Curriculum Vitae

Department of Biostatistics
School of Public Health, CB 7420
The University of North Carolina
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EDUCATION

Ph.D.	Department of Statistics, The University of Michigan, Ann Arbor, 2001
Ph.D. Candidate	Department of Mathematics, Purdue University, West Lafayette, 1996
M.S.	Department of Mathematics, The University of Science and Technology of China, Hefei, 1995
B.S.	Department of Mathematics, The University of Science and Technology of China, Hefei, 1993

PROFESSIONAL EXPERIENCE

Associate Professor	Department of Biostatistics, The University of North Carolina, 2007 - present
Assistant Professor	Department of Biostatistics, The University of North Carolina, 2001 - 2007
Research Assistant	Center for Statistical Consulting and Research, The University of Michigan, Ann Arbor, 2000 - 2001
Summer Intern	Merck Research Lab, Rahway, New Jersey, May-July, 2000
Teaching Assistant	Department of Statistics, The University of Michigan, Ann Arbor, 1996-2000
Teaching Assistant	Department of Mathematics, Purdue University, West Lafayette, 1995-1996
Teaching Assistant	Department of Mathematics, University of Science and Technology of China, Hefei, 1993-1995

HONORS & AWARDS

1. Junior Faculty Developmental Award, The University of North Carolina, 2006.
2. Center for AIDS Research Development Award, The University of North Carolina, 2002
3. Travel Award, Rackham Graduate School, The University of Michigan, 2001
4. Excellence Award in Qualifying Exams, Department of Statistics, The University of Michigan, 1997
5. Guo-Moruo Award, The University of Science and Technology of China, 1993
6. College Mathematical Contest Team Award, Academia Sinica of China, 1991
7. Third Rank in National High School Mathematical Olympics Contest in China, 1988

PROFESSIONAL MEMBERSHIP

1. Institute of Mathematical Statistics

2. American Statistical Association

3. International Biometric Society , 2001-2003

PEER REVIEWED PUBLICATIONS (METHODOLOGICAL PART)

1. Chen, Q., **Zeng, D.** and Ibrahim, J. (2007). Sieve Maximum Likelihood Estimation for Regression Models with Covariates Missing at Random. *Journal of the American Statistical Association*, in press.

2. Cai, J. and **Zeng, D.** (2007). Case-Cohort Design for Non-Rare Disease. *Biometrics*, in press.

3. **Zeng, D.** and Lin, D. Y. (2007). Maximum Likelihood Estimation in Semiparametric Models with Censored Data (with discussion). *Journal of the Royal Statistical Society, Series B*, in press (30 pages).

4. **Zeng, D.**, Lin, D.Y., and Lin, X. (2007). Semiparametric Transformation Models with Random Effects for Clustered Failure Time Data. *Statistica Sinica*, in press (25 pages).

5. **Zeng, D.** and Lin, D.Y. (2007). Semiparametric Transformation Models with Random Effects for Recurrent Events. *Journal of the American Statistical Association*, **102**, 167-180.

6. Schaubel, D.E., **Zeng, D.** and Cai, J. (2006). A Semiparametric Additive Rates Model for Recurrent Event Data. *Lifetime Data Analysis*, **12** 386-406.

7. **Zeng, D.** and Lin, D.Y. (2006). Maximum Likelihood Estimation in Semiparametric Transformation Models for Counting Processes. *Biometrika*, **93** 627-640.

8. **Zeng, D.**, Lin, D.Y., Avery, C.L. and North, K.E. (2006). Efficient Semiparametric Estimation of Haplotype-disease Associations in Case-cohort and Nested Case-control Studies. *Biostatistics*, **7**, 486-502.

9. Pan, W., Lin X., and **Zeng, D.** (2006). Structural Inference in Transition Measurement Error Models for Longitudinal Data. *Biometrics*, **62** 402-412.

10. **Zeng, D.**, Yin, G., and Ibrahim, J.G. (2006). Semiparametric Transformation Models for Survival Data with a Cure Fraction. *Journal of the American Statistical Association*, **101**, 670-684.

11. Lin, D.Y. and **Zeng, D.** (2006). Likelihood-Based Inference on Haplotype Effects in Genetic Association Studies (with discussion). *Journal of the American Statistical Association*, **101**, 89-103.

12. **Zeng, D.**, Cai, J., and Shen, Y. (2006). Semiparametric Additive Model for Interval Censored Data. *Statistica Sinica*, **16**, 287-302.

13. Yin, G. and **Zeng, D.** (2006). Efficient Algorithm for Computing Maximum Likelihood Estimates in Linear Transformation Models. *Journal of Computational and Graphic Statistics*, **15**, 228-245.

14. Lin, D., **Zeng, D.**, and Millikan, B. (2005). Maximum Likelihood Estimation of Haplotype Effects and Haplotype-Environment Interactions in Association Studies. *Genetic Epidemiology*, **29**, 299-312.

15. **Zeng, D.** and Cai, J. (2005). Asymptotic Results for Maximum Likelihood Estimates in Joint Analysis of Repeated Measurements and Survival Time. *The Annals of Statistics*, **33**, 2132-2163.

16. **Zeng, D.** and Cai, J. (2005). Simultaneous Modeling of Quality of Life and Survival Time. *Lifetime Data Analysis*, **11**, 151-174.

17. **Zeng, D.**, Yin, G., and Ibrahim, J.G. (2005). Inference for a Class of Transformed Hazards Models. *Journal of the American Statistical Association*, **100**, 1000-1008.

18. **Zeng, D.**, Lin, D.Y., and Yin, G. (2005). Maximum Likelihood Estimation in Proportional Odds Model with Random Effects. *Journal of the American Statistical Association*, **100**, 470-483.

19. **Zeng, D.** (2005). Likelihood Approach for Marginal Proportional Hazards Regression in the Presence of Dependent Censoring. *The Annals of Statistics*, **33**, 501-521.

20. **Zeng, D.** and Lin, D.Y. (2005). Estimating Haplotype-disease Associations with Pooled Genotype Data. *Genetic Epidemiology*, **28**, 70-82.

21. Yin, G. and **Zeng, D.** (2005). Pair Chart Test for an Early Survival Difference. *Lifetime Data Analysis*, **11**, 117-129.

22. **Zeng, D.** (2004). Estimating Marginal Survival Function by Adjusting for Dependent Censoring Using Many Covariates. *The Annals of Statistics*, **32**, 1533-1555.

23. Cai, J. and **Zeng, D.** (2004). Power and Sample Size in Case-Cohort Study. *Biometrics*, **60**, 1015-1024.

PEER REVIEWED PUBLICATIONS (COLLABORATIVE PART)

1. Pollitt, R.A., Kaufman, J.S., Rose, K.M., Diez-Roux, A. V., **Zeng, D.**, and Heiss, G. (2007). Cumulative Life-course and Adult Socioeconomic Status and Levels of Inflammatory Risk Markers in Adulthood: The Life Course Socioeconomic Status, Social Context, and Cardiovascular Disease Study. *Journal of Epidemiology and Community Health*, in press.

2. Richard Kwork, K., Medola, P., Liu, Z. Y., Savitz, D. A., Heiss, G., He, L.L., Xia, Y., Lobdell, D. T., **Zeng, D.**, Thorp, J. M., Creason, J. P., and Mumford1, J. L. (2007). Drinking Water Arsenic Exposure and Blood Pressure In Healthy Women Of Reproductive Age In Inner Mongolia, China. *Toxicology and Applied Pharmacology*, in press.

3. Bullitt, E., Lin, D.U., Smith, K., **Zeng, D.**, Winer, E. P., Carey, L. A., Lin, W., and Ewend, M.G. (2007). Alteration of Vessel Morphology During Treatment of Breast Cancer Metastatic to Brain. *Radiology*, in press (10 pages).

4. Shoham, D., Kaufman, J.S., Vuputuri, S., Kshirsagar, A. V., **Zeng, D.**, Diez-Roux, A., Corsh, J., and Heiss, G. (2007). Kidney Disease in Life-Course Socioeconomic Context: The Atherosclerosis Risk in Communities (ARIC) Study. *American Journal of Kidney Diseases*, in press (10 pages).

5. Pollitt, R.A., Kaufman, J.S., Rose, K.M., Diez-Roux, A. V., **Zeng, D.**, and Heiss, G. (2007). Early-life and Adult Socioeconomic Status and Inflammatory Risk Markers in Adulthood. *European Journal of Epidemiology*, in press (10 pages).

6. Lange, L. A., Carlson, C.S., Hindorff, L.A., Lange, E.M., Walston, J., Peter Durda, J. Cushman, M., Bis, J.C, **Zeng, D.**, Lin, D. Y., Kuller, L. H., Nickerson, D. A., Psaty, B. M., Tracy, R. P., and Reiner, A. P. (2006). Polymorphisms in the CRP Gene Are Associated with Circulating C-Reactive Protein Levels and Cardiovascular Events: the Cardiovascular Heath Study. *Journal of the American Medical Association*, **296**, 2703-2711.

7. Bullitt E., Lin N.U., Ewend M.G., **Zeng D.**, Winer, E., Carey, L., and Smith, K. (2006). Tumor Therapeutic Response and Vessel Tortuosity: Preliminary Report in Metastatic Breast Cancer. *Lecture Notes in Computer Science*, **4191**, 561-568.

8. Cole, E.B., Clary, C., Pisano, E.D., **Zeng, D.**, Koomen, M., Kuzmiak, M., Seo, B. K., Lee, Y., and Pavic, D. (2006). A Comparative Study of Mobile Electronic Data Entry Systems for Clinical Trials Data Collection. *International Journal of Medical Informatics*, **75**, 722-729..

9. Kuzmiak, C.M., Dancel, R., Pisano, E.D., **Zeng, D.**, Cole, E., Koomen, M. A., and McLelland, R. (2006). Consensus Review: A Method of Assessment of Calcifications That Appropriately Undergo a Six-Month Follow-up. *Academic Radiology*, **13**, 621-629.

10. Bullitt, E., Wolthousen, A. Brubaker, L. Lin, W., **Zeng, D**, and Van Dyke, T. (2006) Malignancy-Associated Vessel Tortuosity: A Computer-Assisted, MRA Study of Choroid Plexus Carcinoma in Genetically Engineered Mice. *American Journal of Neuroradiology*, **27**, 612-619.

11. Kuzmiak, C.M., Pisano, E.D., Cole, E.B., Johnson, R.E., and **Zeng, D.**, Burns, C. B., Roberto, C., Pavic, D., Lee, Y., Seo, B. K., Koomen, M., and Washburn, D. (2005). Comparison of Full-Field Digital Mammography to Screen-Film Mammography with Respect to Contrast and Spatial Resolution in Tissue Equivalent Breast Phantoms. *Medical Physics*, **32**, 3144-3150.

12. Mortamet, B., **Zeng, D.**, Gerig, G., Prastawa, M., and Bullitt, E. (2005). Effects of Healthy Aging Measured By Intracranial Compartment Volumes Using a Designed MR Brain Database. *Lecture Notes in Computer Science*, **3749**, 383-391.

13. Bullitt, E., **Zeng, D**, Gerig, G., Aylward, S., Joshi, S., Smith, J. K., Lin, W., and Ewend, M. G. (2005). Vessel Tortuosity and Brain Tumor Malignancy: A Blinded Study. *Academic Radiology*, **12**, 1232-1240. (**Recipient of the 2006 Herbert M. Stauffer Award for Best Clinical Paper 2005 by the Association of University Radiologists**).

14. Wohl, D., **Zeng, D.**, Stewart, P., Glomb, N., Alcorn, T., Jones, S., Handy, J., Fiscus, S., Weinberg, A., Gowda, D., and van der Horst, C. (2005). Cytomegalovirus Viremia, Mortality and CMV End-Organ Disease Among Patients with AIDS Receiving Potent Antiretroviral Therapies. *Journal of AIDS*, **38**, 538-544.

15. Cole, E.B., Pisano, E.D., **Zeng, D.**, Muller, K., Aylward, S. R., Park, S., Kuzmiak, C., Koomen, M., Pavic, D., Walsh, R., Baker, J., Gimenez, E. I., and Freimanis, R. (2005). The Effects of Grey Scale Image Processing on Digital Mammography Interpretation Performance. *Academic Radiology*, **12**, 585-595.

16. Abrams, T., Milner, D, Kwiek, J., Mwapasa, V., Kamwendo, D., **Zeng, D.** Tadesse, E., Lema, V. M., Molyneux, M. E., Rogersonm, S. J., and Meshnick, S.R. (2004). Risk Factors and Mechanisms of Preterm Delivery in Malawi. *American Journal of Reproductive Immunology*, **52**, 174-183.

17. Murray, M., Meyer, W., Zaino, R., Lessey, B., Novotny, D., Ireland, K., **Zeng, D.**, and Fritz, M. (2004). A Critical Reanalysis of the Accuracy, Reproducibility, and Clinical Utility of Histologic Endometrial Dating: A Systematic Study of the Secretory Phase in Normally Cycling, Fertile Women. *Fertility and Sterility*, **81**, 1333-1343.

18. Lin, G. and **Zeng, D.** (1999). Spatial Clusters of Diseases: Remodeling the Concept. *Geographic Information Sciences*, **5**, 175-180.

PRESENTATIONS

1. Invited talk: Semiparametrically Efficient estimation in the accelerated failure time model. Presented at ICSA, Raleigh, 2007.

2. Efficient estimation in the accelerated failure time model. Presented at ENAR, Atlanta, 2007.

3. Invited talk: Efficient estimation in the accelerated failure time model. Presented at WNAR, Flagstaff, 2006.

4. Invited talk: Dependent censoring with high-dimensional auxiliary information. Presented at Academic Sinica of China, Beijing, 2006.

5. Invited talk: Transformation models for cure survival data. Presented at Academic Sinica of China, Beijing, 2006.

6. Invited talk: Transformation models for counting processes. Presented at Academic Sinica of China, Beijing, 2006.

7. Semiparametric transformation models for cure data. Presented at Joint Statistical Meeting, Minneapolis, 2005.

8. Transformation models in survival data. Presented at 8th New Researcher Conference, Minneapolis, 2005.

9. Invited talk: Semiparametric transformation models for counting process. SCROS conference at Clemson University, 2005.

10. Invited talk: Semiparametric transformation models for counting process. M.D. Anderson Cancer Center, 2005.

11. Invited talk: Semiparametric transformation models for survival data with a cure fraction. University of Pennsylvania, 2005.

12. Semiparametric linear transformation model with random effects for clustered survival times. Presented at ENAR, Pittsburgh, 2004.

13. Proportional odds model with random effects. Presented at Joint Statistical Meeting, San Francisco, 2003.

14. Invited talk: Analysis of longitudinal data when observation times are outcome-informative. Presented at American Statistical Association Chapter, Indianapolis, 2003.

15. Kernel estimation of longitudinal pattern with informative observation times. Presented at ENAR conference, Tampa, 2003.

16. Analysis of longitudinal data when observation times are outcome-related. Presented at ENAR conference, Washington DC, 2002.

17. Invited talk: Analysis of longitudinal data when observation times are outcome-informative. Presented at Department of Statistics in North Carolina State University, Raleigh, 2002.

18. Invited talk:Adjusting for dependent censoring using high-dimensional auxiliary information. Presented (joint with Murphy S.A.) at Joint Statistical Meeting presentation, Atlanta, 2001.

19. Invited talk: Adjusting for dependent censoring using high-dimensional auxiliary information. Presented (joint with Murphy S.A.) at WNAR, Vancouver, 2001.

20. Analyzing CGD Data Using Wavelet Transformation. Presented at Merck Research Lab, Rahway, 2000.

TEACHING ACTIVITIES

1. *Course taught in the past three years*

   Advanced Probability and Statistical Inference (I) (BIOS 760), UNC-CH, Fall 2006 (11 students)

   Advanced Probability and Statistical Inference (I) (BIOS 260), UNC-CH, Fall 2005 (19 students)

   Advanced Probability and Statistical Inference (I) (BIOS 260), UNC-CH, Fall 2004 (15 students)

2. *Currently supervised students*

   Eunhee Kim (PhD student, co-advised), Li Chen (PhD student, co-advised), Kai Ding (PhD student, co-advised)

3. *Previously supervised students*

   Yimei Li (Masters student), with thesis "On The Efficiency of Resampling Methods Based on Pivotal Estimating Functions", graduated in July 2006.

   Leila Amorim (DrPH student, co-advised), with dissertation "Estimating Time-Varying Treatment Effect for Recurrent Childhood Diseases", graduated in May 2005.

   Qingxia Chen (PhD student, co-advised), with dissertation "Theory and Inference for Parametric and Semiparametric Methods in Missing Data Problems", graduated in May 2005.

4. *Member of the doctoral committees of students*: Guoqing Diao (Biostatistics, UNC), Yue-yun Chi (Biostatistics, UNC), Guosheng Yin (Biostatistics, UNC), Xiaofei Wang (Biostatistics, UNC), Inkyun Jung (Biostatistics, UNC), David Shoham (Epidemiology, UNC), Richard Kwok (Epidemiology, UNC), Amy Pickard (Epidemiology, UNC), Ricardo Pollitt (Epidemiology, UNC), Stephen Campbell (Epidemiology, UNC)

GRANT SUPPORT

1. (co-investigator) 20% by GRANT R01 CA82659-08 funded by National Cancer Institute (PI: Lin, D.Y., UNC; Title: "Statistical Methods in Current Cancer Research"; Total cost: $823,782) 4/1/2004-3/31/2008.

2. (co-investigator) 8% (by 1 RO1 CA101186-01A2 funded by NCI (PI: Fuchs, H., UNC; Title: "3D cerebral vessel location for surgical planning"; Total cost: $1,617,174) 5/17/2005-4/30/2008.

3. (co-investigator) 10% by 2 R01-EB00219-08A1 funded by NCI (PI: Bullitt, E., UNC; Title: "3D Image Guided Endovascular Surgery" ; Total cost: $1,979,500) 8/1/2005-6/30/2009.

4. (biostatistician) 13% by 5-R01-HL69808-03 funded by NCI (PI: Bullitt, E., UNC; Title: "3D Cerebral Vessel Location for Surgical Planning "; Total cost: $2,663,766) 4/1/2002-3/31/2007.

5. (biostatistician) 10% by GRANT R01 HL69720-04 funded by National Heart,Lung,Blood Institute (PI: Cai, J., UNC; Title: "Semi-parametric Methods for Multivariate Survival Data"; Total cost: $1,164,000) 9/1/2002-8/31/2006.

6. (biostatistician) 10% by SA308-1105-4377 funded by Illinois Institute of Technology (PI: Pisano, E., UNC; Title: "Design for Multiple-Imaging Radiography of the Breast"; Total cost: $149,070) 7/7/2005-5/31/2007.

7. (co-investigator) 5% by 5 R01 CA105007-03 funded by Women's Health Initiative (PI: Pisano, E., UNC; Title: "Mammographic Density and Invasive Breast Cancer"; Total cost: $1,470,279) 3/12/2004-2/28/2007.

8. (biostatistician) 15% by 5 R01-EB00219-07 funded by National Institute of Biomedical Imaging and Bioengineering (PI: Bullit, E., UNC; Title: "3D Image Guided Endovascular Surgery"; Total cost: $1,100,981) 1/1/2005-2/28/2006.

9. (biostatistician) 10% by 5 P30 ES10126-04 funded by NIEHS (PI: Swenberg, UNC; Title: "UNC-CH Center for Environmental Health & Susceptibility-Facility Core 2"; Total cost: $3,782,176) 7/1/2004-3/31/2005.

10. (biostatistician) 10% by S1935-21/23 funded by Assoc/Schools of Public Health (PI: Meshnik, S., UNC; Title: "Strengthening Malaria Prevention and Control in Malawi"; Total cost: $813,969) 10/1/2002-9/30/2004.

11. (biostatistician) 10% by MiCo (PI: Pisano, E., UNC; Title: "Efficient and Effective Mobile Data Capture in an ACRIN Clinical Trial Environment"; Total cost: $286,766) 7/1/2005-12/31/2005.

PROFESSIONAL SERVICE

1. Member of search committee (Biostatistics, UNC), 2006

2. Member of examination committee (Biostatistics, UNC), 2001-2006

3. Member of graduate study committee (Biostatistics, UNC), 2003-2004

4. Chair of seminar committee (Biostatistics, UNC), 2003-2005

5. Referee service: JASA, Annals of Statistics, Biometrika, Biometrics, Statistica Sinica, JRSSB, Scandivian Journal of Statistics, Lifetime Data Analysis, Annals of International Mathematical Statistics, Journal of Planning and Statistical Inference, Statistics and Probability Letter, Statistics in Medicine

6. Conference service: organize the invited session on semiparametric models in survival analysis in WNAR/IMS meeting (2006)