CURRICULUM VITAE
The Johns Hopkins University School of Medicine

(Signature) _____ _____
(Typed Name) Yuxin (Daisy) Zhu, PhD (Date of this version)

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

2021–present Assistant Professor, Johns Hopkins Armstrong Institute for Patient Safety and Quality, Baltimore, MD
2021–present Assistant Professor, Department of Neurology, Johns Hopkins School of Medicine, Baltimore, MD
2022–present Assistant Professor (joint), Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Personal Data

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Baltimore, Maryland, 21202
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Education and Training

Undergraduate
2009–2013 B.S., Mathematics, Nanjing University, Nanjing, Jiangsu, China
Doctoral/graduate
2013–2018 Ph.D., Biostatistics, Johns Hopkins University, Baltimore, MD
Postdoctoral
2018–2021 Postdoctoral fellow, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, and Division of Biostatistics and Bioinformatics, Department of Oncology, Johns Hopkins School of Medicine.

Professional Experience NONE

PUBLICATIONS

Original Research [OR]. (* for corresponding and/or senior authorship, underline for mentee, † for co-first authorship.)

Statistical research

1. Deng D, Du Y, Ji Z, Rao K, Wu Z, **Zhu Y**, and Coley RY. Predicting survival time for metastatic castration resistant prostate cancer: An iterative imputation approach. F1000Research. 2016; 5; (alphabetically ordered authorship except for the last author.) https://doi.org/10.12688/f1000research.8628.1
2. Wang Z, Tang Z, **Zhu Y**, Pettigrew C, Soldan A, Gross A, and Albert M. AD risk score for the early phases of disease based on unsupervised machine learning. Alzheimer's & Dementia. 2020; 16(11), 1524-1533; contributor in methodology. https://doi.org/10.1002/alz.12140
3. **Zhu Y**, Wang Z, Liberman AL, Chang TP, Newman-Toker D. Statistical insights for crude-rate-based operational measures of misdiagnosis-related harms. Statistics in Medicine. 2021 Sep 10;40(20):4430-41. https://doi.org/10.1002/sim.9039
4. **Zhu Y***, Wang MC. Obtaining optimal cutoff values for tree classifiers using multiple biomarkers. Biometrics. 2022 Mar;78(1):128-40. https://doi.org/10.1111/biom.13409
5. Wang MC, **Zhu Y**. Bias correction via outcome reassignment for cross-sectional data with binary disease outcome. Lifetime Data Analysis. 2022 Jun 24:1-6. https://doi-org.proxy1.library.jhu.edu/10.1007/s10985-022-09559-3
6. **Zhu Y**, Wang Z, Newman-Toker DE. Misdiagnosis-Related Harm Quantification Through Mixture Models and Harm Measures. Biometrics. 2022 Oct 11. https://doi-org.proxy1.library.jhu.edu/10.1111/biom.13759

7. Tang Z, **Zhu Y**, Wang Z. Characterizing Alzheimer's Disease Biomarker Cascade Through Non-linear Mixed Effect Models. arXiv preprint arXiv:2304.09754. 2023 Apr 19.
8. Chen K, Du Y, **Zhu Y***. Statistical Considerations and Challenges with Time-to-Event Analyses for Composite Endpoints in Clinical Trials. Therapeutic Innovation & Regulatory Science. 2025 Jul 22:1-7. https://doi.org/10.1007/s43441-025-00840-9

Collaborative work

9. Pettigrew C, Soldan A, **Zhu Y**, Wang MC, Moghekar A, Brown T, Miller M, Albert M, and BIOCARD Research Team. Cortical thickness in relation to clinical symptom onset in preclinical AD. NeuroImage: Clinical. 2016; 12, 116-122. Role: primary statistician. https://doi.org/10.1016/j.nicl.2016.06.010
10. Guinney, Justin, et al. (Authorship as part of the Prostate Cancer Challenge DREAM Community) "Prediction of overall survival for patients with metastatic castration-resistant prostate cancer: development of a prognostic model through a crowdsourced challenge with open clinical trial data." The Lancet Oncology 18.1 (2017): 132-142. https://doi-org.proxy1.library.jhu.edu/10.1016/S1470-2045(16)30560-5
11. Pettigrew C, Soldan A, **Zhu Y**, Wang MC, Brown T, Miller M, Albert M, and BIOCARD Research Team. Cognitive reserve and cortical thickness in preclinical Alzheimer's disease. Brain imaging and behavior. 2017; 11(2), 357-367. Role: primary statistician. https://doi.org/10.1007/s11682-016-9581-y
12. Albert M, **Zhu Y**, Moghekar A, Mori S, Miller MI, Soldan A, Pettigrew C, Selnes O, Li S, and Wang MC. Predicting progression from normal cognition to mild cognitive impairment for individuals at 5 years. Brain. 2018; 141(3), 877-887. Role: primary statistician. https://doi.org/10.1093/brain/awx365
13. Newman-Toker DE, Schaffer AC, Yu-Moe CW, Nassery N, Tehrani ASS, Clemens GD, Wang Z, **Zhu Y**, Fanai M, and Siegal D. Serious misdiagnosis-related harms in malpractice claims: the "Big Three"–vascular events, infections, and cancers. Diagnosis. 2019; 6(3), 227-240. Role: secondary statistician. https://doi.org/10.1515/dx-2019-0019
14. Pettigrew C, Shao Y, **Zhu Y**, Grega M, Brichko R, Wang MC, Carlson MC, Albert M, and Soldan A. Self-reported lifestyle activities in relation to longitudinal cognitive trajectories. Alzheimer Disease & Associated Disorders. 2019; 33(1), 21-28. Role: primary statistician. https://doi.org/10.1097/WAD.0000000000000281
15. Soldan A, Pettigrew C, **Zhu Y**, Wang MC, Gottesman RF, DeCarli C, Albert M, and BIOCARD Research Team. Cognitive reserve and midlife vascular risk: Cognitive and clinical outcomes. Annals of clinical and translational neurology. 2020; 7(8), 1307-1317. Role: primary statistician. https://doi.org/10.1002/acn3.51120
16. Pettigrew C, Soldan A, **Zhu Y**, Cai Q, Wang MC, Moghekar A, Miller MI, Singh B, Martinez O, Fletcher E, and DeCarli C. Cognitive reserve and rate of change in Alzheimer's and cerebrovascular disease biomarkers among cognitively normal individuals. Neurobiology of aging. 2020; 88, 33-41. Role: primary statistician. https://doi.org/10.1016/j.neurobiolaging.2019.12.003
17. Soldan A, Pettigrew C, **Zhu Y**, Wang MC, Moghekar A, Gottesman RF, Martinez O, Fletcher E, DeCarli C, and Albert M. White matter hyperintensities and CSF Alzheimer disease biomarkers in preclinical Alzheimer disease. Neurology. 2020; 94(9), e950-e960. Role: primary statistician. https://doi.org/10.1212/WNL.0000000000008864
18. Newman-Toker DE, Wang Z, **Zhu Y**, Nassery N, Tehrani ASS., Schaffer AC, Yu-Moe CW, Clemens GD, Fanai M, and Siegal D. Rate of diagnostic errors and serious misdiagnosis-related harms for major vascular events, infections, and cancers: toward a national incidence estimate using the "Big Three". Diagnosis 8.1 (2021): 67-84. Role: secondary statistician. https://doi.org/10.1515/dx-2019-0104
19. Newman-Toker DE, Schaffer AC, Yu-Moe CW, Nassery N, Tehrani ASS, Clemens GD, Wang Z, **Zhu Y**, Fanai M and Siegal D. Corrigendum to: Serious misdiagnosis-related harms in malpractice claims: The "Big Three"–vascular events, infections, and cancers. Diagnosis. 2021; 8(1), pp.127-128. Role: secondary statistician. https://doi.org/10.1515/dx-2020-0034
20. Chen L, Soldan A, Oishi K, Faria A, **Zhu Y**, Albert M, van Zijl PC, and Li X. Quantitative susceptibility mapping of brain iron and β-amyloid in MRI and PET relating to cognitive performance in cognitively normal older adults. Radiology. 2021; 298, no. 2: 353-362. Role: contributing statistician. https://doi.org/10.1148/radiol.2020201603

21. Sharp AL, Baecker A, Nassery N, Park S, Hassoon A, Lee MS, Peterson S, Pitts S, Wang Z, **Zhu Y**, and Newman-Toker DE. Missed acute myocardial infarction in the emergency department–standardizing measurement of misdiagnosis-related harms using the SPADE method. Diagnosis. 2021; 8(2), pp.177-186. Role: secondary statistician. https://doi.org/10.1515/dx-2020-0049
22. Soldan A, Pettigrew C, **Zhu Y**, Wang MC, Bilgel M, Hou X, Lu H, Miller MI, Albert M and BIOCARD Research Team. Association of Lifestyle Activities with Functional Brain Connectivity and Relationship to Cognitive Decline among Older Adults. Cerebral Cortex. 2021. Role: primary statistician. https://doi.org/10.1093/cercor/bhab187
23. Liberman AL, Hassoon A, Fanai M, Badihian S, Rupani H, Peterson SM, Sebestyen K, Wang Z, **Zhu Y**, Lipton RB, Newman-Toker DE. Cerebrovascular Disease Hospitalizations following Emergency Department Headache Visits: A Nested Case-Control Study. Academic Emergency Medicine. 2021 Jul 26; Role: contributing statistician. https://doi.org/10.1111/acem.14353
24. Pettigrew C, Soldan A, Brichko R, **Zhu Y**, Wang MC, Kutten K, Bilgel M, Mori S, Miller MI, Albert M. Computerized paired associate learning performance and imaging biomarkers in older adults without dementia. Brain imaging and behavior. 2021 Oct 23:1-9. Role: primary statistician. https://doi.org/10.1007/s11682-021-00583-9
25. Pettigrew C, Soldan A, Alm KH, Bakker A, **Zhu Y**, Wang MC, Kutten K, Bilgel M, Miller MI, Faria A, Mori S. White matter tract integrity, but not amyloid burden, is related to cognition in cognitively normal older adults. Alzheimer's & Dementia. 2021 Dec;17:e055675. Role: primary Statistician. https://doi.org/10.1002/alz.055675
26. Sharp AL, Pallegadda R, Baecker A, Park S, Nassery N, Hassoon A, Peterson S, Pitts SI, Wang Z, **Zhu Y**, Newman-Toker DE. Are Mental Health and Substance Use Disorders Risk Factors for Missed Acute Myocardial Infarction Diagnoses Among Chest Pain or Dyspnea Encounters in the Emergency Department?. Annals of Emergency Medicine. 2022 Feb 1;79(2):93-101. Role: contributing statistician. https://doi.org/10.1016/j.annemergmed.2021.08.016
27. Chan CK, Pettigrew C, Soldan A, **Zhu Y**, Wang MC, Albert M, Rosenberg PB, BIOCARD Research Team. Association Between Late-Life Neuropsychiatric Symptoms and Cognitive Decline in Relation to White Matter Hyperintensities and Amyloid Burden. Journal of Alzheimer's Disease. 2022 Feb 21(Preprint):1-2. Role: primary statistician. https://doi.org/10.3233/JAD-215267
28. Lin Z, Lim C, Jiang D, Soldan A, Pettigrew C, Oishi K, **Zhu Y**, Moghekar A, Liu P, Albert M, Lu H. Longitudinal changes in brain oxygen extraction fraction (OEF) in older adults: Relationship to markers of vascular and Alzheimer's pathology. Alzheimer's & Dementia. 2023 Feb;19(2):569-77. Role: primary statistician. https://doi.org/10.1002/alz.12727
29. Liberman AL, Wang Z, **Zhu Y**, Hassoon A, Choi J, Austin JM, Johansen MC, Newman-Toker DE. Optimizing measurement of misdiagnosis-related harms using symptom-disease pair analysis of diagnostic error (SPADE): comparison groups to maximize SPADE validity. Diagnosis. 2023 Apr 5(0). Role: contributing statistician. https://doi.org/10.1515/dx-2022-0130
30. Soldan A, Oh S, Ryu T, Pettigrew C, **Zhu Y**, Moghekar A, Xiao MF, Pontone GM, Albert M, Na CH, Worley P. NPTX2 in cerebrospinal fluid predicts the progression from normal cognition to mild cognitive impairment. Annals of neurology. 2023 Oct;94(4):620-31. Role: primary statistician. https://doi.org/10.1002/ana.26725
31. Rani N, Alm KH, Speck CL, Soldan A, Pettigrew C, **Zhu Y**, Albert MS, Bakker A. Tau PET accumulation in Brodmann areas 35 and 36 is associated with individual differences in cognition in non-demented older adults. Alzheimer's & Dementia. 2023 Dec;19:e083095. Role: primary statistician. https://doi.org/10.1002/alz.083095
32. Alm KH, **Zhu Y**, Soldan A, Pettigrew C, Faria A, Hou X, Lu H, Mori S, Albert MS, Bakker A. Rates of change in structural and functional brain connectivity are associated with longitudinal changes in episodic memory in non-demented older adults. Alzheimer's & Dementia. 2023 Dec;19:e079875. Role: primary statistician. https://doi.org/10.1002/alz.079875

33. Pettigrew C, Na CH, Oh S, Soldan A, **Zhu Y**, Moghekar A, Albert MS, Worley PF. Synaptic Marker NPTX2 Predicts Risk of MCI Clinical Symptom Onset. Alzheimer's & Dementia. 2023 Dec;19:e079748. Role: primary statistician. https://doi.org/10.1002/alz.079748
34. Rani N, Alm KH, Corona-Long CA, Speck CL, Soldan A, Pettigrew C, **Zhu Y**, Albert M, Bakker A. Tau PET burden in Brodmann areas 35 and 36 is associated with individual differences in cognition in non-demented older adults. Frontiers in Aging Neuroscience. 2023 Dec 14;15:1272946. Role: contributing statistician. https://doi.org/10.3389/fnagi.2023.1272946
35. Bastani PB, Rieiro H, Badihian S, Otero-Millan J, Farrell N, Parker M, Newman-Toker D, **Zhu Y**, Saber Tehrani A. Quantifying induced nystagmus using a smartphone eye tracking application (EyePhone). Journal of the American Heart Association. 2024 Jan 16;13(2):e030927. Role: contributing statistician. https://doi.org/10.1161/JAHA.123.030927
36. Newman-Toker DE, Nassery N, Schaffer AC, Yu-Moe CW, Clemens GD, Wang Z, **Zhu Y**, Tehrani AS, Fanai M, Hassoon A, Siegal D. Burden of serious harms from diagnostic error in the USA. BMJ Quality & Safety. 2024 Feb 1;33(2):109-20. Role: secondary statistician. https://doi.org/10.1136/bmjqs-2021-014130
37. Austin JM, Zhu Y, Sebestyen K, Fracica EA, Newman-Toker DE. The Development and Endorsement of a Performance Measure for Stroke Misdiagnosis in the Emergency Department. Quality Management in Healthcare. 2024 Oct 1;33(4):289-90. Role: primary statistician. https://doi.org/10.1097/QMH.0000000000000492
38. Wu J, Oishi K, Soldan A, Pettigrew C, Lin Z, **Zhu Y**, Jiang D, Li X, Moghekar A, Liu P, Oishi K. Longitudinal changes in cerebral metabolic rate of oxygen in older adults without and with cognitive impairment. Alzheimer's & Dementia. 2024 Dec;20:e085554. Role: consulting statistician. https://doi.org/10.1002/alz.085554
39. Anderson CL, Vazquez J, **Zhu Y**, Pettigrew C, Moghekar A, Erus G, Davatzikos C, Xiao MF, Worley PF, Albert MS, Soldan A. The synaptic marker NPTX2 and longitudinal brain atrophy among cognitively unimpaired adults. Alzheimer's & Dementia. 2024 Dec;20:e093019. Role: primary statistician. https://doi.org/10.1002/alz.093019
40. Vazquez J, Soldan A, Pettigrew C, **Zhu Y**, Anderson C, Moghekar A, Oh S, Na CH, Albert M, Worley P. CSF Levels of NPTX2 are Associated With Decreased Rate of Brain Atrophy Over Time in Cognitively Unimpaired Individuals (P7-3.014). InNeurology 2025 Apr 8 (Vol. 104, No. 7_Supplement_1, p. 5269). Hagerstown, MD: Lippincott Williams & Wilkins. Role: primary statistician. https://doi.org/10.1212/WNL.0000000000212247

Review Articles [RA] NONE
Case Reports [CR] NONE

Book Chapters, Monographs [BC]

1. Scharfstein D, **Zhu Y**, and Tsiatis A. Handbook of Statistical Methods for Randomized Controlled Trials. (1st Edition.) Part II.4. Time to event subject to censoring: logrank test, Kaplan-Meier estimation and Cox proportional hazards regression models. CRC press. 2021.

Books, Textbooks [BK] NONE
Editorials [ED] NONE
Guidelines/Protocols, Consensus Statement, Expert Opinion, Consortium Articles
NONE
[GL] Letters, Correspondence [LT] NONE

FUNDING

EXTRAMURAL Funding
Current

05/15/2025–01/31/2030 Statistical methods for analyzing risk of Alzheimer's Disease and biomarker measurements
R01 AG088637
NIA
$455,274 (annual)
PI: Mei-Cheng Wang
20%

06/15/2025–03/31/2030 Johns Hopkins Alzheimer's Disease Research Center
P30 AG066507
NIA
$ 4,466,283 (annual)
PI: Marilyn Albert
7% (co-leader of Data Management and Statistics Core)

09/30/2022–09/29/2026 Armstrong Institute Center for Diagnostic Excellence-Pursuing Scalable System-Level Diagnostic Quality, Value and Equity by Applying Safety Science to Emergency Department Diagnosis
R18 HS29350
AHRQ
$3,999,993
PI: David Newman-Toker/Kathy McDonald
5%

07/01/2024–06/30/2026 Time-Dynamic Tree-Based Methods for Personalized Alzheimer's Disease Prediction
R03 AG083470
NIH/NIA
$327,5000 (total funding)
PI: Yuxin Zhu
24%

09/01/2019–05/31/2026 Biomarkers of Cognitive Decline Among Normal Individuals: The BIOCARD Cohort
U19 AG033655
NIH/NIA
$21,497,064
PI: Marilyn Albert
35%

Past

09/15/2020–05/31/2024 Statistical Models of Alzheimer's Disease Pathological Cascade
5R01AG068002
NIH/NIA
$1,637,500
PI: Zheyu Wang
20%

06/01/2020–05/31/2024 Towards a National Diagnostic Excellence Dashboard—Partnering with Stakeholders to Construct Evidence-Based Operational Measures of

Misdiagnosis-Related Harms
R01 HS027614
AHRQ
$1,529,695
PI: David Newman-Toker
20%

09/20/2021–03/19/2023 Natus Algorithm-Fox Squirrel
N/A
Natus Medical Incorporated
$2,521,365
PI: David Newman-Toker
10%

01/01/2023–06/31/2023 Maternal, Infant & Early Childhood Home Visiting Program
23VMZP
State of New Jersey
$522,110
PI: Cynthia Minkovitz
5%

05/15/2018–04/30/2021 National diagnostic performance dashboard to measure and track diagnostic error using big data
#5756
Gordon and Betty Moore Foundation
$2,355,438
PI: David Newman-Toker
Statistician, 50%.

07/01/2009–03/31/2019 Biomarkers of Cognitive Decline among Normal Individuals: the BIOCARD Cohort
U19 AG033655
NIH/NIA
PI: Marilyn Albert
~$3,000,000 yearly
Statistician, 100% from 09/2014 to 06/2018, 50% from 06/2018 to 03/2019.

INTRAMURAL Funding NONE

CLNICAL ACTIVITIES
NONE

EDUCATIONAL ACTIVITIES
Educational Focus
I have experience teaching in statistical curriculum courses, special topics, and statistical courses for non-statistics students at undergraduate and graduate levels. I teach to help students succeed and inspire interest in meaningful research and application.

Teaching and Facilitating Learning (Role, learner level, course title, venue; any explanatory notes)

Classroom instruction
2021, 2023 Guest lecturer, graduate-level, "140.860.01 Current Topics in Biostatistics Research", Johns Hopkins Bloomberg School of Public Health, Department of Biostatistics.

Details: (2021) 29 students, "Optimal Rule for Prefixed Tree Classifiers"; (2023) 26 students, "Statistical Methods for Alzheimer's Disease and AD-related biomarkers".

2022–2024 Primary instructor, graduate-level, "140.607.79 Multilevel Models", Johns Hopkins Bloomberg School of Public Health, Biostatistics and Epidemiology Summer Institute. Class size: 19 (2022), 17 (2023), 7 (2024). Recognized for *Excellence in Teaching* (2024).

2022–2024 Primary instructor, graduate-level, "140.641.01 Survival Analysis", Johns Hopkins Bloomberg School of Public Health, Department of Biostatistics. Class size: 30 (2022), 24 (2023), 31 (2024). Recognized for *Excellence in Teaching* (2022, 2023, 2024).

Clinical instruction NONE

CME instruction NONE

Workshop / seminars

2024–present Co-leader of the SLAM working group (Survival, Longitudinal And Multivariate statistics working group), Department of Biostatistics, Johns Hopkins University. Website: SLAM Working Group - About SLAM (google.com)

Mentoring

Pre-doctoral Advisees / Mentees

2022 October–2024 May Zhirui Fu, Department of Biostatistics (ScM thesis advisor; thesis work won *JSM 2024 Risk Analysis Student Paper Award*; current position: PhD candidate, Department of Biostatistics, Emory University).

2024 January–2024August Jingyi Hao, Department of Applied Mathematics and Statistics (MS; project manuscript received *Honorable Mention in the JSM 2025 ASA MDD Student Paper Competition*; current position: PhD candidate, Department of Statistics, North Carolina State University).

2023 July–2024 August Kexin Zhang, Department of Applied Mathematics and Statistics (MS).

2024 June–2025 May Xiyao Zou, Department of Biostatistics (ScM thesis advisor).

2024 June–2025 May Jiyue Zhang, Department of Applied Mathematics and Statistics (MS).

Preliminary Schoolwide Oral Exam Committee (* for alternate member, † for advisor.)

2022 *Ruzhang Zhao, Department of Biostatistics (PhD), Johns Hopkins Bloomberg School of Public Health. Advisor: Dr. Hongkai Ji.

2022 *Wei Jin, Department of Applied Mathematics and Statistics (PhD), Johns Hopkins Whiting School of Engineering. Advisor: Dr. Yanxun Xu.

2022 *KunboWang, Department of Applied Mathematics and Statistics (PhD), Johns Hopkins Whiting School of Engineering. Advisor: Dr. Yanxun Xu.

2022 Dongliang Zhang, Department of Biostatistics (PhD), Johns Hopkins Bloomberg School of Public Health. Advisor: Dr. Martin Lindquist.

2024 Zhiyue Zhang, Department of Applied Mathematics and Statistics (PhD), Johns Hopkins Whiting School of Engineering. Advisor: Dr. Yanxun Xu.

2025 *Julie Kim, Health Policy. Advisor: Dr. Matt Austin.

Thesis Reader/Committees (* for alternate member, † for advisor.)

2023 Chunnan Liu, Department of Biostatistics (ScM), Johns Hopkins Bloomberg School of Public Health. Thesis title: "The Association Between Binary Surrogate Endpoints and Time-to-Event Outcomes in Two-Arm Clinical Trials." Role: thesis reader. Advisor: Dr. Chen Hu.

2024 Dongliang Zhang, Department of Biostatistics (PhD), Johns Hopkins Bloomberg School of Public Health. Thesis title: "Novel Methods and Applications in Analyzing High-Dimensional Neuroimaging Data". Role: voting member. Advisor: Dr. Martin Lindquist.

2024	*Ruzhang Zhao, Department of Biostatistics (PhD), Johns Hopkins Bloomberg School of Public Health. Thesis title: "Integrative and Transfer Learning Methods for Disparate Data with Applications in Single-Cell Genomics and Statistical Genetics". Role: alternate voting member. Advisor: Dr. Hongkai Ji.
2024	†Zhirui Fu, Department of Biostatistics (ScM), Johns Hopkins Bloomberg School of Public Health. Thesis title: "Semiparametric Change Point Model for Survival Outcomes in the Presence of a U-Shaped Risk". Role: advisor.
2024	Weixiao Dai, Department of Biostatistics (PhD), George Washington. Thesis title: "Patient-Centric Pragmatic Subgroup Analyses in Clinical Trials based on the Desirability of Outcome Ranking (DOOR)". Role: voting member. Advisors: Drs. Scott R. Evans, and Toshimitsu Hamasaki.
2024	Meghan Ames, (DrPH) Johns Hopkins Bloomberg School of Public Health. Thesis title: "Lifestyle Medicine Implementation: Teaching Healthcare Professionals to Recommend Healthy Behaviors". Role: voting member. Advisor: Dr. Joel Gittelsohn.
2025	†Xiyao Zou, Department of Biostatistics (ScM), Johns Hopkins Bloomberg School of Public Health. Thesis title: "A Survival Tree Approach for Risk-Adjusted Time-to-Event Modelling: Integrating Absolute Risk and Biomarker-Driven Splitting". Role: advisor.
2025	Yuhan Xiao, Department of Biostatistics (ScM), Johns Hopkins Bloomberg School of Public Health. Thesis title: "Enhancing Survival Prediction Models: Insights on Biomarker Inclusion and Model Updating" Role: thesis reader. Advisor: Dr. Chen Hu.

Ad-hoc

2022 June–August	Internship program in collaboration with Eli Lilly; co-advising with Yu Du (Sr. Advisor | Statistics Group). Mentee: Dongliang Zhang.

Mentoring, coaching and advising programs NONE

2024–present	*STATCOM (Statistics in the Community)*, faculty advisor.

Assessment and Evaluation NONE

Program Building and Curriculum Development NONE

Educational Leadership NONE

Educational Demonstration Activities to external audiences NONE

RESEARCH ACTIVITIES

Research Focus

My research focuses on developing statistical methods for biomarkers and electronic medical records. I work on methods that combine biomarkers to predict cognitive decline related to preclinical Alzheimer's Disease among normal individuals. I also develop methods to evaluate misdiagnosis-related harm at institution or medical system levels using electronic medical records. Methodologically, I work on tree-based models, latent variable models, survival analysis, and recurrent event analysis. My general interest is in interpretable and robust statistical methodology that advances biomedical understanding and informs practices.

Research Program Building / Leadership

2025–present	Johns Hopkins Alzheimer's Disease Research Center, Data Management and Statistics Core, Core co-leader.

Research Demonstration Activities NONE

Inventions, Patents, Copyrights NONE

Technology Transfer Activities NONE

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

NONE

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments NONE
Editorial Activities NONE
Editorial Board appointments NONE

Journal peer review activities

2019–present	Biostatistics & Epidemiology
2021–present	Journal of the American Statistical Association
2021–present	Alzheimer's & Dementia
2022–present	HealthScienceReport
2022–present	Quality Management in Healthcare
2022-present	JAMA Pediatrics
2022–present	Journal of Alzheimer's Disease
2022–present	American Journal of Perinatology
2022–present	Biometrics
2023–present	Scientific Reports
2023–present	Informatics
2023–present	Alzheimer's Research & Therapy

Other peer review activities NONE

Advisory Committees, Review Groups/Study Sections

2023–present	Data Monitoring and Safety Board, "Clinical trial evaluating the efficacy and safety of AGB101 for treatment of Parkinson's disease related psychosis", PI: Dr. Christopher Morrow, Johns Hopkins University, Baltimore MD.
2024 February	National Institute of Health, Analytics and Statistics for Population Research Panel B (ASPB), study section reviewer.
2025–present	Data Monitoring and Safety Board, "Clinical trial evaluating the efficacy of AGB101 for reducing hippocampal overactivity in older adults (AGB101-CN)", PI: Dr. Marilyn Albert, Johns Hopkins University, Baltimore MD.

Professional Societies NONE

Conference Organizer

JHMI/Regional

2024 May	8th Annual Diagnostic Excellence Summit. Planning Committee member and moderator.

Professional Societies

2020–present	Member, American Statistical Association
2020–present	Member, Eastern North American Region of the International Biometric Society

Session Chair

2021 August	Joint Statistical Meetings. Invited Session "Advances and Challenges in Recent Diagnostic Research". Virtual.
2024 August	Joint Statistical Meetings. Invited Session "Leveraging Biomarkers for Early Detection of Dementia and Acceleration of Drug Development". Portland, OR.

Consultantships NONE

RECOGNITION

Awards, Honors

Invited Talks

JHMI/Regional

2024 Feb. "SPADE-based Regression Methods and Quality Measures for Quantifying Misdiagnosis-Related Harm", Anesthesiology and Critical Care Medicine Discovery Rounds, Baltimore, MD.

2024 Jun. Quality and Safety Research Day. Reaction Panel panelist. Baltimore, MD.

National

2020 Nov. "Obtaining Optimal Rule for a Prefixed Tree Classifier", Michigan Statistics for Individualized-healthcare Lab (MiSIL), Department of Biostatistics, University of Michigan. Virtual.

2023 Oct. "The SPADE-Prediction Project", Society to Improve Diagnosis in Medicine Conference, Research and Education Day, Cleveland, OH.

2024 Aug. Joint Statistical Meeting. "Quantifying Misdiagnosis-related harm leveraging health record data and through mixture-model-based novel measures" in Invited Session "Navigating Electronic Health Record Data for Deeper Insights: Case Studies and Statistical Solutions". (Unable to present due to sudden illness, presented by co-author.) Portland, OR.

2025 Mar. ENAR. Discussant in Invited Session "Statistical Consideration and Challenges with Survival Estimands in Clinical Trial". New Orleans, LA.

2025 May "Optimal Personalized and Dynamic Classification with Fixed Trees for Survival Outcomes", Department of Statistics, Donald Bren School of Information & Computer Sciences, University of California Irvine, Irvine, CA.

Visiting Professorships

NONE

OTHER PROFESSIONAL ACCOMPLISHMENTS

Oral/Podium Presentations

2016 "Optimal Decision Rule for Multiple Biomarkers Combined as Tree-based Classifiers", Joint Statistical Meetings, Chicago, IL.

2017 "Adaptive Estimation of High Dimensional Partially Linear Model with Some Provable Gains", Joint Statistical Meetings, Baltimore, MD, and Conference on Frontiers of Big Data Statistical Sciences (organized by ICSA Canada Chapter), Vancouver, BC, Canada.

2020 "Joint Rate Regression Models for Bivariate Recurrent Events with Frailty Processes", Joint Statistical Meetings. Virtual.