FAIRBANKS SCHOOL OF PUBLIC HEALTH CURRICULUM VITAE

Ying Zhang, PhD January, 2016

I. EDUCATIONAL AND PROFESSIONAL HISTORY

A. Education (least to most recent)

(includes undergraduate, graduate, and postgraduate education)

	Dates		Degree	
<u>Institution</u>	<u>Attended</u>	Field of Study	Obtained	<u>Date</u>
Fudan University, China	1981-1985	Computational Mathematics	BS	7/1985
Fudan University, China	1985-1988	Computational Mathematics	MS	7/1988
Florida State University	1991-1994	Applied Mathematics	MS	5/1994
University of Washington	1994-1998	Statistics	PhD	6/1998

B. Professional and Academic Positions

Position Lecturer	Dates of <u>Service</u> 9/1988-7/1991	Location/Institution Department of Mathematics Fudan University, China
Applied Statistician	6/1997-9/1997	Applied Statistics Group The Boeing Company
Assistant Professor	8/1998-6/2004	Department of Statistics and Actuarial Science, University of Central Florida
Associate Professor	7/2004-6/2010	Department of Biostatistics The University of Iowa College of Public Health
Professor	7/2010-6/2014	Department of Biostatistics, Program of Health Informatics, and Program of Applied Mathematics, The University of Iowa
Professor & Director of Graduate Education	1/2014-present	Department of Biostatistics, Indiana University

C. Honors, Awards, Recognitions, Outstanding Achievements (<u>least to most recent</u>)

<u>Year</u> 1982	<u>Title</u> Fellowship for Outstanding Academic Performance; awarded by Fudan University
1997	"Recognition Award" for Outstanding Performance; awarded by Boeing Company
1997	"Z.W. Birnbaum award for excellence in dissertation proposal"; awarded by Department of Statistics, University of Washington (10/1997).
2008	"Faculty Teaching Award" by College of Public Health, University of Iowa.
2008	"Quality of Life Award" by the Oncology Nursing Society Press for the paper "Transition from Treatment to Survivorship: Effects of a Psychoeducational Intervention on Quality of Life in Breast Cancer Survivors."

II. TEACHING AT THE INDIANA UNIVERSITY

A. **Teaching Assignments** on semester-by-semester basis (<u>least to most recent</u>) (*classroom, seminar, teaching lab*)

Semester, <u>Year</u> Fall 2014	Course Title/ <u>Number</u> PBHL-B661 Biost. Method I-	Semeste Hours 4	er # Students 5	Role Instructor	Percent Responsible 100%
1 dii 201 i	Linear Models in Public Health	·	Ü		10070
Spring 2015	PBHL-B670 Biost. Method II- Categorical Data Analysis	4	6	Instructor	100%
Fall 2015	PBHL-B670 Advanced Likelihood Theory	3	9	Instructor	100%
Spring 2016	PBHL-B670 Biost. Method II- Categorical Data Analysis	4	13	Instructor	100%

University of Iowa-Courses Taught

Design and Analysis of Experiments in Biomedical Studies	171:162
Introduction to Biostatistics	171:161

Statistical Data Mining in Public Health	171:230
Theory of Biostatistics I	171:251
Theory of Biostatistics II	171:252
Survival Data Analysis	171:261
Advanced Survival Data Analysis	171:271
Biostatistical Method in Categorical Data	171:203

<u>University of Central Florida – Courses Taught</u>

Statistical Theory I	Sta6326
Statistical Theory II	Stat6327
Quality Control	Sta4664
Statistical Methods II with Computer	Sta-4165
Statistical Methods I	Sta2023
Statistical Methods II	Sta4163
Biostatistical Methods (undergraduate level)	Sta4173
Biostatistical Methods (Graduate level)	Sta5704
Data Mining Methods II	Sta6704
Logistic Regression Model	Sta6938

B. Students Advised

Graduate Students

<u>Name</u>	Degree Objective	<u>Outcome</u>
Laura Becker	MS, Biostatistics	Completed
Benjamin Doyle	MS, Biostatistics	Withdrew
Yang Lei	MS, Biostatistics	Completed
Shanshan Zhao	MS, Biostatistics	Completed
Junting Zheng	MS, Biostatistics	Completed
Zhiwei Wang	MS, Biostatistics	Completed
Li Liu	MS, Biostatistics	Completed
Gang Cheng	MS, Biostatistics	Completed
Hongqian Wu	MS, Biostatistics	Completed
Yaohui Zeng	MS, Biostatistics	Completed

University of Central Florida

<u>Name</u>	<u>Degree Objective</u>	<u>Outcome</u>
Youngmei Chen	MS, Statistics	Completed
Mengxi Li	MS, Statistics	Completed
Lucy Luo	MS, Statistics	Completed

Kang Ying	MS, Statistics	Completed
Chao-Yen Wang	MS, Statistics	Completed
Di Zhou	MS, Statistics	Completed
Ting-Jung Kuo	MS, Statistics	Completed
Di Huang	MS, Statistics	Completed
Jin Liang	MS, Statistics	Completed

Professional/Postdoctoral Students

Name Degree Objective Outcome

Dissertations/Thesis

<u>Name</u>	Degree Object		<u>Outcome</u>
Wei Zhang	PhD, Biostatistics	Co-Director	Conferred 2005
Bongin Yoo	PhD, Biostatistics	Dissertation Committee	Conferred 2005
Minggen Lu	PhD, Biostatistics	Director	Conferred 2007
Suhong Zhang	PhD, Biostatistics	Director	Conferred 2008
Yuan Wu	PhD, Applied Mathematics	Director	Conferred 2010
Qian Qiu	PhD, Health Management and Policy	Dissertation Committee	Withdrew
Chih-Lin Chi	PhD, Health Informatics	Dissertation Committee	Conferred 2009
Huiliang Xie	PhD, Statistics	Dissertation Committee	Conferred 2007
Huaming Tan	PhD, Biostatistics	Dissertation Committee	Conferred 2007
John Zhu	PhD, Marketing	Dissertation Committee	Conferred 2009
Lei Hua	PhD, Biostatistics	Director	Conferred 2010
Gang Cheng	PhD, Biostatistics	Director	Conferred 2012
Jingyang Zhang	PhD, Biostatistics	Director	Conferred 2012
Xiongwen Tang	PhD, Statistics	Co-Director	Conferred 2012
Dingfeng Jiang	Ph.D, Biostatistics	Dissertation Committee	Conferred 2012
Xiaoli Gao	PhD, Statistics	Dissertation Committee	Conferred 2008
Xingqiu Zhao	PhD, Statistics McMaster University, Canada	External Dissertation Committee	Conferred 2008

Carissa	PhD, Epidemiology	Dissertation	Conferred 2009	
Rocheleau Tianyang Zhang	Ph.D, Statistics	Committee Dissertation	Conferred 2010	
Kun Chen	Ph.D, Statistics	Committee Dissertation	Conferred 2010	
Run Chen	,	Committee	Contened 2010	
Yafang Li	Ph.D, Public Health Genetics	Dissertation Committee	Conferred 2011	
Joan Xie	Ph.D, Biostatistics	Dissertation Committee	Conferred 2011	
Spencer Lourens	Ph.D, Biostatistics	Director	Conferred 2015	
Wenjing Lu	Ph.D, Biostatistics	Director	Conferred 2015	
Ke Liu	Ph.D, Biostatistics	Director	Conferred 2015	
Chenghao Chu	Ph.D, Biostatistics	Director	Ongoing	
Preceptorship				
<u>Name</u>	Degree Objective	Role	Outcome	
Yajun Zhu	MS, Biostatistics	Advisor	Completed 2006	
Gang Cheng	MS, Biostatistics	Advisor	Completed 2008	
Zhiguo Zhao	MS, Biostatistics	Advisor	Completed 2008	
Changbin Du	MS, Biostatistics	Advisor	Completed 2008	
Yuan Wu	MS, Biostatistics	Advisor	Completed 2009	
Wenjing Lu	MS, Biostatistics	Advisor	Completed 2011	
Ke Liu	MS, Biostatistics	Advisor	Completed 2012	
Spencer	Ph.D, Biostatistics	Advisor	Completed 2012	
Laurence Hongqian Wu	MS, Biostatistics	Advisor	Completed 2013	
University of Centra	al Florida			
<u>Name</u>	Degree Objective	Role	Outcome	
Duc A. Tran	PhD, Computer	Dissertation Committee		
Other Advising/Mentoring				
<u>Name</u>	<u>Position</u>	Role	<u>Outcome</u>	

C.

D. Other Contributions to Institutional Programs

Institutional Conferences, Grand Rounds, Journal Club

<u>Date</u> <u>Title</u> <u>Location</u>

None

Teaching Committees

Year Committee Name

2004-13 Biostatistics MS and PhD Curriculum Committee, member

2004-13 Biostatistics PhD Examination Committee, member

2006-09 Biostatistics Seminar Committee, Fall Chair

National Education-Related Presentations

<u>Year</u> <u>Title</u>

None

Formal Study to Improve Teaching Abilities

<u>Year</u> <u>Institution</u> <u>Course Title</u>

2000 University of Central A week-long teaching workshop:

Florida Effective Teaching

Current Research Concerning Teaching

Title None

Local and Regional CME Talks

Year Title Location

None

E. Course Materials (syllabi, instructional web pages, computer lab materials) (Description only – *full materials to be included in promotion dossier*)

III. SCHOLARSHIP

A. Publications or Creative Works (<u>least to most recent</u>)

Peer-Reviewed Papers

- 1. Wellner JA and **Zhang Y**. Two estimators of the mean of a counting process with panel count data. <u>Annals of Statistics</u>, 28:779-814, 2000.
- 2. Aragon D, Clancy R, Sole ML, **Zhang Y**. Variable influencing outcomes in patients with elective aortic reconstruction. <u>American Journal of Critical Care</u>, 9(4):279-287, 2000.
- 3. **Zhang Y**, Liu W, Zhan Y. A nonparametric two-sample test of the failure functions with interval censoring Case 2. <u>Biometrika</u>, 38:677-686, 2001.
- 4. **Zhang Y**. A semiparametric pseudolikelihood estimation method for panel count data. <u>Biometrika</u>, 89:39-48, 2002.
- 5. Sole ML, Byers J, Ludy J, **Zhang Y**, Banta C, Brummel K. A multi-site survey of suctioning techniques and airway management practice (STAMP). <u>American Journal of Critical Care</u>, 12(3):220-232, 2003.
- 6. **Zhang Y** and Jamshidian M. The gamma-frailty Poisson model for the nonparametric estimation of panel count data. <u>Biometrics</u> ,59:1099-1106, 2003.
- 7. **Zhang Y**, Liu W, Wu H. A simple nonparametric two-sample test for the distribution function of event time with interval censored data. <u>Journal of Nonparametric Statistics</u>, 15:643-652, 2003.
- 8. Wellner JA, **Zhang Y**, Liu H. A semiparametric regression model for panel count data: when do pseudo-likelihood estimators become badly inefficient? <u>Proceedings of the Second Seattle Biostatistical Symposium: Analysis of Correlated Data</u>, 2004.
- 9. **Zhang Y** and Jamshidian M. On algorithms for NPMLE of the failure function with censored data. <u>The Journal of Computational and Graphical Statistics</u>, 13:123-140. 2004.
- 10. Liu W, Jamshidian M, **Zhang Y**. Multiple comparison of several linear regression models. <u>Journal of the American Statistical Association</u>, 99:395-403, 2004.
- 11. Ahmad I, Liu W, **Zhang Y**. On the finite sample behavior of testing whether new is better than used of a specific age. Metrika, 60:287-294, 2004.
- 12. Liu W, Jamshidian M, **Zhang Y**, Bretz F. Constant width simultaneous confidence bands in multiple linear regression with predictor variable constrained in interval. <u>Journal of Statistical Computation and Simulation</u>,75:425-436, 2005.
- 13. Liu W, Jamshidian M, **Zhang Y**, Donnelly J. Simulation-based simultaneous confidence in multiple linear regression with predictor variables constrained in interval. <u>The Journal of Computational and Graphical Statistics</u>, 14:459-484, 2005.
- 14. Coohey C. and **Zhang Y**. The role of men in chronic supervisory neglect. <u>Child</u> Maltreatment 11:27-33, 2006.

- 15. **Zhang, Y.** Nonparametric *K*-sample tests with panel count data. <u>Biometrika</u>, 93:777-790, 2006.
- 16. Huang, C-Y, Wang, M-C, and **Zhang Y**. Analyzing panel count data with informative observation times. <u>Biometrika</u>, 93:763-775, 2006.
- 17. Liu W, Jamshidian M, **Zhang Y**, Bretz, F., and Han, X.L. Some new methods for the comparison of two linear regression models. <u>The Journal of Statistical Planning and Inference</u>, 137:57-67, 2007.
- 18. Liu, W., Jamshidian, M., **Zhang, Y**., Bretz, F., and Han, X.L. Pooling batches in drug stability study by using constant-width simultaneous confidence bands. Statistics in Medicine, 26:2759-2771, 2007.
- 19. Yang, J., Peek-Asa, C., Allareddy, V., Phillips, G., **Zhang, Y.**, and Cheng, G. Patient and hospitalization characteristics associated with length of stay and hospital charges for pediatric sports-related injury hospitalizations in the United States, 2000-2003. <u>Pediatrics</u>, 119(4):e813-820, 2007.
- 20. Wellner JA. and **Zhang Y.** Two likelihood-based semiparametric estimation methods for panel count data with covariates. <u>Annals of Statistics</u>, 35:2106-2142, 2007.
- 21. Lu M., **Zhang Y.**, and Huang J. Estimation of the mean function with panel count data using monotone polynomial splines. <u>Biometrika</u>, 94:705-718, 2007.
- 22. Dow KM, McNees P, Loerzel VW, Su X, **Zhang Y**, and Hassey K. Transition from treatment to survivorship: effects of a psychoeducational intervention on quality of life in breast cancer survivors. Oncology Nursing Forum, 34:1-10, 2007.
- 23. Zhang W., Chaloner K., Cowles, M.K., **Zhang Y.**, and Stapleton J.T. A Bayesian pooled analysis of doubly censored data using a hierarchical Cox model. <u>Statistics in Medicine</u>, 27:529-542, 2008.
- 24. Shell JA, Carolan M, **Zhang Y**, and Dow KM. The longitudinal effects of cancer treatment on sexuality in individuals with lung cancer. <u>Oncology Nursing Forum</u> 35:73-79, 2008.
- 25. Zhang W., **Zhang, Y.**, Chaloner K., and Stapleton J. Imputation methods for doubly censored HIV data. <u>Journal of Statistical Computation and Simulation</u>. 79:1245-1257, 2009.
- 26. Lu, M., **Zhang, Y.**, and Huang, J. Semiparametric estimation methods for panel count data using monotone B-splines. <u>Journal of the American Statistical Association</u>. 104:1060-1070, 2009.
- 27. Zhang, S., **Zhang, Y.**, Chaloner, K. and Stapleton, J. A Copula model for bivariate hybrid censored survival data with application to the MACS study. <u>Lifetime Data Analysis</u>. 16:231-249, 2010.
- 28. **Zhang, Y**. and Clarke, W. A Flexible Futility Monitoring Method with Time-Varying Conditional Power Boundary. <u>Journal of the Society for Clinical Trials</u>. 7:209-218, 2010.
- 29. **Zhang, Y.**, Hua, Lei, and Huang, J. A spline-based semiparametric maximum

- likelihood estimation method for the Cox model with interval-censored data. Scandinavian Journal of Statistics. 37:338-354, 2010.
- 30. Easton, S., Coohey, C., O'leary, P., **Zhang, Y.** and Hua, L. The effect of childhood sexual abuse on psychosexual functioning during adulthood. <u>Journal of Family</u> Violence. 26:41-52, 2011.
- 31. Day, J., Policeni, B., Smoker, W., Dobre, M., **Zhang, Y.,** Leira, E., Davis, P., Chen, S., Olalde, H., and Adams, H. Prior statin use is not associated with an increased prevalence or degree of gradient-echo (GRE) lesions in patients with acute ischemic stroke or TA. Stroke. 42:354-358, 2011.
- 32. Cheng, G., **Zhang, Y.,** and Lu, L. Efficient algorithms for computing the non- and semi-parametric maximum likelihood estimates of panel count data. <u>Journal of Nonparametric Statistics</u>. 23:567-579, 2011.
- 33. Coohey, C., Renner, L., Hua, L., **Zhang, Y.**, and Whitney, S. Academic achievement despite child maltreatment: a longitudinal study. <u>Child Abuse & Neglect</u>. 35:688-699, 2011.
- 34. **Zhang, Y.**, Long, L.D., Mills, J.A., Warner, J.H., Lu, W., Paulsen, J.S., and the PREDICT-HD Investigators and Coordinators of the Huntington Study Group. Indexing disease progression at study entry with individuals at-risk for Huntington disease. American Journal of Medical Genetics, Part B: Neuropsychiatric Genetics. 156 (7): 751-763, 2011.
- 35. Hua, L. and **Zhang, Y.** Spline-based semiparametric projected generalized estimating equation method for panel count data. <u>Biostatistics</u>. 13 (3): 440-454, 2012.
- 36. Wu, Y. and **Zhang, Y.** Partially Monotone Tensor Spline Estimation of the Joint Distribution Function with Bivariate Current Status Data. <u>Annals of Statistics</u>. 40 (3): 1609-1636, 2012.
- 37. Harrington, D., Smith, M., **Zhang, Y.,** Carlozzi, N., Paulsen, J. and the PREDICT-HD Investigators and Coordinators of the Huntington Study Group. Cognitive domains that predict time to diagnosis in prodromal Huntington disease. <u>Journal of Neurology, Neurosurgery, and Psychiatry</u>. 83: 612-619, 2012
- 38. Jiang, DF., Huang, J. and **Zhang, Y**. The cross-validated AUC for MCP-logistic regression with high-dimensional data. <u>Statistical Methods for Medical Research</u>. 22(5): 505-518, 2013.
- 39. Biglan, KM., **Zhang, Y.**, Long, J., Geschwind, M., Kang, GA., Killoran, A., Lu, W., McCusker, E., Mills, JA., Raymond, LA., Testa, C., Wojcieszek, J., Paulsen, JS. and the PREDICT-HD Investigators of the Huntington Study Group. Refining the diagnosis of Huntington Disease: the PREDICT-HD study. <u>Frontiers in Aging Neuroscience</u>. 5:12, 2013. doi . 10.3389/fnagi.2013.00012
- 40. Lourens, S., **Zhang, Y.**, Long, JD., Paulsen, JS. Bias in estimation of a mixture of normal distributions. <u>J Biomet Biostat</u>. 4:179, 2013. doi 10:4172/21556180.1000179.
- 41. Long, JD., Paulsen, JS., Marder, K., **Zhang, Y.**, Kim, JI., Mills, JA. Tracking motor impairments in the progression of Huntington Disease. Movement Disorders. 29(3):

- 311-319, 2014.
- 42. Hua, L., **Zhang, Y.**, Tu, W. Spline-based semiparametric sieve likelihood method for over-dispersed panel count data. <u>The Canadian Journal of Statistics</u>. 42(2):217-245, 2014.
- 43. Yang, JZ., Cheng, G., **Zhang, Y.**, Covassin, T., Heiden, EO., Peek-Asa C. Influence of symptoms of depression and anxiety on injury hazard among collegiate football players. <u>Research in Sports Medicine</u>. 22(2): 147-160, 2014.
- 44. Paulsen, JS., Long, JD., Johnson, HJ., Aylward, EH., Ross, CA., Williams, JK., Nance, MA., Erwin, CJ., Westervel, HK., Harrington, DL., Bockholt, HJ., **Zhang, Y.**, McCusker, EA., Chiu, EM., Panegyres, PK. and PREDICT-HD Investigators and Coordinators of the Huntington Study Group. Clinical and biomarker changes in premanifest Huntington disease show trial feasibility: a decade of the PREDICT-HD study. <u>Frontiers in Aging Neuroscience</u>. 6:78, 2014. doi: 10.3389/fnagi.2014.00078.
- 45. Lourens, S., **Zhang, Y.**, Long, JD. And Paulsen, JS. Analysis of longitudinal censored semicontinuous data with application to the study of executive dysfunction: the Towers Task. <u>Statistical Methods for Medical Research</u>. First published on November 2014. doi: 10.1177/0962280214560187
- 46. Zhu, Y., Romitti, PA., Caspers, KM., Kim, SK., Mathews, KD., **Zhang, Y.**, Yang, M. and the MD STAR*net*. Genitourinary conditions receiving medical intervention in a population-based cohort of males with Duchenne/Becker muscular dystrophies. The Journal of Urology. To appear.
- 47. Paulsen, JS., Long, JD., Ross, CA., Harrington, DL., Erwin, CJ., Williams, JK., Westervelt, KH., Johnson, HJ., Aylward, EH., Bockholt, HJ., Zhang, Y., Bockholt, HJ., Barker, RA., and the PREDICT-HD Investigators and Coordinators of the Huntington Study Group. Prediction of manifest of Huntington disease with clinical and imaging measures: A 12-year prospective observational study. The Lancet Neurology. 13:1193-1201,2014.
- 48. Conway, KC., Mathews, KD., Paramsothy, P., Oleszek, J., Trout, C., **Zhang, Y.**, Romitti, PA., and the MD STAR*net*. Neurobehavioral problems among males with dystrophinopathy using population-based surveillance data from the muscular dystrophy surveillance, tracking, and research network (MD STAR*net*). <u>Journal of Developmental Behavioral Pediatrics</u>. 36: 455-463, 2015.
- 49. Liu, D., Long, JD., **Zhang, Y.,** Raymond, LA., Marder, K., Rosser, A., McCukser, EA., Mills, JA., and Paulsen, JS. Motor onset and diagnosis in Huntington disease using the diagnostic confidence level. <u>Journal of Neurology</u>. 262:2691-2698, 2015.
- 50. Zhang J., **Zhang Y.**, Chaloner K., and Stapleton JT. A sequential classification rule based on multiple quantitative tests in the absence of a gold-standard. <u>Statistics in Medicine</u>. 35: 1359-1372, 2016.
- 51. **Zhang, Y.,** Cheng, G. and Tu, W. Robust nonparametric estimation of monotone regression function with interval-censored observations. <u>Biometrics</u>. To appear.
- 52. Su, X., Wijayasinghe, CS., Fan, J., and **Zhang, Y**. Sparse estimation of proportional hazards models via approximated information criteria. <u>Biometrics</u>. To appear.

53. Zhao, XQ. and **Zhang, Y**. Asymptotic normality of nonparametric M-estimators with applications to hypothesis testing for panel count data. <u>Statistica Sinica</u>. To appear.

Non-Peer-Reviewed Papers (reports, proceedings, etc.)

- 1. **Zhang Y**. A pseudo likelihood estimation method for panel count. <u>Proceedings of the Statistical Computing Section</u> 1-9, 1999.
- 2. Wellner JA and **Zhang Y**. Large sample theory of an estimator of the mean of a counting process. Technical Report No. 327, *Department of Statistics, University of Washington*.
- 3. Scholz F and **Zhang Y**. Confidence bounds for type 1 censored Weibull data including Covariates. *Boeing Technical Report*, SSGTECH-97-025.
- 4. Lu M, **Zhang Y**, and Huang J. Semiparametric estimation methods for panel count data using monotone polynomial splines. <u>Proceedings of Biometric Section</u>, <u>JSM</u>, 275-282, 2006.

Books/Monographs None

Chapters

1. Huang, J., **Zhang, Y.,** and Hua, L. (2012) Consistent Variance Estimation in Interval Censored Data. *Interval-Censored Time-to-Event Data: Methods and Applications, eds Ding-Geng Cheng, Jianguo Sun and Karl E. Peace*, p 333-368.

Electronic Publications (peer-reviewed)

1. Jamshidian M, Liu W, **Zhang Y**, and Jamshidian F. SimReg: A Software Including Some Developments in Multiple Comparison and Simultaneous Confidence Bands for Linear Regression Models. Journal of Statistical Software 12, Issue 2, 2005.

Abstracts

- Dow K.H., Loerzel V., Zhang Y, and McNees P. A targeted breast cancer education intervention (BCEI) for breast cancer survivors: An interim analysis. <u>Oncology</u> <u>Nursing Forum</u>, 32 (2): 432-432 35 Mar., 2005.
- 2. **Zhang Y.** and Clarke William. Statistical Considerations for the Carotid Occlusion Surgery Study (COSS). Clinical Trials, Vol 3. Supplement 1, 2006.
- 3. Dow K.H., McNees P, Loerzel V, and **Zhang Y**. Effectiveness of Psychoeducational Interventions for Breast Cancer Survivors: An Interim Analysis. <u>Psycho-Oncology</u>, 15 (1): S34-S34 Suppl. S, Feb., 2006.

Reviews

Other (example, letter to the editor)

B. Areas of Research Interest/Current Projects

- 1. Panel Count and Interval-Censored Data
- 2. Joint Models of Longitudinal and Survival Data Analysis
- 3. Data Mining and Statistical Computing
- 4. Variable Selection for High Dimensional Data
- 5. Clinical Trials
- 6. Disease Progression Modeling for Huntington Disease

C. Grants Received (<u>ALL grants</u>, least to most recent) (if you are not the PI, state your role or contributions – in a few sentences)

Title Source P.I. "Knowledge Discovery from Composite Lag Machine Data" Florida Space Grant Consortium PI: Zhang, Ying	% Effort <u>% Salary Support</u> y-up	Direct Funds Period of Funding \$8,000 1999
"Nonparametric Maximum Likelihood Estimof the Probability Distribution of Cancer On University In-House (Univ. Central Florida) PI: Zhang, Ying	nset"	\$7,498 2001
"Prostasin Serine Protease as a Breast Ca Invasion Marker and a Metastasis Suppres US Army PI: Chai, Karl Co-PI: Zhang, Ying (note: Ying Zhang's support ends in June	ssor"	\$334,031 7/2002-6/2005
"Quality of Life Intervention in Breast Canc Survivor" NIH PI: Dow, Karen Co-Investigator: Zhang, Ying (Note: Ying Zhang's support ends in June 2		\$1,600,000 9/2001-5/2005

"Home vs Center-Based Weight Loss & Exercise in Menopause" NIH PI: Dennis, Karen Co-Investigator: Zhang, Ying Instructional Improvement Award University of Iowa PI: Zhang, Ying	10%	\$2,032,028 4/2003-6/2008 (note: support ends in June 2004) \$4,900 2004-05
Clinical Islet Transplantation: Data Coordinating Center NIH PI: Clarke, William R. Co-Investigator: Zhang, Ying	10%	\$21,197,251 9/30/04-7/31/09
Carotid Occlusion Surgery Study NINDS PI: Clarke, William R. Co-Investigator: Zhang, Ying	20%	\$5,558,894 12/1/07-4/30/11
The Impact of Supervisory Neglect on Peer Relationships, Behavior, and School Performance among School-Aged Children NSCAW PI: Coohey, Carol Biostatistical Consultant: Zhang, Ying	50 Hours Effective 10/1/06	\$79,808 10/1/06-2/28/08
Project PATH (Providers Advocating Team Health); Underage Drinking Building Health Care System Responses NIH PI: James Hall	10%	\$348,107 9/30/06-6/30/09
Role: Biostatistics Consultant Social Support and Depression and Anxiety Following Injury in Collegiate Athletes; part of Injury Prevention Research Center CDC PI: Yang, Ginger	5%	\$297,273 9/1/07-8/31/12
Co-PI: Zhang, Ying Pakinson's Progression Markers Initiative- Statistics Core The Michaels J. Fox Foundation for Parkinson's research PI: Chris Coffey	10%	\$21,950.89 4/1/10-8/30/12
Co-Investigator: Zhang, Ying Network of Excellence in Neuroscience Clinical Trials (NEXT)-DCC NIH/NINDS	10%	\$8,443,401 10/1/11-8/30/12

PI: : Chris Coffey

Co-Investigator: Zhang, Ying

PREDICT HD: Neurobiological Predictors of 50% \$8,378,958 Huntington's Disease-Biostatistics Core 9/1/10-8/31/13

NIH & CHDI PI: Jane Paulsen

Co-Investigator: Zhang, Ying

MD STARnet: Feasibility of Expansion to other 10% 09/1/12-08/31/13

Muscular Dystrophies

CDC

PI: Paul Romitti

Co-Investigator: Zhang, Ying

PREDICT HD: Neurobiological Predictors of 20% \$219,234

Huntington's Disease-Biostatistics Core 1/1/14-8/31/16

NIH

PI: Jane Paulsen Site-PI: Zhang, Ying

Virtual Perspective-Taking to Reduce Race and 8% \$1,839.213 SES Disparities in Pain Care \$7/1/14-6/30/19

NIH

PI: Adam Hirsh

Co-Investigator: Zhang, Ying

PRIS-M: Precision Monitoring to Transform Care 20% \$800,000

VA HSR&D Queri Que 10/01/15-09/30/20

PI: Damush

Co-Investigator: Zhang, Ying

Indiana University Melvin and Bren Simon Cancer 20% \$999,866

Center Support Grant 09/01/14-08/31/16

NIH-NCI PI: Loehrer

Co-Investigator: Zhang, Ying

D. Invited Presentations (least to most recent)

<u>Year</u> 1999	Title Nonparametric Estimation of a Counting Process with Panel Count Data	Organization Dept of Statistics University of California, Davis
1999	Semiparametric Estimation of a Counting Process with Panel Count Data	Joint Statistical Meetings, Baltimore, MD.
2000	Introduction to Data Mining	Department of Mathematics Fudan University, China
2000	Nonparametric Estimation with Panel Count Data	Department of Statistics Fudan University, China

2002	The Asymptotics on Semiparametric M-Estimation	Department of Statistics University of Missouri- Columbia
2002	Semiparametric Pseudolikelihood Estimation Method with Panel Count Data	AMS Sectional Meeting; Orland, FL.
2003	A Gamma-Frailty Model for Panel Count Data	ENAR; Tampa, FL.
2005	A Simple Multiple Comparison Procedure for Linear Regression Lines	Biostatistics Seminar Department of Biostatistics University of Iowa
2005	Likelihood-based Semiparametric Estimation Methods for Panel Count Data with Covariates	Department of Statistics, Simon Fraser University, Vancouver, Canada
2005	Nonparametric Inference with Panel Count Data	Department of Statistics, University of British Columbia, Canada
2006	Likelihood-based Semiparametric Estimation Methods for Panel Count Data with Covariates	Department of Statistics and Actuarial Science Colloquium, University of Iowa
2006	Semiparametric Regression Model for Panel Count Data: Comparing Two Estimators (Wellner JA, Zhang Y)	IMS-WNAR Meeting Flagstaff, Arizona
2007	Inference on Association Measure for Bivariate Survival Data with Hybrid Censoring and Application to an HIV Study (Zhang Y, Zhang Suhong, and Chaloner K)	IMST Shanghai, China
2007	Semiparametric Analysis of Panel Count Data	Department of Statistics Beijing Normal University China
2007	Semiparametric Analysis of Panel Count Data	School of mathematics Fudan University China
2007	Inference on Association Measure for Bivariate Survival Data with Hybrid	Institute of Biostatistics School of Life Science

	Censoring and Application to an HIV Study (Zhang Y, Zhang Suhong, and Chaloner K)	Fudan University China
2007	Semiparametric Analysis of Panel Count Data	Department of Epidemiology and Biostatistics
2007	Semiparametric Analysis of Panel Count Data	University of Pennsylvania Department of Biostatistics University of Wisconsin Madison, WI
2007	Semiparametric Analysis of Panel Count Data	Department of Mathematics and Statistics Northern Illinois University
2008	Semiparametric Analysis of Panel Count Data	Department of Biostatistics University of Michigan
2008	Semiparametric Analysis of Panel Count Data	Applied Mathematics University of Iowa
2008	Inference on Association Measure for Bivariate Survival Data with Hybrid Censoring and Application to an HIV Study (Zhang Y, Zhang Suhong, and Chaloner K)	The First International Symposium on Biopharmaceutical Statistics Shanghai, China
2008	Inference on Association Measure for Bivariate Survival Data with Hybrid Censoring and Application to an HIV Study	Survival Analysis Workshop Department of Statistics University of Missouri
2009	Spline-Based Sieve Semiparametric GEE Analysis of Panel Count Data	Department of Statistics Fudan University China
2009	Spline-Based Sieve Semiparametric GEE Analysis of Panel Count Data	Department of Mathematics Shanghai Jiao Tong University China
2009	Spline-Based Sieve Semiparametric GEE Analysis of Panel Count Data	Workshop on Modeling Indirectly or Imprecisely Observed Data Fields Institute Canada
2010	Partly Monotone Spline-Based Sieve Estimation with Bivariate Current Status Data	School of Mathematics Fudan University China
2010	Partly Monotone Spline-Based Sieve	Department of Mathematics

	Estimation with Bivariate Current Status Data	Shanghai Jiao Tong University China
2011	Semiparametric Estimating Method for Over-Dispersed Panel Count Data	ENAR; Miami, FL
2011	Nonparametric Least-Squares Estimation for Tumor Growth Function	School of Mathematics Fudan University China
2011	Dancing with Statistics: Diagnosis of Huntington Disease with Predict-HD	Department of Biostatistics Fudan University China
2011	A Sequential Diagnostic Method Based on Multiple Diagnostic Tests without a Gold Standard	Department of Mathematics Shanghai Jiao Tong University China
2012	Classification with Multiple Tests without a Gold Standard	Department of Epidemiology and Biostatistics Drexel University
2012	A Nonparametric Least-Squares Estimation Method for Tumor Growth Function with Interval-censored Observations	FACM Department of Mathematics New Jersey Institute of Technology
2013	Statistical Methods for Analyzing Panel Count Data	Department of Biostatistics University of Pittsburgh
2013	A Nonparametric Least-Squares Estimation Method for Tumor Growth Function with Interval-censored Observations	IMS-Chengdu, China
2013	Statistical Methods for Analyzing Panel Count Data	Department of Biostatistics Indiana University
2013	Statistical Methods for Analyzing Panel Count Data	Workshop on Frontier Problems in Statistics Shanghai Jiao Tong University
2014	Sieve Estimation for Bivariate Current Status Data	The Third International Symposium of Biostatistics Chengdu, China
2014	Statistical Methods for Analyzing Panel Count Data	Department of Mathematics and Statistics University of El Paso
2014	Sieve Estimation for Bivariate Current Status Data	Conference of Applied Statistics in Defense (CASD) Washington DC
2015	Statistical Methods for Analyzing Panel Count Data	Department of Mathematics and Statistics Wright State University

2016	Nonparametric Inference with Misclassified Competing Risks Data	Workshop on Frontiers of Statistics and Data Sciences Conference The Hong Kong Polytechnic
2016	Nonparametric Inference with Misclassified Competing Risks Data	University The 2 nd International Symposium on Data Driven Health and Medicine Shanghai Jiao Tong University
2016	Nonparametric Inference with Misclassified Competing Risks Data	Biostatistics Seminar Boehringer Ingelheim, China
Conferer	nce Presentations/Posters	
<u>Year</u>	<u>Title</u>	<u>Organization</u>
2000	Algorithms on NPMLE with Censored Data	Joint Statistical Meetings, Indianapolis, Indiana.
2002	Asymptotic on M-Estimation	Joint Statistical Meetings, New York, NY
2003	A Gamma-Frailty Model for Panel Count Data	Joint Statistical Meetings, San Francisco, CA
2005	Imputation Methods for Doubly Censored Survival Data with an Interval-censored Covariate. Zhang W, Zhang Y, Chaloner K.	Joint Statistical Meetings; Minneapolis, MN
2005	Multiple Comparisons for Linear Regression Lines	The 4 th International Conference on Multiple Comparison Procedures; Shanghai, China
2006	Estimation of Panel Count Data Using Monotone Splines (Lu M, Zhang Y, Huang J)	2006 ENAR Spring Meetings, Tampa, FL.
2006	Statistical Considerations for the Carotid Occlusion Surgery Study (COSS) (Zhang Y, Clarke W, Powers W)	27 th Annual Meeting of the Society for Clinical Trials, Orlando, FL
2006	Nonparameteric Inference for Panel Count Data	Joint Statistical Meetings, Seattle, WA
2006	Estimation of the Mean Function of	Joint Statistical Meetings,

	Panel Count Data Using Monotone Polynomial Splines (Lu M, Zhang Y, Huang J)	Seattle, WA
2006	A Bayesian Pooled Analysis of Doubly Censored HIV Data Using the Hierarchical Cox Model (Zhang W, Chaloner K, Zhang Y, Cowles MK)	Joint Statistical Meetings, Seattle, WA
2007	Semiparametric Analysis of Panel Count Data with Polynomial Monotone Spline (Lu M, Zhang Y, and Huang J)	2007 ENAR Spring Meetings Atlanta, GA (Student Paper Award)
2007	Inference on Association Measure for Bivariate Survival Data with Hyrid Censoring and Application to an HIV Study (Zhang S, Zhang Y, and Chaloner K)	2007 ENAR Spring Meetings Atlanta, GA
2008	Inference on Association measure for Bivariate Survival Data (Zhang S, Zhang Y, Chaloner K, and Stapleton JK)	2008 ENAR Spring Meetings Arlington, VA
2009	Spline-Based Sieve Semiparametric Estimating Equation Method for Panel Count Data (Hua L, Zhang Y)	2009 ENAR Spring Meetings San Antonia, TX (Student Paper Award)
2010	A Flexible Futility Monitoring Method with Time-Varying Conditional Power Boundary	Joint Statistical Meetings, Vancouver, BC, Canada

Visiting Professorships

<u>Year</u>	<u>Location</u>
6/01-6/30,	School of Mathematics
2008-10	Fudan University, China
	Senior Visiting Professor in Applied
	Mathematics
6/7-6/28	Department of Mathematics
2011	Shanghai Jiao Tong University, China
	Senior Visiting Professor in Statistics
6/2013-	Department of Mathematics
5/2016	Shanghai Jiao Tong University, China
	Visiting Chair Professor in Statistics

E. Pending Information (grant proposals, book contracts, submitted publications etc.)

Title		
Source	% Effort	Direct Funds
P.I.	% Salary Support	Period of Funding

Publications (<u>submitted</u> articles, including name of journal submitted to. In- press articles would go under publications section)

- 1. Wu, H., **Zhang, Y.**, and Long, JD. A longitudinal beta-binomial model using GEE method for over-dispersed binomial data. Invited revision by <u>Statistics in Medicine</u>.
- 2. Zhu, L., **Zhang, Y.**, Li, Y., Sun, J. and Robison, L. A semiparametric likelihood-based method for regression analysis of mixed panel-count data, submitted to Biometrics.

IV. SERVICE

A. Offices/appointments held in professional organizations (least to most recent)

1. Editorships

<u>Year</u> <u>Publication</u>
2005-2010 Journal of Computational Statistics and Simulation (Associate Editor)

2. Review Panels

<u>Year</u> 2005	<u>Title</u> The Continuation of the Dialysis Access Consortium (DCA) Clinical Trial [8 U01 NIH panel review]
2006	University of Iowa review committee for MPSFP program
2010	NIH RO1-RFA-AI-10-014 "Ancillary Studies in Immunomodulation Clinical Trials

3. Departmental, Collegiate or University Service Positions
Year Position

University of Central Florida

2000-2002 Departmental Computing Equipment Committee

2000-2002	Departmental Undergraduate Study Committee
2000-2002	Department Data Mining Program Committee
2001	College Teaching Incentive Program Committee
2003	Departmental Computing Equipment Committee
2003	Department Data Mining Program Committee
2003	Departmental Graduate Study Committee

University of Iowa

2004-06	Biostatistics Admissions Committee (Chair)
2004-05	CPH Curriculum Committee, member
2005-08	CPH Faculty Council, member
2006-08	Biostatistics Admissions & Recruitment Committee
2006-08	CPH Seminar Committee
2007-08	Faculty Search Committee
2007-08	Biostatistics Departmental Self-Study Committee
2008-09	Biostatistics Recruitment Committee
2008-09	Biostatistics MS & Ph.D Curriculum Committee
2008-09	Biostatistics Seminar Committee (Chair)
2008-09	Biostatistics Ph.D Comprehensive Exam Committee
2009-10	Biostatistics Ph.D Comprehensive Exam Committee
2009-10	Biostatistics Seminar Committee (Chair)
2009-10	Biostatistics MS & Ph.D Curriculum Committee
2009-10	Biostatistics Admissions Committee
2010-11	Biostatistics Ph.D Comprehensive Exam Committee
2010-11	Biostatistics MS & Ph.D Curriculum Committee
2010-11	Biostatistics Admissions Committee
2011-13	Biostatistics MS Comprehensive Exam Committee, Chair
	(Fall)
2011-13	Biostatistics Ph.D Comprehensive Exam Committee
2011-13	Biostatistics MS & Ph.D Curriculum Committee
2011-13	Biostatistics Admissions Committee

Biostatistics Recruitment Committee for Research Track 2012-13

Indiana University

2014-	Biostatistics Admissions Committee
2014-	Ph.D committee, School of Public Health
2014-	University Fellowship Committee
2014-	Director of Graduate Education, Department of
	Biostatistics
2014-	Ph.D curriculum committee, Department of Biostatistics

4. Professional Organization (state and/or national)

<u>Year</u>	<u>Organization</u>	<u>Position</u>
1998-	American Statistical Association	Member
1998-	International Chinese Statistical Association	Member Board of Director 2013-2016
2003-	International Biometrics Society, Eastern North American Region	Member
2015-	ICSA Midwest Chapter	Treasurer

Other Professional Service (Use only those headings that apply to you) B.

1.

Referee Manuscripts			
<u>Year</u>	<u>Title</u>		
1998	Journal of the Royal Statistical Society, Series B		
1999	Scandinavian Journal of Statistics		
2000	Journal of Statistical Software		
2001	Journal of the Nonparametric Statistics		
2001	Biometrika		
2002	Journal of American Statistical Association		
2002	Biometrika		
2003	Journal of Computational Statistics and Data Analysis		
2004	Biometrika		
2004	Journal of Computational Statistics and Data Analysis		
2004	Statistics in Medicine		
2005	Lifetime Analysis		
2006	Journal of the Royal Statistical Society, Series B		
2006	Annals of Statistics (3)		
2006	Statistic Sinica		

2007	Annals of Statistics (2)
2007	Biometrika
2007	Statistic Sinica
2008	Journal of Time Series Analysis
2009	Biometrika
2009	Statistica Sinica
2009	Journal of Statistical Computation and Simulation (2)
2009	Statistics in Medicine
2010	Biometrics
2010	International Journal of Biostatistics
2010	Journal of Computational and Graphical Statistics
2010	Biometrika
2010	Canadian Journal of Statistics
2011	Canadian Journal of Statistics
2012	Journal of American Statistical Association
2012	Biometrical Journal
2012	PLOS- ONE
2012	Canadian Journal of Statistics
2014	Journal of American Statistical Association
2014	Biometrika
2015	Journal of Multivariate Analysis
2015	Biometrics
2016	Journal of American Statistical Association (2)
2016	Journal of Computational and Graphical Statistics
2016	Biometrika (2)
Organiza C	Conference Depar Section etc

2. Organize Conference, Paper Session, etc. Year Title

<u>rear</u>	<u>riue</u>
2002	Chair in session "Nonparametric Statistics" for JSM, New
	York
2007	Organizer and Chair in invited session "Statistical Methods in
	HIV Research" for IMST 2007, FIM XV, Shanghai, China
2010	Organizing committee of Workshop on "From probability to
	statistics and back: high-dimensional models and processes",
	Seattle, WA.
2011	Organizing two sessions for Applied Statistics Symposium of
	Chinese Statistics Professional Association, New York, NY
2015	ICSA Midwest Chapter Conference
2016	JSM-2016, Program Committee, ICSA Representative
2016	The 10 th ICSA Program Committee

3. Departmental, Collegiate or University Committees (other than teaching)

<u>Year</u> 2007-08 <u>Title</u>

Chair, CPH Seminar Committee, University of Iowa

4. State or National Committees

	<u>Year</u> None	<u>Title</u>	
5.	Professionali <u>Year</u> None	ly Relevant Community Involvement Activity	
6.	Professional Year None	Consulting Organization	Role
7.	Other Year None	<u>Activity</u>	
Clinical assignments since last promotion (if applicable)			
<u>Year</u> N/A		<u>Area</u>	# Per Year

C.