

Yan Dora Zhang

Department of Statistics and Actuarial Science
Room 304, 3/F, Run Run Shaw Building
The University of Hong Kong
Pokfulam Road, Hong Kong
Tel: (852) 3917-2473
Email: doraz@hku.hk
Website: <http://web.hku.hk/~doraz>

EDUCATION

- 2016 **Ph.D. in Statistics**, North Carolina State University, USA
Thesis: *Bayesian Methods for High-dimensional Data*
Advisor: *Howard D. Bondell*
- 2013 **M.S. in Statistics**, North Carolina State University, USA
- 2011 **B.S. in Statistics**, Nankai University, China

RESEARCH INTERESTS

Statistical genetics, bioinformatics, Bayesian methods, big data, risk prediction
Application areas: cancer genetics, psychology disease, public health/biomedical research

PROFESSIONAL EXPERIENCE

- 2019– **Assistant Professor**
Department of Statistics & Actuarial Science
Centre for Genomic Sciences
The University of Hong Kong
- 2016–2019 **Postdoctoral Fellow**
Department of Biostatistics, Bloomberg School of Public Health
Johns Hopkins University
Mentor: *Nilanjan Chatterjee*
- 2014–2015 **Research Assistant**
Target Sciences Statistics, GlaxoSmithKline, *Durham, NC*
- 2014–2014 **Research Scientist Intern**
Avaya Labs Research, Avaya, *Basking Ridge, NJ*
- 2013–2013 **Research Assistant**

Department of Civil Engineering, NCSU, Raleigh, NC

PUBLICATIONS

Peer-Reviewed

1. Choudhury, P. P., Wilcox, A., Brook, M., **Zhang, Y.**, Ahearn, T., Orr, N., ... Chatterjee, N., & García-Closas, M. (2019). Comparative validation of breast cancer risk prediction models and projections for future risk stratification. *JNCI: Journal of the National Cancer Institute*, djz113.
2. **Zhang, Y.**, Qi, G., Park, J. H., & Chatterjee, N. (2018). Estimation of complex effect-size distributions using summary-level statistics from genome-wide association studies across 32 complex traits. *Nature genetics*, 50(9), 1318-1326.
3. **Zhang, Y.**, & Bondell, H. D. (2018). Variable selection via penalized credible regions with Dirichlet-Laplace global-local shrinkage priors. *Bayesian Analysis*, 13(3), 823-844.

Under review or revision

4. **Zhang, Y.**, Wilcox, A. N., Zhang, H., Choudhury, P. P., Easton, D. F., Milne, R. L., ..., Chatterjee, N., & García-Closas, M. (2019+). Assessment of Polygenic Architecture and Risk Prediction based on Common Variants Across Fourteen Cancers. *bioRxiv*, 723825. *Under Review*.
5. **Zhang, Y.**, Reich, B. J., & Bondell, H. D. (2019+). High-dimensional linear regression via the R2-D2 shrinkage priors. *Under revision*.
6. Su, Y., Bhattacharya, A., **Zhang, Y.**, Chatterjee, N., & Carroll, R. (2019+). Nonparametric Bayesian deconvolution of a symmetric unimodal density. *Under revision*.
7. Hong, X., Fu, Z., **Zhang, Y.**, ..., Wang, X. (2019+). Maternal metabolomic profile plus conventional risk factors help further distinguish preterm from term births in a sample of US urban, low income multi-ethnic population. *Under revision*.

TEACHING

Lab Instructor

2013–2014 Experimental Statistics for Biological Sciences II

Teaching Assistant

2016 Applied Bayesian Statistics
2013 Applied Multivariate Statistical Analysis
2012 Experimental Statistics for Biological Sciences I
2012 Introduction to Mathematical Statistics I

- 2012 Experimental Statistics for Engineers II
2011 Introduction to Statistics

PRESENTATIONS

- 10/2018 **Poster presentation** on “Estimation of the polygenetic architecture of ten cancers and its implications for future discoveries”, *ASHG, San Diego, CA*
- 09/2018 **Invited talk** on “Estimation of complex effect-size distributions using summary-level statistics from genome-wide association studies”, *School of Public Health, Peking University, Beijing, China*
- 09/2018 **Invited talk** on “Estimation of complex effect-size distributions using summary-level statistics from genome-wide association studies”, *SJTU-YALE Joint Center of Biostatistics and Data Science, Shanghai, China*
- 09/2018 **Invited talk** on “Estimation of complex effect-size distributions using summary-level statistics from genome-wide association studies”, *School of Statistics and Data Science, Nankai University, Tianjin, China*
- 10/2017 **Poster presentation** on “Estimation of complex effect-size distributions using summary-level statistics from genome-wide association studies across 32 complex traits and implications for the future”, *ASHG, Orlando, FL*
- 08/2017 **Invited talk** on “Estimation of complex effect-size distributions using summary-level statistics from genome-wide association studies”, *JSM, Baltimore, MD*
- 08/2016 **Contributed talk** on “High-dimensional linear regression via the R2-D2 shrinkage priors”, *JSM, Chicago, Illinois*
- 12/2015 **Invited talk** on “Bayesian penalized credible region variable selection and global-local shrinkage priors”, *The Institute of Statistics, Nankai University, Tianjin, China*
- 08/2015 **Contributed talk** on “High-dimensional variable selection via penalized credible regions with global-local shrinkage priors”, *JSM, Seattle, WA*
- 08/2014 **Contributed talk** on “Adaptive tensor regression with applications in neuroimaging data analysis”, *JSM, Boston, MA*

MEMBERSHIP AND ACADEMIC SERVICES

- 2017– Member of American Society of Human Genetics (ASHG)
- 2017–2018 Committee Representative of Department of Biostatistics, School of Public Health, Johns Hopkins Postdoctoral Association
- 2016–2017 Member of International Chinese Statistical Association (ICSA) Community
- 2012–2016 Member of American Statistical Association (ASA) Community
- 2013–2014 Student Seminar Representative, Department of Statistics, NCSU
- 2013–2014 Executive of STATCOM - NCSU Chapter, a student-run volunteer organization supported by ASA

SELECTED HONORS & AWARDS

- 2017 Honorable Mention for poster “Estimating effect-size distribution from summary-level statistics for large genome-wide association studies” , Genetics Research Day, The Maryland Genetics, Epidemiology, and Medicine Training Program (MD-GEM)
- 2013 Nomination for the University Outstanding Teaching Assistant Award, NCSU
- 2013 Mu Sigma Rho Statistics Society Honor, NCSU
- 2011 Outstanding Graduates Honor, Nankai University, China
- 2010 Excellent Student Leader Honor, Nankai University, China
- 2009 National Scholarship, China

SOFTWARE

- [GENESIS](#): GENetic Effect-Size distribution Inference from Summary-level data

PEER REVIEWER

- Bayesian Analysis
- Nature Communications