editor, *Biostatistics*, July 2010 - present
- Associate Editor, *Journal of Statistical Theory and Practice*, Jan 2010 - present
- Proposal: NIH review - Clinical Hematology
NIH review - Selected Topics in Transfusion Medicine
NSA Mathematics & Science Grant Proposal
Austrian Science Fund (FWF)
- Journal review service: review for *Annals of the Institute of Statistical Mathematics (AISM)*, *Biometrics*, *Biometrika*, *Biostatistics*, *BMC Medical Research Methodology*, *Computational Statistics and Data Analysis (CSDA)*, *Communications in Statistics – Theory & Methods (CSTM)*, *International Journal of Statistics (IJS)*, *Journal of American Statistical Association (JASA)*, *Journal of Applied Statistics (JAS)*, *Journal of Computational and Graphical Statistics (JCGS)*, *Journal of Multivariate Analysis (JMA)*, *Journal of Royal Statistical Society, series B (JRSSB)*, *Journal of Statistical Planning and Inference (JSPI)*, *Journal of Statistical Software*, *Lifetime Data Analysis (LDA)*, *Scandinavian Journal of Statistics (SJS)*, *Statistical Applications in Genetics and Molecular Biology*, *Statistics in Medicine (SIM)*, *Statistica Sinica*, *Statistics and Its Inference (SII)*, ...

Research Support

1. NCSU Faculty Research and Professional Development Award Grant
Grant number: 350656, 03/01/04 - 02/28/05
Title: “Models, Methodologies and Related Theory for Analyzing Survival Data with Long-term Survivors.”
Role: PI
2. National Science Foundation (NSF) Standard Grant

Grant number: DMS-0504269, 07/01/05 - 12/31/08

Title: "Semiparametric Models, Methodologies and Related Theory for Analysis of Censored Survival Data."

Role: PI

3. National Institute of Health (NIH) Research Grant

Grant number: 1 RO1 CA-140632-0A1, 04/01/10 - 2/28/14

Title: "Flexible Statistical Methods for Complex Survival Data in Biomedical Studies."

Role: PI

4. National Institute of Health (NIH) Research Grant

Grant number: 1 RO3 CA-150077-01, 07/01/10 - 6/30/12

Title: "Sample Size Method and Software Development in Survival Trial with a Cure Rate."

Role: Co-investigator (subcontract from University of South Carolina, PI, Dr. Jiajia Zhang)

5. National Institute of Health (NIH) Research Grant

Grant number: 1 RO3 CA-153083-01, 08/01/10 - 7/31/12

Title: "Time-Variant Effects of Cancer Risk Factors in Nested Case-Control Studies."

Role: Co-investigator (subcontract from New York University, PI, Dr. Mengling Liu)

6. National Institute of Health (NIH) Research Grant

Grant number: 1 RO1 CA-051962-20, 08/01/10 - 7/31/11

Title: "Statistical Analysis of Complex Data in Cancer."

Role: Co-investigator (PI, Dr. Anastasios Tsiatis)

Travel Support

1. NSF travel support, JSM 8th New Researchers Conference, August 2005, Minneapolis.
2. NIH travel support, ENAR Junior Faculty Workshop, March 2004, Pittsburgh.

Student Advising

Ph.D. Chair or Co-chair:

1. Miao Yu, graduated in August 2007 (co-advisor Daowen Zhang)
2. Justin Shows, graduated in May 2009 (co-advisor Hao Helen Zhang)
3. Elizabeth Nelson, graduated in May 2009 (co-advisor Sujit Ghosh)
4. Mihye Ahn, expect to complete in May 2010 (co-advisor Hao Helen Zhang)
5. Caroline Seabrook, expect to complete in May 2010 (co-advisor Lexin Li)
6. Song Yan, expect to complete in May 2011 (co-advisor Daowen Zhang)
7. Chuan Tian, expect to complete in May 2011 (co-advisor Lexin Li)
8. Zifang Guo, (co-advisor Lexin Li)

9. Lei Pang, (co-advisor Huixia Judy Wang)
10. Na Cai, (Hao Helen Zhang)
11. Bo Liu

Department/University Services

2002-present, Graduate Faculty Member
Summer 2004, Ph.D. Prelim Exam Committee, Dept. of Statistics, NC State University
Aug. 2005, PhD Qualifying Exam Committee, Dept. of Statistics, NC State University
Jan. 2006, PhD Qualifying Exam Committee, Dept. of Statistics, NC State University
Aug. 2006, Departmental Beach Trip Committee
Summer 2007, Ph.D. Prelim Exam Committee, Dept. of Statistics, NC State University
Aug. 2007, Departmental Beach Trip Committee (chair)
Jan. 2008, PhD Qualifying Exam Committee, Dept. of Statistics, NC State University
Aug. 2009, PhD Qualifying Exam Committee (chair), Dept. of Statistics, NC State University
2010 - 2011, Seminar Committee (chair), Dept. of Statistics, NC State University

Invited and Contributed Talks

- October 2010, Georgia State University, Department of Mathematics and Statistics, "Variable Selection for Linear Transformation Models" (invited)
- August 2010, JSM Meeting, Vancouver, BC, Canada, "Dimension Reduction and Variable Selection for Censored Regression" (invited)
- May 2010, Frontiers in Applied and Computational Mathematics (FACM) meeting, NJIT, Newark, NJ, "Dimension Reduction and Variable Selection for Censored Regression" (invited)
- July 2009, 1st IMS APRM Meeting, Seoul, "Semiparametric Marginalized Model for Longitudinal Data with Nonignorable Dropout" (invited)
- March 2009, ENAR Meeting, San Antonio, TX, "Sparse estimation for semiparametric linear transformation model" (contributed)
- February 2009, University of North Carolina at Charlotte, Department of Mathematics and Statistics, "Estimation and Inference for Partial Linear Transformation Models" (invited)
- January 2009, University of South Carolina, Department of Biostatistics, "Variable Selection for Semiparametric Survival Models - Estimation & Inference" (invited)
- October 2008, Winemiller Conference on Survival Analysis and Its Applications, Columbia, MO, "Semiparametric Analysis of Mixture Regression Models with Competing Risks Data" (contributed)
- September 2008, University of Georgia, Statistics Department, "Estimation and Inference for Partial Linear Transformation Models" (invited)

- September 2008, Duke University, Department of Biostatistics and Bioinformatics, DCRI, "Variable Selection for Semiparametric Survival Models – Estimation & Inference" (invited)
- August 2008, NCSU, Statistics Department, "Estimation and Inference for Partial Linear Transformation Models" (faculty sampler)
- June 2008, ICSA Applied Statistics Symposium, Piscataway, NJ, "On Estimation Of Linear Transformation Models With Nested Case-Control Sampling" (invited)
- April 2008, Emory University, Department of Biostatistics, "Semiparametric Marginalized Model for Longitudinal Data with Nonignorable Dropout" (invited)
- March 2008, Division of Epidemiology, Statistics, Prevention Research, National Institute of Children and Health Development, NIH, "A Unified Variable Selection Method for Censored Survival Data" (invited)
- February 2008, University of Virginia, Statistics Department, "Estimation and Inference for Partial Linear Transformation Models with Censored Survival Data" (invited)
- December 2007, Iowa State University, Statistics Department, "Estimation and Inference for Partial Linear Transformation Models with Censored Survival Data" (invited)
- November 2007, NYU Medical School, Department of Environmental Medicine, "Transformation Models for Case-Cohort and Nested Case-Control Studies" (invited)
- October 2007, Nonparametric Conferences, Columbia, SC, "Partial Linear Transformation Models For Survival Data" (invited)
- August 2007, JSM Meeting, Salt Lake City, UT, "Variable Selection for Censored Survival Data" (topic contributed)
- June 2007, ICSA Applied Statistics Symposium, Raleigh, NC, "Partial Linear Transformation Models For Survival Data" (invited)
- March 2007, ENAR Meeting, Atlanta, GA, "Semiparametric Analysis of Mixture Regression Models with Competing Risks Data" (contributed)
- August 2006, JSM Meeting, Seattle, WA, "Adaptive-Lasso for Cox's Proportional Hazards Model" (topic contributed)
- Fall 2005, NCSU, Statistics Department, "Mapping Quantitative Trait Loci with Time-to-Event Data from a Population of Mixed Susceptibility" (faculty sampler)
- Fall 2005, NCSU, Bioinformatics Research Center, "Interval Mapping of Quantitative Trait Loci for Time-to-Event Trait with the Mixture Cure Model" (invited)
- August 2005, JSM Meeting, Minneapolis, MN, "Marginal Regression of Multivariate Event Based on Linear Transformation Models" (contributed)
- March 2005, ENAR Meeting, Austin, TX, "Semiparametric transformation models for the case-cohort study" (contributed)
- Fall 2004, NCSU, Statistics Department, "Semiparametric transformation models for the case-cohort study" (faculty sampler)
- August 2004, JSM Meeting, Toronto, Canada, "Semiparametric Transformation Cure Models" (contributed)
- March 2004, ENAR Meeting, Pittsburgh, PA, "On Semiparametric Transformation Cure Models" (contributed)

Updated on May 31, 2011

- February 2004, UNC-Chapel Hill, Biostatistics Department, "On Semiparametric Transformation Cure Models" (invited)
- February 2003, University of California, Department of Statistics, "On Semiparametric Transformation Cure Models" (invited)
- February 2003, North Carolina State University, Department of Statistics, "On Semiparametric Transformation Cure Models" (invited)
- August 2002, JSM Meeting, New York, NY, "Efficiency Comparison between Mean and Log-Rank Tests with Recurrent Event Times" (contributed)
- March 2002, ENAR Meeting, Arlington, VA, "Efficiency Comparison between Mean and Log-Rank Tests with Recurrent Event Times" (contributed)