

Xichen Mou

Assistant Professor, Biostatistics
Division of Epidemiology, Biostatistics, and Environmental Health
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EDUCATION

Aug 2019 Ph.D. in Statistics, University of South Carolina, Columbia, SC, USA
Dec 2013 M.S. in Statistics, University of Illinois at Urbana-Champaign, Champaign, IL, USA
Jun 2010 B.S. in Statistics, Shandong University, Shandong, China

PROFESSIONAL EXPERIENCE

Aug 2019 - present Assistant Professor, Division of Epidemiology, Biostatistics, and Environmental Health, School of Public Health, University of Memphis, TN, USA
Aug 2014 - Aug 2019 Graduate Assistant, Department of Statistics, University of South Carolina, Columbia, SC, USA

PUBLICATION

Mukhopadhyay, A., Mondol, M. H., Rahman, M., Unicomb, L., Khan, R., Mazumder, H., ... & Naser, A. M. (2025). The direct and urinary electrolyte-mediated effects of ambient temperature on population blood pressure: A causal mediation analysis. *Environment international*, 195, 109208.

Mou, X., Zhang, H., & Arshad, H. (2024). Bayesian generalized kernel regression machine. *Statistical Methods in Medical Research*. doi:10.1177/09622802241280784

Wu, C.*, **Mou, X.**, & Zhang, H. (2024). Identifying differentially methylated CpG regions in the human genome via generalized beta regression method. *BMC Bioinformatics*, 25(1), 97.

Mou, X., & Wang, D. (2024). Additive partially linear model for pooled biomonitoring data. *Computational Statistics and Data Analysis*. *Computational Statistics & Data Analysis*, 190, 107862.

Mahmood, A., Kedia, S., Arshad, H., **Mou, X.**, & Dillon, P. (2024). Disparities in access to mental health services among children with mental health disorders in the United States. *Community Mental Health Journal*. <https://doi.org/10.1007/s10597-024-01305-3>

Qi., R., Jin, D., Chen, H., **Mou, X.**, & Ali., F. (2024). Strategic-level perceived fairness of hotel dynamic pricing: the role of cues and the asymmetric moderating effect of inflation attribution. *Journal of Revenue and Pricing Management*, 1-13.

- Lee, G., Hicks, D., Kedia, S., Regmi, S., & **Mou, X.** (2024). Pathways of Mental Health Problems, Substance Use, and Perceived Risk on Current Cannabis Use among High School Seniors in the United States. *Children and Youth Services Review*, *158*, 107456.
- Batbaatar, N., Smith, A., Jia, C., Naser, A. M., **Mou, X.**, Vidal, G., & Starlard-Davenport, A. (2024). Association of Environmental Factors with Breast Cancer Incidence among African American Women in Memphis, Tennessee. *International Journal of Environmental Health Research*, 1-13.
- Gain, E., Yu, X., Kedia, S., Naser, A. M., Bromley, M., Ajoku, M., & **Mou, X.** (2024). Discontinuation of antidepressants and the risk of medication resumption among community-dwelling older adults with depression in the US. *International Journal of Environmental Research and Public Health*, *21*(9), 1209.
- Velásquez-Mieyer, P. A., Nieto-Martinez, R., Velasquez, A. E., **Mou, X.**, Young-Moss, S., Mechanick, J. I., ... & Neira, C. P. (2024). Disparities in the Cardiometabolic Impact of Adiposity among African American and Hispanic Adolescents. *Nutrients*, *16*(18), 3143.
- Kovesdy, C. P., Mazumder, H., Faizah, F., Alam, N., **Mou, X.**, Zhang, H., & Naser, A. M. (2024). Effect of Ambient Temperature on Renal Colic: A Systematic Review and Meta-Analysis: SA-PO1106. *Journal of the American Society of Nephrology*, *35*(10S), 10-1681.
- Mazumder, H., Mondol, M. H., Rahman, M., Khan, R., Doza, S., Unicomb, L., Jahan, F., Mukhopadhyay, A., Makris K. C., Caban-Martinez, A., Iqbal, R., Ahmed, F., Creencia, L., Shamsudduha, M., Mzayek, F., Jia, C., Hongmei Zhang, Musah, A., Fleming, L.E., . . . Naser, A. M. (2024). Sex-specific association of ambient temperature with urine biomarkers in Southwest Coastal Bangladesh. *Kidney International Reports*.
- Nieto-Martínez, R., Velásquez-Rodríguez, A., Neira, C., **Mou, X.**, Neira, A., Garcia, G., Velásquez-Rodríguez, P., Levy, M., Mechanick, J. I., & Velásquez-Mieyer, P. A. (2022). Impact of a multidisciplinary approach on cardiometabolic risk reduction in a multiracial cohort of adults: A 1-Year pilot study. *Nutrients*, *14*(16), 3391.
- Mou, X.**, Zhang, H., & Arshad, H. (2022). Identifying intergenerational patterns of correlated methylation sites. *Annals of Applied Statistics*, *16*(1), 521-536.
- Wang, D., **Mou, X.**, & Liu, Y. (2022). Varying-coefficient regression analysis for pooled biomonitoring. *Biometrics*, *78*(4), 1328-1341.
- Zhan, L., **Mou, X.**, & Gill, M. (2021). Adverse childhood experiences (ACEs): Development of an ACEs knowledge scale. *Journal of Nursing Measurement*. <https://doi.org/10.1891/JNM-D-20-00117>
- Wang, D., **Mou, X.**, Li, X., & Huang, X. (2020). Local polynomial regression for pooled response data. *Journal of Nonparametric Statistics*, *32*(4), 814-837.
- Qi, R., Cardenas, D. A., **Mou, X.**, & Hudson, S. (2018). The strategic value of advertising expenditures in the tourism and hospitality industry. *Tourism Economics*, *24*(7), 872-888.

* *advisee*.

Submitted or In Preparation

Submitted:

Kilmurray, C., Weg, M., Wilson, N., **Mou, X.**, Clanahan, B., Stockton, M., & Ward, K. (2024+). Weight concern as a predictor of smoking cessation in smokers participating in a community-based cessation program. *Drug and Alcohol Dependence*. *Under review*.

Qi., R, **Mou, X.**, Liu, H., Dogru, T., & So, K. (2024+). Analyzing and mapping vulnerability and resilience of the hospitality industry: An evolutionary approach. *International journal of hospitality management*. *Under review*.

In Preparation:

Mou, X., Wang, D., & Tebbs, J. (2024+). Nonparametric conditional density estimation with pooled biomarker data.

Mou, X., & Zhang, H. (2024+). Clustering through networks with application to epigenetics.

Mahmood, A., Kedia, S., Arshad, H., **Mou, X.**, & Dillon, P. (2024+). Disparities in preventive healthcare utilization among children with mental, behavioral, and developmental disorders (MBDDs) in the United States.

PRESENTATION

The presenter(s)'s name is underlined.

Mou, X., Zhang, H., Arshad, H. (May 2024). Generalized Bayesian kernel machine regression with application to epigenetics. Invited talk at St. Jude Hospital Children's Research Hospital, Memphis, TN.

Mou, X., Zhang, H., & Arshad, H. (November 2023). Generalized Bayesian kernel machine regression. Invited talk at University of Tennessee Health Science Center, Memphis, TN.

Kedia, S., Mahmood, A, Arshad, H., **Mou, X.**, & Dillon, P. (April 2023). Disparities in preventive healthcare utilization among children with mental, behavioral, and developmental disorders in US. Accepted Poster presentation at Society of Behavioral Medicine (SBM) Annual Meetings, Phoenix, Az.

Regmi, S., Kedia, S. K., **Mou, X.**, Lee, G., & Dillon, P. (April 2023). Depression among children with Adverse Childhood Experiences (ACEs) and the role of family resilience: Findings from NSCH data. Accepted Poster presentation at Society of Behavioral Medicine (SBM) Annual Meetings, Phoenix, Az.

Wu, C., **Mou, X.**, & Zhang, H. (Mar 2023). gbdmr: identification of differentially methylated CpG regions with generalized beta regression. Accepted Poster presentation at MCBIOS2023, Dallas, TX.

Velasquez, A., Velásquez-Rodríguez, A., Watkins, S., **Mou, X.**, Martinez, R., Neira, C., Mechanick, J., Cherrington, A., Levy, M., Grant, C., & Velásquez-Mieyer, P. A. (Oct 2022). Adiposity and Racial Disparities Burden in an Adolescent Cohort: A 3-Year Pragmatic Experience. Poster presentation at Obesity Week, San Diego, CA.

Wu, C., **Mou, X.**, & Zhang, H. (Aug 2022). Identifying differentially methylated CpG sites and regions in the human genome based on the generalized beta distribution. Oral presentation at Joint Statistical Meetings, Washington, D.C.

Mou, X., & Wang, D. (Aug 2022). Additive partial linear model for pooled data. Oral presentation at Joint Statistical Meetings, Washington, D.C.

Mou, X., & Wang, D. (Mar 2022). Additive partially linear model to pooled data analysis. Oral presentation at Memphis DATA 2022, Memphis, TN.

Mou, X., Zhang, H., Karmaus, W., Arshad, H., & Holloway, J. (Aug 2020). Identifying transgenerational patterns of correlated methylation sites. Oral presentation at Joint Statistical Meetings, virtual.

Qi, R., & **Mou, X.** (July 2020). Airbnb and smoking-related risks. Poster presentation accepted at the 2020 International Council on Hotel, Restaurant, and Institutional Education (ICHRIE) Conference, virtual.

Wang, D., **Mou, X.**, & Tebbs, J. (July 2019). Nonparametric conditional density estimation for pooled biomarker data. Joint Statistical Meetings, Fort Collins, CO.

Wang, D., **Mou, X.**, & Tebbs, J. (June 2019). Nonparametric conditional density estimation for pooled biomarker data. Invited session at ICSA 2019 Applied Statistics Symposium, Raleigh, NC.

Wang, D., **Mou, X.**, & Tebbs, J. (Mar 2019). Nonparametric conditional density estimation for pooled biomarker data. Oral presentation at the ENAR 2019 Spring Meeting, Philadelphia, PA.

Qi, R., **Mou, X.**, & Cárdenas, D.A. (Jan 2019). Understanding the long-term effects of advertising expenditures. Oral presentation at the 24th Annual Hospitality Graduate Conference, Houston, TX.

Mou, X., Wang, D., & Tebbs, J. (Mar 2018). Nonparametric conditional density estimation based on pooled assessments. Oral presentation at the ENAR 2018 Spring Meeting, Atlanta, GA.

Mou, X., & Tebbs, J. (Mar 2017). Back-end screening using information theory. Oral presentation at the ENAR 2017 Spring Meeting, Washington, DC.

Mou, X., & Tebbs, J. (Mar 2017). Information theory in group testing. Oral presentation at the South Carolina Chapter of American Statistical Association 46th Annual Meeting, Columbia, SC. Outstanding Presentation Award.

GRANT

[Extramural Funding]

Clusters of Epigenetic Networks at Birth and Asthma Incidence in Children

Source: NIH/NIAID

Role: Co-I

PI: Hongmei Zhang

9/2023-8/2024

Effect of ambient heat and meteorological variables on chronic kidney disease progression among US veteran

Source: NIH/NIEHS

Role: Co-I
4/2023-3/2026

PI: Abu Mohammed Naser Titu

Evaluation and characterization of a cohort of adolescents with obesity and the impact on clinical social and financial outcomes

Source: Novo Nordisk

Role: Co-I
1/2021-12/2021

PI: Pedro A. Velasquez

Does epigenetic methylation explain the gender-switch in adolescent asthma?

Source: NIH/NIAID

Role: Co-I
1/2016 - 12/2020

PI: Hongmei Zhang, John W. Holloway

Building a Culture of Health for Urban Children and Families

Source: The Urban Child Institute

Role: Statistician
2017 - 2020

PI: Lin Zhan

[Intramural Funding]

Advancing Pooled Data Analysis for Public Health Screening and Biomonitoring

Source: RISER grant, School of Public Health, University of Memphis

Role: PI
1/2024-12/2024

COVID-19 screening using pool testing in Memphis

Source: Community of Research Scholars Grant, University of Memphis

Role: PI
11/2020-4/2021

[Submitted]

Extreme temperature events and heart failure-associated hospitalizations and mortality in the United States

Source: American Heart Association

Role: Co-I
6/2024 - 6/2025

PI: Abu Mohammed Naser Titu

Healthy Mind/Happy Life: Mental Health Promotion for Memphis Elderly, Prevention Research Center

Source: CDC

Role: Co-I
9/2024 - 9/2029

PI: Ashish Joshi

Comprehensive Opioid Abatement Strategy Research and Evaluation in Tennessee

Source: Opioid Abatement Council, Tennessee

Role: Co-I

PI: Satish Kedia

5/2024 - 4/2027

[Submitted but Unfunded]

Parental exposure, intergenerational epigenetics, and offspring allergic diseases via causal inferences

Source: NIH/NIAID

Role: PI

7/2024 - 6/2026

Ambient Temperature and the Effectiveness of Antihypertensive Medications on Blood Pressure Control

Source: NIH/NIEHS

Role: Co-I

PI: Abu Mohammed Naser Titu

1/2024 - 6/2026

Infectious Disease Forecast and Outbreak Response to Enhance Population Health (I-FOR-PH) project in Memphis, TN

Source: CDC

Role: Co-I

PI: Ashish Joshi

9/2023 - 9/2028

Workstation shedding and electrolyte rehydration to protect strenuous outdoor workers' health from ambient heat

Source: International Centre for Diarrhoeal Disease Research, Bangladesh

Role: Co-I

PI: Abu Mohammed Naser Titu

1/2023 - 12/2025

Random Integrated Subdata Ensemble (RISE) for Big Data Model Building with Application to Epigenetic Data

Source: NSF

Role: Co-PI

4/2023 - 3/2026

Memphis Climate Health Environment Equity Research (MCHEER) Lab

Source: NIH

Role: Co-I

PI: Chunrong Jia

10/2022 - 10/2024

BGKMR: a machine learning toolbox for substance use and SUD detection

Source: NIH

Calculus II. Shandong University.
Spring 2011

[Teaching Assistant]

STAT 506 – Introduction to Experimental Design. University of South Carolina.
Spring 2017

STAT 519 – Sampling. University of South Carolina.
Summer 2016

STAT 100 – Statistics. University of Illinois at Urbana-Champaign.
Fall 2012, Spring 2013

HONORS & AWARDS

Faculty Teaching Award at School of Public Health, the University of Memphis, 2024

Outstanding Presentation Award at the South Carolina Chapter of American Statistical Association 46th
Annual Meeting, 2017

University of South Carolina Graduate Student Travel Grant, 2017

Department of Statistics Graduate Student Travel Grant, 2017

Best First Year Ph.D. Student in the Department of Statistics at the University of South Carolina, 2015

Excellent Student Scholarship at Shandong University, 2009 & 2010