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Department of Biostatistics and Epidemiology
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Education

- Ph.D. in Biostatistics, August 2018
Department of Statistical Science, Southern Methodist University, Dallas, TX
Center for Human Genetics, University of Texas Southwestern Medical Center (UTSW), Dallas, TX
Advisor: Dr. Chao Xing
- M.S. in Statistics, May 2017
Department of Statistical Science, Southern Methodist University, Dallas, TX
- B.S. in Mathematics, July 2014
School of Mathematics and Statistics, Beijing Institute of Technology, Beijing, China

Professional Experience

- Assistant Professor, August 2018 – present
Department of Biostatistics and Epidemiology, School of Public Health
University of North Texas Health Science Center (UNTHSC), Fort Worth, TX
- Graduate Research Assistant, May 2015 – July 2018
Bioinformatics Lab, UTSW, Dallas, TX
- Graduate Teaching Assistant, August 2016 – December 2016
Department of Clinical Science, UTSW, Dallas, TX
- Graduate Teaching Assistant, January 2015 – June 2015
Department of Statistical Science, Southern Methodist University, Dallas, TX

Honors and Awards

- Graduate Student Travel Grant, Southern Methodist University, 2018
- Schueren Award, Department of Statistical Science, Southern Methodist University, 2015

- Second Place, SAS Analytics Shootout Competition, 2015
- Meritorious Winner Award, Mathematical Contest in Modeling, 2012
- First Prize, Contemporary Undergraduate Mathematical Contest in Modeling, Beijing, 2012
- First Prize, Contemporary Undergraduate Mathematical Contest in Modeling, Beijing, 2011

Professional Affiliations

- American Society of Human Genetics, 2019 – present
- Society for Prevention Research, 2019 – present
- Texas Genetics Society, 2019 – present
- International Biometric Society, Eastern North American Region, 2017 – present
- American Statistical Association, 2015 – present

Grant Activities

- Women’s Center of Tarrant County, Thompson (PI), 2020
Title: Play It Safe Evaluation
Role: Biostatistician
- National Institute on Minority Health and Health Disparities (1U54 MD013376-01A1), H. Yu (PI), D. Dluzen (Project Lead), 2020 – 2024
Title: The Relationship between Socioeconomic Status and Poverty and mRNA Expression in Immune Cells
Role: Subaward PI
- National Institute on Minority Health and Health Disparities (3U54 MD006882-08S2), J. Vishwanatha (PI), N. Phillips (Project Lead), 2019 – 2021
Title: Focus on Mexican Americans: Mitochondrial Underpinnings of Sex- and Ethnicity-based risk for Alzheimer’s Disease
Role: Co-Investigator
- National Institute on Alcohol Abuse and Alcoholism (R01 AA025611), M. Lewis, 2019 – 2023
A Longitudinal, Measurement Burst Study to Examine the Ecological Validity of the Prototype Willingness
Title: Model of Hazardous Adolescent and Young Adult Alcohol Use
Role: Co-Investigator
- National Institute on Alcohol Abuse and Alcoholism (R01 AA021379), M. Lewis, 2019
Title: Informing Alcohol-Related Risk Intervention with the Prototype Willingness Model
Role: Co-Investigator
- National Institute on Alcohol Abuse and Alcoholism (2R01 AA019511-05A1), E.Y. Mun, 2018 – 2022
Title: Estimating Comparative Effectiveness of Alcohol Interventions for Young Adults
Role: Co-Investigator
- Texas Alzheimer’s Research & Care Consortium, R. Barber, 2018 – 2021
Title: Epigenetic Risk Factors for Early Age at Onset of Alzheimer’s & MCI among non-Caribbean Hispanics
Role: Co-Investigator

Publications

- Wu, G^{*}, Liu, L.^{*}, **Zhou, Z.**^{*}, Liu, J., Wang, B., Ruan, J., Yang, Q., Zhang, C., Wang, D., Kang, L., Wang, S., Hui, R., Zou, Y., Xing, C., Song, L. and Wang, J. (2020). An East Asian-1 specific common variant in TNNI3 predisposes to hypertrophic cardiomyopathy. Accepted by *Circulation*.
(*: Co-first authorship)
- Uche, U. I., Suzuki, S., Fulda, K. G. and **Zhou, Z.** (2020). Environment-Wide Association Study on Childhood Obesity in the US. *Environmental Research*, 110109.
- Garg, A., El-Shanti, H., Xing, C., **Zhou, Z.**, Abujbara, M., Rashed, K., Khateeb, M., Ajlouni, K. and Agarwal, A. (2020). A novel syndrome with short stature, mandibular hypoplasia and osteoporosis may be associated with a PRRT3 variant. *Journal of the Endocrine Society*, 4(8), bvaa088.
- Kim, S., Huh, D., **Zhou, Z.** and Mun, E. (2020). A Comparison of Bayesian to Maximum Likelihood Estimation for Latent Growth Models in the Presence of a Binary Outcome. *International Journal of Behavioral Development*. doi: 0165025419894730.
- Pathak, G., **Zhou, Z.**, Silzer, T., Barber, R. and Phillips, N. (2020). Two-stage Bayesian GWAS of 9,576 individuals identifies SNP-regions that are targeted by miRNAs inversely expressed in Alzheimer's and cancer. *Alzheimer's & Dementia*, 16(1), 162-177.
- Patni, N., Hatab, S., Xing, C., **Zhou, Z.**, Quittner, C., and Garg, A. (2019). A novel autosomal recessive lipodystrophy syndrome due to homozygous LMNA variant. *Journal of Medical Genetics*. Epub ahead of print. doi:10.1136/jmedgenet-2019-106395
- Pathak, G., Silzer, T., Sun, J., **Zhou, Z.**, Daniel, A., Johnson, L., O'Bryant, S., Phillips, N. and Barber, R. (2019). Genome-wide methylation of mild cognitive impairment in Mexican Americans highlights genes involved in synaptic transport, Alzheimer's disease-precursor phenotypes, and metabolic morbidities. *Journal of Alzheimer's Disease*, (Preprint), 1-17.
- Chen, Z., Cai, J., Chen, Y., Wei, J., Li, H., Lu, Y., **Zhou, Z.** and Chen, X. (2019). A meta-analysis of the association between the presence of Helicobacter pylori and periodontal diseases. *Medicine*, 98(22).
- Ma, Y., Li, W., Shotorbani, P., Huang, L., Chaudhari, S., Wu, P., Wang, L., Dubansky, B., Ryou, M., **Zhou, Z.** and Ma, R. (2019), Comparison of diabetic nephropathy between male and female eNOS^{-/-}db/db mice. *American Journal of Physiology-Renal Physiology*, 316(5), F889-F897.
- Huh, D., Mun, E., Walters, S., **Zhou, Z.** and Atkins, D. (2019). A Tutorial on Individual Participant Data Meta-Analysis using Bayesian Multilevel Modeling to Estimate Alcohol Intervention Effects across Heterogeneous Studies. *Additive Behaviors*, 94, 162-170.
- Zhang, D., **Zhou, Z.**, Abu-Hijleh, M., Batra, K., Xing, C. and Garcia, C. K. (2019). Homozygous Rare PARN Missense Mutation in Familial Pulmonary Fibrosis. *American Journal of Respiratory and Critical Care Medicine*, 199(6), 797-799.
- **Zhou, Z.**, Ku, H. C., Xing, G. and Xing, C. (2018). Decomposing Pearson's χ^2 Test: A Linear Regression and its Departure from Linearity. *Annals of Human Genetics*, 82(5), 318-324.

- Hu, J., Rong, Z., Gong, X., **Zhou, Z.**, Sharma, V., Xing, C., Watts, J., Corey, D. and Mootha, V. V. (2018). Oligonucleotides Targeting *TCF4* Triplet Repeat Expansion Inhibit RNA Foci and Mis-splicing in Fuchs' Dystrophy. *Human Molecular Genetics*, 27(6), 1015-1026.
- Saade, J. S., Xing, C., Gong, X., **Zhou, Z.** and Mootha, V. V. (2018), Instability of *TCF4* Triplet Repeat Expansion in Fuchs' Endothelial Corneal Dystrophy with Parent-Child Transmission. *Investigative Ophthalmology & Visual Science*, 59(10), 4065-4070.
- **Zhou, Z.**, Ku, H. C., Huang, Z., Xing, G. and Xing, C. (2017). Differentiating the Cochran-Armitage Trend Test and Pearson's χ^2 Test: Location and Dispersion. *Annals of Human Genetics*, 81(5), 184-189.
- Mootha, V. V., Hansen, B., Rong, Z., Mammen, P. P., **Zhou, Z.**, Xing, C. and Gong, X. (2017). Fuchs' Endothelial Corneal Dystrophy and RNA Foci in Patients with Myotonic Dystrophy. *Investigative Ophthalmology & Visual Science*, 58(11), 4579-4585.

Submitted for Publication

- Mun, E., Li, X., Lineberry S., Tan, Z., Huh, D., Walters, S., **Zhou, Z.** and Larimer, M. Do Brief Motivational Interventions Reduce Driving after Drinking Among College Students? A Two-step Meta-analysis of Individual Participant Data. Submitted.
- **Zhou, Z.**, Xie, M., Huh, D. and Mun, E. A Bias Correction Method in Meta-analysis of Randomized Clinical Trials with no Adjustments for Zero-inflated Outcomes. Submitted.
- Loparco, C. R., Lowery, A., **Zhou, Z.**, Leon, M., Galvin, A., Lewis, M. A. and Litt, D. M. Age as a Moderator of the Association Between Perceived Vulnerability and the Posting and Deleting of Alcohol-Related Content on Social Media. Submitted.

Review Experience

- Statistical Science, SCIENCE CHINA Mathematics, Electronic Journal of Statistics, Research Synthesis Methods, SORT-Statistics and Operations Research Transactions, Alcohol and Alcoholism, WIREs Computational Statistics, Scientific Reports

Presentations

- *The Additive Model in Genetic Association Studies*, Joint Statistical Meeting, Denver, CO, July 2019.
- *Testing Nonlinear Gene-Environment Interaction Through Varying Coefficient and Linear Mixed Models*, Eastern North American Region International Biometric Society, Atlanta, GA, March 2018.
- Work in Progress: *Testing Nonlinear Gene-Environment Interaction Through Varying Coefficient and Linear Mixed Models*, Quantitative Biomedical Research Center, University of Texas Southwestern Medical Center, Dallas, TX, October 2017.
- *A Procedure to Control for Population Structure in Genome-Wide Association Studies with Rare Variants*, Joint Statistical Meetings, Baltimore, MD, August 2017.

- *A Procedure to Control for Population Structure in Genome-Wide Association Studies with Rare Variants*, Biostatistics Work in Progress, University of Texas Southwestern Medical Center, Dallas, TX, July 2017.
- Journal Club: *Determinants of Power in Gene-Based Burden Testing for Monogenic Disorders*, Quantitative Biomedical Research Center, University of Texas Southwestern Medical Center, Dallas, TX, March 2017.
- Journal Club: *Determinants of Power in Gene-Based Burden Testing for Monogenic Disorders*, McDermott Center for Human Growth and Development, University of Texas Southwestern Medical Center, Dallas, TX, November 2016.
- Journal Club: *Rare-Variant Association Testing for Sequencing Data with the Sequence Kernel Association Test*, Biostatistics Journal Club, University of Texas Southwestern Medical Center, Dallas, TX, September 2016.
- Journal Club: *Cochran-Armitage Trend Test*, Biostatistics Journal Club, University of Texas Southwestern Medical Center, Dallas, TX, March 2016.
- *An Introduction to Genome-Wide Association Study*, Seminar, Department of Statistical Science, Southern Methodist University, Dallas, TX, March 2016.

Teaching Experience

- Lecturer, Statistical Genetics (BIOS 6391), UNTHSC, 2020
- Lecturer, Methods of Clinical Trials (BIOS 6326), UNTHSC, 2019
- Lecturer, Advanced SAS and R (EPID 6391), UNTHSC, 2019, 2020

Mentoring Experience

Dissertation Committee

- Member, PhD Student: Gita Pathak, UNTHSC, 2018 – 2019
- Member, PhD Student: Uloma Igara Uche, UNTHSC, 2019 – present
- Member, PhD Student: Bing Song, UNTHSC, 2019 – present
- Member, PhD Student: Micaela Colmenarez, UNTHSC, 2020 – present

Computing Skills

- Statistical software: R, SAS, SPSS
- Programming language: Python
- Operating System: Unix, Windows
- Genetics software: Plink, Samtools, Eigensoft, Vcftools