Jingyuan Yang

CONTACT INFORMATION

Room 305-B, 1958 Neil Ave.,
Department of Statistics,
Ohio State University,
Columbus, Ohio 43210

Mobile: (614) 313-0425
Office: (614) 292-6038
Email: yj@stat.osu.edu
WWW: www.stat.osu.edu/~yj

RESEARCH INTEREST

Broad interests in biostatistics. Particularly interested in modeling problems in research of human diseases and drug development.

EDUCATION

Ohio State University, Columbus, Ohio **09/2005 - present**

Ph.D. Candidate, Biostatistics (GPA: 3.94/4.0)
M.S., Statistics (GPA: 4.0/4.0)

- Advisor: Prof. Shili Lin
- Curriculum:
  Stat: Statistical Inference, Probability Theory, Generalized Linear Models, Bayesian Method, Nonparametric Methods, Stochastic Process, and Statistical Computing
  BioStat: Design and Analysis of Clinical Trials, Genetic Data Analysis, Group Randomized Trials, and Survival Analysis

Zhejiang University, Hangzhou, China **09/2001 - 06/2005**

B.S., Biological Science (GPA: 3.87/4.0)

- Advisor: Prof. Jun Zhu

INTERNSHIPS

- Summer intern in the general medicine and inflammation team of the Global Biostatistics and Epidemiology department at **Amgen Inc.** **06/2009 - 09/2009**
- Summer intern in the late stage statistics group of the Biostatistics and Research Decision Sciences (BARDS) department at **Merck Research Laboratories** **06/2008 - 08/2008**
- IAESTE (International Association for the Exchange of Students for Technical Experience) intern in a molecular ecology lab in Cardiff University (Wales, UK) **07/2004 - 09/2004**

RESEARCH EXPERIENCE

Clinical Trial Related Research I **06/2009 - present**

Collaborated with experienced biostatisticians in Amgen Inc. on the summer intern project "Analyzing Radiographic Outcomes from Rheumatoid Arthritis Clinical Trials". Examined statistical characteristics of the radiographic outcomes and reviewed conventional non-parametric and parametric methods for analysis. Proposed new parametric methods to account for the unique distribution of the radiographic outcomes. Designed and implemented two sets of simulations in R to evaluate and compare performance of conventional and proposed methods. Also applied these methods to data from two longitudinal clinical trials.

Clinical Trial Related Research II **06/2008 - 06/2009**

Collaborated with experienced biostatisticians in Merck Research Labs on the summer intern project "Analysis of Zero-Inflated Count Data from Longitudinal Trials with Dropouts". Dealt with the potential issues on analyzing this type of count data: 1) over-dispersion arising from the intra-subject correlation among binary outcomes, 2) zero-inflation caused by low incidence rate, and 3) the missing data due to early dropouts. Proposed a new link function for conventional Poisson hurdle (PH) and negative binomial hurdle (NBH) models to improve model fitting and interpretability. Evaluated the extent to which NBH model with offset and the multiple imputation (MI) method could adjust the bias caused by dropouts. Set up the simulation scenarios in SAS and compared the characteristics of different models via simulations.

Statistical Genetics Research (Dissertation) **04/2007 - present**

Developed a likelihood approach to incorporate imprinting and maternal effects in genome-wide association study of complex human disorders by using family-based data from prospective studies. Extended the capability of conventional method which could only model family-based data from retrospective studies. Generalized the model assumption about maternal effect and adjusted the model according to the modification. Evaluated the type I error rate and power of the proposed method via simulations. Applied the proposed method on the Framingham Heart Study data in two stages to detect single nucleotide polymorphisms (SNPs) that may have imprinting and/or heterogeneous maternal effects on the susceptibility of high blood pressure in adults.

Conference Presentations

- Genetic Analysis Workshop 16, St. Louis, Missouri **09/2008**
- Joint Statistical Meetings 08, Denver, Colorado **08/2008**

Publications

- J. Yang and S. Lin, Genome-wide Detection of Imprinting and Heterogeneous Maternal Effects on High Blood Pressure Using Framingham Heart Study Data, *BMC Proceedings (In Press)*
- J. Yang, X. Li and G. F. Liu, Analysis of Zero-Inflated Count Data from Clinical Trials with Potential Dropouts, *Statistics in Medicine (Submitted)*
- J. Yang and S. Lin, Logistic Model is Robust to Deviation from Mating Frequency Assumptions without Compromising Power, *American Journal of Epidemiology (Submitted)*

Honors and Awards

- 06/2007 Travel Award, Summer Institute in Statistical Genetics, University of Washington
- 03/2005 University Fellowship, Ohio State University
- 10/2004 Panasonic Scholarship, Panasonic Co. & Zhejiang University
- 09/2004 Travel Award for the IAESTE internship in the UK, Zhejiang University
- 02/2004 Honorable Mentioned in the Mathematical Contest in Modeling, USA
- 2002-2005 Outstanding Student Scholarship (2002-2004) and Distinguished Graduate Award (2005), Zhejiang University