
TIANZHOU (CHARLES) MA

2234M School of Public Health Bldg, College Park, MD 20742

(301)-405-6421 \diamond tma0929@umd.edu

<https://sph.umd.edu/people/tianzhou-ma> \diamond <https://matianzhou.github.io/>

EDUCATION

University of Pittsburgh,

Pittsburgh, PA, US

- Ph.D. in Biostatistics, Apr 2018
 - Thesis: *Differential expression and feature selection in the analysis of multiple omics studies.*
 - Advisors: George C. Tseng, ScD and Zhao Ren, PhD

Yale University,

New Haven, CT, US

- M.S. in Biostatistics, May 2013
 - Thesis: *Incorporating functional annotation information in prioritizing disease associated SNPs from genome wide association studies.*
 - Advisor: Hongyu Zhao, PhD

University of Toronto,

Toronto, ON, Canada

- Honours B.Sc. in Genes, Genetics and Biotechnology (specialist), June 2010
 - *with High Distinction (Summa Cum Laude)*

RESEARCH INTERESTS

- Bioinformatics, genetics (GWAS and post-GWAS fine mapping) and multi-omics (e.g. expression of both coding and noncoding RNA, epigenomics, proteomics, etc.)
- Meta-analysis and data integration of omics data and with other data types (e.g. imaging-genetics)
- Statistical learning and high-dimensional variable selection
- Bayesian hierarchical modeling
- Survival data analysis
- Application of statistical and machine learning methods in cancer, psychiatry, infectious disease and epidemiology fields

PROFESSIONAL EXPERIENCE

- **Assistant Professor** Aug 2018 ~ Now
 - Department of Epidemiology and Biostatistics, University of Maryland, College Park, MD
- **UMD Affiliate** Dec 2018 ~ Now
 - Maryland Population Research Center, University of Maryland, College Park, MD

PUBLICATIONS

Notes: [^]: co-first author; *corresponding author; students underlined; Also available at My Google Scholar Page

2021

⁰Last modified: May 2, 2021

1. Cruz-Cano R, **Ma T**, Yu Y, Lee M and Liu H. Forecasting COVID-19 Cases based on Social Distancing in Maryland, U.S.A.: A Time –Series Approach. (2021). *Disaster Medicine and Public Health Preparedness*. Accepted.
2. Saegusa T, Zhao Z, Ke H, Ye Z, Xu Z, Chen S and **Ma T***. (2021). Detecting survival-associated biomarkers from heterogeneous populations. *Scientific Reports*, 11(1): 1-12.
3. Wu Q, **Ma T**, Liu Q, Milton D, Zhang Y and Chen S. (2021). Extracting Interconnected Communities in Gene Co-expression Networks. *Bioinformatics*. Accepted.
4. Ye Z[^], Ke H[^], Chen, S, Cruz-Cano, R, He, X, Zhang, J, Dorgan J, Milton D and **Ma T***. (2021). Biomarker categorization in transcriptomic meta-analysis by concordant patterns with application to Pan-cancer studies. Under revision in *Frontiers in Genetics*.
5. Rahman T, Li Y, **Ma T**, Tang L and Tseng GC. (2021). A sparse negative binomial mixture model for clustering RNA-seq count data. Under revision in *Biostatistics*.
6. Rose A, Belus J, **Ma T**, Lee J, Wan C, Reyes A, Joska J, Andersen L, Myers B and Magidson J. (2021+). An event-level analysis of the relationship between harmful alcohol use and anti-retroviral treatment non-adherence in people accessing HIV treatment in Cape Town, South Africa. To be submitted.
7. **Ma T***, Ke H and Ren Z*. (2021+). Robust distance correlation for variable screening. To be submitted.
8. Zong W, Rahman T, Zhu L, Zeng X, Zhang Y, Zou J, Liu S, Li JJ, **Ma T*** and Tseng GC*. (2021+). Congruence evaluation for model organisms in transcriptomic response. To be submitted.
9. Adenaiye O, Mesquita J, Hong F, German J, Tai S, Youssefi S, Albert, B, **Ma T**, ... and Milton D. (2021+). Tracking Acute Respiratory Infections in A College Resident Community. To be submitted.
10. Khan S, Adenaiye O, **Ma T**, ..., Milton D and Felgner P. (2021+). Subtype-specific IgA antibodies partially mediate influenza immunity following vaccination. To be submitted.
11. Linkov F, Goughnour, S, Vlad A, Elishaev E, **Ma T**, Xu Z, Edwards RP, Ramanathan R, Hamad G and Bovbjerg D. (2021+). Changes in the endometrial immune markers in women undergoing surgical weight loss. To be submitted.
12. Rose A, Belus J, **Ma T**, Lee J, Wan C, Reyes A, Joska J, Andersen L and Magidson J. (2021+). An event-level analysis of the relationship between problematic alcohol use and anti-retroviral treatment non-adherence in people accessing HIV treatment in Cape Town, South Africa. To be submitted.

2020

13. **Ma T**, Ren Z and Tseng GC. (2020). Variable screening with multiple studies. *Statistica Sinica*, 30(2): 925–953.
14. Lin C, Chang L, **Ma T**, Oh H, French, B, ..., Tseng G and Sibille E. (2020). Older Molecular Brain Aging in Severe Mental Illness. *Molecular Psychiatry*. Accepted.
15. Saegusa T, **Ma T**, Lee MT, Li G and Chen Y. (2020). Variable selection in censored threshold regression model with applications to HIV drug adherence data. *Statistics in Biosciences*. Accepted.
16. Zeng X, Zong W, Lin C, Fang Z, Li Y, **Ma T**, Lewis D, Enwright J and Tseng GC. (2020). Comparative Pathway Integrator: a framework of meta-analytic integration of multiple transcriptomic studies for consensual and differential pathway analysis. *Genes*. Accepted.
17. Wu Q, Milton D, Xing Y, **Ma T**, Zhang Z and Chen S. (2020). Predicting Latent Contacts from Self-reported Social Network Data via Outcome Misclassification Adjustment. *Statistics in Medicine*. Accepted.
18. Yu Y, Liu S, Tao J, Ren B, Chen Z, Li F, Nalesnik M, **Ma T**, ..., Tseng G and Luo J. (2020). Pten-NOLC1 fusion promotes cancers involving MET and EGFR signalings. *Oncogene*. Accepted.
19. Ye Z[^], Mo C[^], Hatch K, Liu S, Gao S, Hong E, Kochunov P*, Chen S* and **Ma T***. White matter integrity and nicotine dependence in smokers: evaluating vertical and horizontal pleiotropy. *bioRxiv* (2020).

20. Mo C[^], Ye Z[^], Hatch K, Zhang Y, Wu Q, Liu S, Kochunov P, **Ma T**^{*} and Chen S^{*}. Genetic Fine-mapping with Dense Linkage Disequilibrium Blocks: genetics of nicotine dependence. *bioRxiv* (2020).

2019

21. Zhu L, Huo Z, **Ma T** and Tseng G. (2019). Bayesian indicator variable selection to incorporate hierarchical overlapping group structure in multi-omics applications. *Annals of Applied Statistics*, 13(4): 2611-2636. (a preliminary version won the ENAR distinguished student paper award).
22. Huo Z, Zhu L, **Ma T**, ..., Zhao J and Tseng G. (2019). Two-way Horizontal and Vertical Omics Integration for Disease Subtype Discovery. *Statistics in Biosciences*. In press.
23. **Ma T**[^], Huo Z[^], Kuo A[^], ..., Song C and Tseng GC. (2019). MetaOmics - Comprehensive Analysis Pipeline and Web-based Software Suite for Transcriptomic Meta-Analysis. *Bioinformatics*, 35(9):1597-1599.([^]co-first author) PMID: 30518877.
24. Grabosch S, Bulatovic M, Zeng F, **Ma T**, ..., Edwards R and Vlad A. (2019). Cisplatin-induced immune modulation in ovarian cancer mouse models with distinct inflammation profiles. *Oncogene*, 38(13):2380-2393. PMID: 30518877.

2018

25. Fang Z, **Ma T**, Zhu L, ..., Tang G and Tseng GC. (2018). Bayesian integrative model for multi-omics data with missingness. *Bioinformatics*, 34(22):3801-3808. PMID: 30184058.
26. Andersen CL, Boisen MM, Sikora MJ, **Ma T**, ..., Edwards RP and Oesterreich S. (2018). The evolution of estrogen receptor signaling in the progression of endometriosis to endometriosis-associated ovarian cancer. *Hormones and Cancer*, 9(6): 399-407. PMID: 30302736.
27. Scifo E, Pabba M, Kapadia F, **Ma T**., Lewis DA, Tseng GC and Sibille E. (2018). Sustained molecular pathology across episodes and remission in depression. *Biological Psychiatry*, 83(1): 81-89. PMID: 28935211.

2017

28. **Ma T**, Liang F and Tseng GC. (2017). Biomarker detection and categorization in ribonucleic acid sequencing meta-analysis using Bayesian hierarchical models. *Journal of the Royal Statistical Society: Series C*, 66(4): 847-867. (won ASA Section on Bayesian Statistical Science (SBSS) student paper award to attend 2017 JSM, reported on RNA-Seq Blog)
29. **Ma T**, Liang F, Oesterreich S and Tseng GC. (2017). A Joint Bayesian Model for Integrating Microarray and RNA Sequencing Transcriptomic Data. *Journal of Computational Biology*, 24(7): 647-662. (selected to present at Dahshu Data Science Symposium: Computational Precision Health 2017 and won the best paper award)
30. **Ma T**, Song C and Tseng GC. (2017). Discussant paper on "Statistical contributions to bioinformatics: Design, modelling, structure learning and integration". *Statistical Modelling*, 17(4-5): 305-315.
31. Andersen CL, Sikora MJ, Boisen MM, **Ma T**, ..., Edwards RP and Oesterreich S. (2017). Active estrogen receptor-alpha signaling in ovarian cancer models and clinical specimens. *Clinical Cancer Research*, 23(14): 3802-3812. PMID: 28073843.
32. Linkov F, Goughnoura SL, **Ma T**, Xu Z, ..., McCloskey C and Bovbjerg DH. (2017). Changes in inflammatory endometrial cancer-associated biomarkers in individuals undergoing surgical weight loss. *Gynecologic Oncology*. Accepted. PMID: 28797697.
33. French L, **Ma T**, Oh H, Tseng GC and Sibille E. (2017). Age-related gene expression in the frontal cortex suggests synaptic function changes in specific inhibitory neuron subtypes. *Frontiers in aging neuroscience*, 9: 162. PMID: 28611654.
34. Pabba M, Scifo E, Kapadia F, Nikolova YS, **Ma T**, Mechawar N, Tseng GC and Sibille E. (2017). Resilient protein co-expression network in male orbitofrontal cortex layer 2/3 during human aging. *Neurobiology of Aging*, 58: 180-190. PMID: 28750307.
35. Grabosch S, Tseng G, Edwards RP, Lankes HA, Moore K, Odunsi K, Vlad A, **Ma T**, ..., Walker JL and Birrer M. (2017). Multiplex profiling identifies distinct local and systemic alterations during intraperitoneal chemotherapy for ovarian cancer: An NRG Oncology/Gynecologic Oncology Group

Study. *Gynecologic Oncology*, 146(1):137-145. PMID: 28483269.

2016

36. Liu S, Tsai W, Ding Y, Chen R, Fang Z, Huo Z, Kim S, **Ma T**, ..., Chung I and Tseng GC. (2016). Comprehensive evaluation of fusion transcript detection algorithms and a meta-caller to combine top performing methods in paired-end RNA-seq data. *Nucleic Acids Research*, 44(5):e47. PMID: 26582927.
37. Zhang L, **Ma T**, ..., Tseng G and Vlad AM. (2016). Effects of Kras activation and Pten deletion alone or in combination on MUC1 biology and epithelial to mesenchymal transition in ovarian cancer. *Oncogene*, 35(38): 5010-20. PMID: 26973247.
38. Chen CY, Logan RW, **Ma T**, Lewis DA, Tseng GC, Sibille E and McClung CA. (2016). Effects of aging on circadian patterns of gene expression in the human prefrontal cortex. *Proceedings of the National Academy of Sciences*, 113(1): 206-21. PMID: 26699485. (High Attention Paper, 99th percentile, News on National Public Radio (NPR))
39. Sanei-Moghaddam A, **Ma T**, ..., Mansuria SM and Linkov F. (2016). Changes in hysterectomy trends after the implementation of a clinical pathway. *Obstetrics & Gynecology*, 127(1), 139-147. PMID: 26646126.

2015 and before

40. Mony JT, Zhang L, **Ma T**, ..., Huang X and Vlad AM. (2015). Anti-PD-L1 prolongs survival and triggers T cell but not humoral anti-tumor immune responses in a human MUC1-expressing preclinical ovarian cancer model. *Cancer Immunology, Immunotherapy*, 64(9):1095-108. PMID: 25998800.
41. Liao S, Hartmaier RJ, McGuire KP, Puhalla SL, Luthra S, Chandran UR, **Ma T**, ..., Tseng GC and Oesterreich S. (2015). The molecular landscape of premenopausal breast cancer. *Breast Cancer Research*, 17(1): 1-13. PMID: 26251034. (discussed in an interview; *Nature*, 527: S108-109)
42. Suryawanshi S, Huang X, Elishaev E, Budiu RA, Zhang L, Kim S, Donnellan N, Mantia-Smaldone G, **Ma T**, ..., Edwards RP and Vlad AM. (2014). Complement Pathway Is Frequently Altered in Endometriosis and Endometriosis-Associated Ovarian Cancer, *Clinical Cancer Research*, 20(23): 6163-6174. PMID: 25294912.
43. Hou L[^], **Ma T**[^] and Zhao H. (2014). Incorporating functional annotation information in prioritizing disease associated SNPs from genome wide association studies. *Science China Life Sciences*, 57(11), 1072-1079. ([^]co-first author)

Book

44. Tseng GC, Huo Z and **Ma T**. Foundations for High-Throughput Omics Data Analysis: Methods, Theories and Applications. *Chapman & Hall/CRC*. In preparation and expected in 2021.

ABSTRACTS

1. Hatch K, Donohue B, **Ma T**, Chen S, Ma Y, Gao S, Hong E, Jahanshad N, Thompson P, Kochunov P. Novel Application of Algorithmic Approaches and Parallel GPU Computing for Voxel-wise Heritability and Voxel-wise Genome-Wide Association Studies. *OHBM 2021*, virtual.
2. Belus J, Ke, H, **Ma T**, Rose A, Regenauer K, Andersen L, Joska J, Safren S, Myers B and Magidson J. Alcohol-specific reward as a mediator of a behavioral activation intervention to reduce problematic substance use in people living with HIV in South Africa. *ABCT 2021*, New Orleans, LA.
3. Adenaiye O, Lai J, Hong F, Tai S, German J, Youssefi S, Mesquita P, Albert B, **Ma T**, Weston S, Frieman M and Milton D. Viral Shedding from Persons Infected with SARS-CoV02: Aerosols, Droplet Spray, and Fomites. *AAAR 2021*, Albuquerque, NM.

TEACHING

- **Lecturer, University of Maryland**

- EPIB652: Categorical Data Analysis

Fall 2020

-
- EPIB664: Missing Data Analysis Fall 2019
 - EPIB661: Applied Multivariate Data Analysis Spring 2019, 2020, 2021
 - **Guest Lecturer, University of Maryland**
 - EPIB633: Health Survey Design and Analysis *Missing data imputation using SAS* Oct 2019
 - **Lecturer, University of Pittsburgh**
 - BIOST2094: Advanced R Computing (with Zhiguang Huo) Spring 2017
 - BIOST2025: Special Studies in Bayesian Data Analysis (with George Tseng, Zhiguang Huo and Li Zhu) Fall 2016
 - BIOST2094: Statistical Computing in R Spring 2015
 - **Guest Lecturer, University of Pittsburgh**
 - BIOST2078: Introductory high-throughput genomic data analysis II: theories and algorithms: *Selected Bayesian Methods in Genomic Studies* Dec 2015
 - **Teaching Assistant, University of Pittsburgh and Yale University**
 - BIOST 2078: Introductory high-throughput genomic data analysis II: theories and algorithms Fall 2015
 - IMED 645: Introduction to Biostatistics, Yale University School of Medicine Summer 2012

STUDENT MENTORING

- Academic advisor and thesis/project committee chair:
 - Travis Canida, PhD in STAT-BB 2021-Now
 - Hongjie Ke, PhD in STAT-BB 2020-Now
 - Soroor Saidian, MPH in Biostatistics 2021-Now
 - Ameri Mahsa, MPH in Biostatistics 2020-Now
 - Amanda Behdin, MPH in Biostatistics 2020-Now
 - Boao Zhao, MPH in Biostatistics 2020-Now
 - Erica Lee, MPH in Biostatistics 2020-Now
 - Kevin Chuang, MPH in Biostatistics 2019-Now
 - John Yee, MPH in Biostatistics 2019-2020
 - Megan Gerdes, MPH in Biostatistics 2019-2020
 - Eunsol Shim, MPH in Biostatistics 2019-2020
 - Zhenyao Ye, MPH in Biostatistics 2018-2020
 - Manyun Zhao, MPH in Biostatistics 2018-2020
- PhD dissertation committee:
 - Yujiang Ge, PhD in STAT-BB 2020-Now
 - Yiming Chen, PhD in STAT-BB 2020-Now
 - Yifan Yang, PhD in Statistics 2020-Now
 - Jianyu Lai, PhD in Epidemiology 2021-Now
 - Lakeshia Watson, PhD in Epidemiology 2020-Now
 - Julia Callaway, PhD in Epidemiology 2020-Now
 - Sarah Irvin, PhD in Epidemiology 2020-2021
 - Alli Hanley, PhD in Epidemiology 2019-2021
 - Jun Chu, PhD in Health Service 2020-Now
 - Nicholas Rachmaninoff, PhD in Computational Biology 2020-Now
 - Rosemary Ezeugoh, PhD in Environmental Health Sciences 2020-Now
- MPH thesis committee:

-
- Samantha Ammons, MPH in Epidemiology 2018-2019
 - Angie Barrall, MPH in Epidemiology 2018-2019
 - PhD independent study:
 - Wing Yan Yuen , PhD in STAT-BB Fall 2020
 - Jianyu Lai , PhD in Epidemiology Spring 2020
 - William Evans, PhD in Kinesiology Spring 2020
 - Yifan Yang, PhD in Statistics Fall 2019
 - Yunjiang Ge, PhD in STAT-BB Fall 2019

RESEARCH SUPPORT

Current:

- **MPower BHHP seed grant, UMD, PI: Tianzhou Ma, Peter Kochunov**
 - Genetic risk factors of accelerated brain aging in severe mental illness: an imaging genetics approach.
 - Period: 04/01/2021 - 03/31/2022
 - Role: Principal Investigator
 - Total direct costs: \$100,000
- **R01A5-204062, NIH, PI: Jie Chen**
 - Effect of Hospital and Community Care Coordination on Health Care Quality and Equity among Individuals with RiskFactors or Diagnosis of ADRD
 - Period: 03/01/2021 - 02/28/2024
 - Role: Co-Investigator (Efforts: 5%)
- **20216801533435, USDA-NIFA, PI: Hee-Jung Song**
 - Effects of an integrated system approach on hypertension management in community dwelling older adults.
 - Period: 10/01/2020 - 09/30/2023
 - Role: Co-Investigator (Efforts: 5%)
 - Total direct costs: \$ 553,285.35
- **R34MH122268, NIMH, PI: Jessica Magidson**
 - Training CHWs to Support Re-Engagement in TB/HIV Care in the Context of Depression and Substance use.
 - Period: 07/07/2020 - 05/31/2023
 - Role: Co-Investigator (Efforts: 5%)
- **FSRA Award 2020-21, UMD, PI: Tianzhou Ma**
 - Novel statistical methods for long non-coding RNA biomarker detection using RNA-Seq data.
 - Period: 09/2020-08/2021
 - Role: Principal Investigator
 - Total direct costs: \$10,000
- **1DP1DA048968-01, NIDA, PI: Shuo Chen**
 - A Multivariate Mediation and Deep Learning Framework for Genome-Connectome-Substance Use Research
 - Period: 09/01/2019 - 08/31/2024
 - Role: Subcontract PI (Efforts: 30%)
 - Total direct costs: \$1,500,000

- **75N93021C00014, NIAID-CRIP, PI: Donald Milton**

- NIAID Centers of Excellence for Influenza Research and Response (CEIRR)
- Period: 04/01/2021 - 03/31/2028
- Role: Co-Investigator (Efforts: 8%)
- Total direct costs: \$1,400,000

Past:

- **N66001-17-2-4023 and N66001-18-2-4015, DARPA BTO, PI: Donald Milton**

- Contagious Phenotypes of Acute Respiratory Infection: Identification, Characterization, and Biomarkers.
- Period: 10/31/2018 - 08/31/2020
- Role: Statistician and Bioinformatician (Efforts: 25%)

- **R01CA221303 - National Cancer Institute**

- PI: Steffi Oesterreich, University of Pittsburgh Medical Center
- Role: Statistician
- 2017/09 - 2018/07

- **R01CA190766 - National Cancer Institute**

- PI: George Tseng, University of Pittsburgh
- Role: Statistician
- 2017/09 - 2018/07

- **R01MH093723 - National Institute of Mental Health**

- PI: Etienne Sibille, University of Toronto
- Role: Statistician
- 2014/01 - 2017/08

- **R01CA163462 - National Cancer Institute**

- PI: Anda Vlad, University of Pittsburgh Medical Center
- Role: Statistician
- 2013/09 - 2017/08

PRESENTATIONS

Talks

- **Invited.** ICSA Xi'an July 2022
 - *A Cox model based two-stage variable selection method for the detection of survival associated biomarkers with multiple genomic studies*
- **Invited.** UMGCCC, University of Maryland Baltimore June 2021
 - *Congruence evaluation for model organisms in transcriptomic response*
- **Invited.** WNAR Anchorage June 2021
 - *Deep learning model using network topology of linkage disequilibrium patterns increases the accuracy of polygenic risk scores*
- **Invited.** Department of Biostatistics and Bioinformatics, Georgetown University Dec 2020
 - *High-dimensional variable screening: from single study to multiple studies (Virtual)*
- **Invited.** The 11th ICSA International Conference, Hangzhou, China Dec 2019
 - *Variable screening with multiple studies and its application in survival analysis.*
- **Invited.** JSM 2019, Denver, CO Aug 2019
 - *Variable screening with multiple studies and its application in survival analysis.*
- **Invited.** The 2nd Conference on Lifetime Data Science, Pittsburgh, PA May 2019

- *Variable selection in censored threshold regression model with applications to HIV drug adherence data.*
- ENAR 2019 Spring meeting, Philadelphia, PA March 2019
 - *Variable screening with multiple studies.*
- **Invited.** School of Public Health, University of Maryland College Park Oct 2018
 - *Statistical and computational methods for the meta-analysis and resemblance analysis of transcriptomic studies.*
- **Invited.** Department of Epidemiology and Biostatistics, University of Southern Carolina Feb 2018
 - *Differential expression analysis in multiple omics studies.*
- **Invited.** Department of Epidemiology and Biostatistics, University of Arizona Feb 2018
 - *Differential expression analysis in multiple omics studies.*
- **Invited.** Department of Mathematics and Statistics, University of Vermont Feb 2018
 - *Differential expression analysis in multiple omics studies.*
- **Invited.** Department of Epidemiology and Biostatistics, University of Maryland College Park Dec 2017
 - *Differential expression analysis in multiple omics studies.*
- JSM 2017, Baltimore, MD Aug 2017
 - *Biomarker detection and categorization in RNA-seq meta-analysis using Bayesian hierarchical model.*
- ENAR 2017 Spring meeting, Washington, DC March 2017
 - *Biomarker detection and categorization in RNA-seq meta-analysis using Bayesian hierarchical model.*
- Dahshu Data Science Symposium: Computational Precision Health 2017, San Francisco, CA Feb 2017
 - *A joint Bayesian modeling for integrating microarray and RNA-seq transcriptomic data.*
- JSM 2016, Chicago, IL Aug 2016
 - *Biomarker detection and categorization in RNA-seq meta-analysis using Bayesian hierarchical model.*
- **Invited.** Statistical Genetics/Genomes Lab, University of Pittsburgh Dec 2015
 - *A Bayesian hierarchical model for RNA-seq meta-analysis and biomarkers categorization by study heterogeneity.*
- **Invited.** The 5th Annual Women's Cancer Research Center (WCRC) Retreat, Farmington, PA Nov 2015
 - *Immune gene signature pairs predict survival in immune-reactive cancer patients: a Pan-cancer analysis.*

Posters

- Poster (Selected). 2021 NIDA GECRT Meeting, National Institute of Health (NIH) March 2021
 - *White matter integrity and nicotine dependence in smokers: evaluating vertical and horizontal pleiotropy (Virtual)*
- Poster, ASA Spring Banquet, Pittsburgh, PA April 2016
 - *A Bayesian hierarchical model for RNA-seq meta-analysis and biomarkers categorization by study heterogeneity.*
- Poster, GSPH Dean's day competition, University of Pittsburgh April 2016
 - *Disrupted circadian rhythms at the molecular level in Bipolar disorder (BP) and Schizophrenia (SCZ).*
- Poster, ENAR 2017 Spring meeting, Austin, TX March 2016
 - *A Bayesian hierarchical model for RNA-seq meta-analysis and biomarkers categorization by study heterogeneity.*
- Poster, GSPH Dean's day competition, University of Pittsburgh April 2015
 - *Cross-species Gene Expression Analysis: In what functional domains do mouse models predict*

AWARDS

- Faculty-student research award AY20-21, University of Maryland Dec 2019
- Delta Omega Membership, Delta Omega Honorary Society in Public Health Apr 2018
- Student Paper Award, ASA Section on Bayesian Statistical Science (SBSS) Aug 2017
- Student of the Year, American Statistics Association (ASA) Pittsburgh chapter Apr 2017
- Best Paper Award, Dahshu Data Science Symposium: Computational Precision Health 2017 Feb 2017
- Best Student Presentation Award, Department of Biostatistics, University of Pittsburgh Apr 2017
- Travel Award to attend “Optimization Opening Workshop”, SAMSI Research Triangle Park Aug 2016
- Outstanding Graduate Student Researcher Award, Department of Biostatistics, University of Pittsburgh Apr 2016
- Dean’s Day Poster Competition Award, GSPH, University of Pittsburgh Apr 2015
- Three consecutive years on Dean’s list, Faculty of Arts and Science, University of Toronto 2008-2010,
- Three consecutive years’ recipient of University College Scholarship, University College, University of Toronto, 2008-2010

EVENT ORGANIZING

- First UMD-SPH Conference on Big Data in Public Health, University of Maryland College Park, 02/28/2020
 - >200 attendees from 35 different institutions and organizations.
 - See news report on UMD-SPH website.

DEPARTMENTAL/SCHOOL/UNIVERSITY SERVICE

- Department: EPIB Graduate Student Recruitment/Admissions Committee (2018-present), EPIB Executive Committee (2019-present), EPIB Curriculum Committee (2019-present)
- School: Undergraduate Degree Program Task Force Committee (2019-present)
- University: Department Liaison to the University Library System (2018-present), University Academic Standards And Procedures (APAS) Committee (2019-present)

PROFESSIONAL SERVICE

Journal Referee

- *Annals of Applied Statistics*
- *Computational Statistics and Data Analysis*
- *American Statistician*
- *Journal of Biopharmaceutical Statistics*
- *Neural Computation*
- *Statistical Analysis and Data Mining*
- *Statistics and Its Interface*
- *The American Statistician*
- *Statistics and Its Interface*

-
- *Communications in Statistics – Theory and Methods*
 - *Journal of Statistical Planning and Inference*
 - *Bioinformatics*
 - *Genome Medicine*
 - *BMC Bioinformatics*
 - *BMC Medical Research Methodology*
 - *Scientific Reports*
 - *PLOS One*
 - *PLOS Computational Biology*
 - *Human Brain Mapping*
 - *Aging*
 - *Journal of Nervous and Mental Disease*

Service to the Profession

- Organizer, 2020 ICSA Houston, session 43: Recent advances in statistical methods for big biomedical data integration
- Chair, 2019 ENAR Spring meeting, session 85: Meta-analysis
- 2016-2018, American Statistical Association Pittsburgh Chapter Student Representative

CONFERENCES AND WORKSHOPS

- 2020 ICSA Symposium
- 2016-2017, 2019 JSM.
- 2014-2017, 2019, 2021 ENAR Spring meeting.
- The 11th ICSA International Conference, Hangzhou, China. Dec 2019
- The 2nd Conference on Lifetime Data Science, Pittsburgh, PA. May 2019
- NIDA and NIAAA Genetics and Epigenetics Research Meeting, Rockville, MD. Jan 2019
- 2017 Summer Short Course on Causal Discovery and Datathon, Pittsburgh, PA. June 2017
- 3rd Annual Statistical Methods in Imaging Conference, Pittsburgh, PA. May 2017
- Computational Precision Health 2017, San Francisco, CA. Feb 2017
- Optimization Opening Workshop, SAMSI, Research Triangle Park, NC. Aug 2016
- 5th Annual WCRC Retreat, Nemaquin Woodlands Resort, PA. Nov 2015

PROGRAMMING AND SOFTWARES

- R, SAS, Stata, C++, Python, UNIX shell scripting and others.

MEMBERSHIP

- Member of American Statistical Association Sep 2013 ~ Now
- Member of Eastern North American Region International Biometric Society Sep 2013 ~ Now
- Member of International Chinese Statistical Association Mar 2015 ~ Now

HOBBIES

Writing, Playing basketball and soccer.