CURRICULUM VITAE
Walter Dempsey, PhD

Part I

PROFESSIONAL DATA

Department of Biostatistics
University of Michigan, School of Public Health
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EDUCATION AND TRAINING

Degrees

Ph.D. / 2015	Statistics, University of Chicago, Chicago, IL, USA
	Advisors: Peter McCullagh
	Dissertation: Statistical Methods for Joint Models of Longitudinal and Survival Data
B.S. / 2009	Mathematics (with Honors) , Statistics, and Economics,
	University of Chicago, Chicago, IL, USA

Postdoctoral Training

2015 – 2019	Postdoctoral Research Fellow
	Department of Statistics, Harvard University ('17 - '19)
	Department of Statistics, University of Michigan ('15 - '17)
	Mentor: Susan A. Murphy, Ph.D.

PROFESSIONAL EXPERIENCE

University of Michigan

- Assistant Professor, Department of Biostatistics, University of Michigan School of Public Health (2019 – present).
- Assistant Research Professor, Institute of Social Research, University of Michigan (2019 – present).
- Affiliated faculty, Michigan Institute For Data Science (2019 – present).

Other Non-Michigan Professional Experience

- Postdoctoral Research Fellow, Department of Statistics, Harvard University, Boston, MA (2017 – 2019).
- Postdoctoral Research Fellow, Department of Statistics, University of Michigan, Ann Arbor, MA (2015 – 2017).
- Teaching Assistant, Department of Statistics, University of Chicago (2010 – 2015).

AWARDS

- Winner of Collaborative Research Proposal by Biostatistics and Statistics Departments (2021)
- Scholarship to attend SAMSI's "Program on Statistical, Mathematical, andComputational Methods for Precision Medicine (PMED)" (2018)
- Travel scholarship to attend "International Conference on Machine Learning (2017)".

○ Scholarship to attend "IMS/ASA Spring Research Conference (2017)".

○ Scholarship to attend "Workshop on Flexible Models for Longitudinal and Survival Data with Applications in Biostatistics (2015)".

○ mHealth Institute Fellowship, 2016

○ Data Science for Social Good Fellowship, 2013

○ Department of Education GAANN Fellowship, 2011-2012

PUBLICATIONS *White numbers indicate first or senior author manuscripts. The * indicates a mentored student or post-doctoral fellow. The † and ‡ indicates co-first and co-last author, respectively.*

Journal Articles (Peer-Reviewed and Published) *Bolded entry indicates current year publications.*

[1] Zhang, Y., **Dempsey W**. CataBEEM: Integrating Latent Interaction Categories in Node-wise Community Detection Models for Network Data. Forthcoming at ▶ *International Conference on Machine Learning (ICML)*. 2023.

[2] Nahum-Shani, I., Dziak, J., Venera, H., Pfammatter, A., Spring, B., and **Dempsey, W**. Design of experiments with sequential randomizations on multiple timescales: the hybrid experimental design. Forthcoming at ▶ *Behavior Research Methods*. 2023.

[3] **Dempsey, W**. Statistical paradoxes in coronavirus case-counts: selection bias, measurement error, and the Covid-19 pandemic. aRXiv:2005.10425. Forthcoming in ▶ *Annals of Applied Statistics*. 2023.

[4] Shi J, Wu Z, **Dempsey W**. Assessing Time-Varying Causal Effect Moderation in the Presence of Cluster-Level Treatment Effect Heterogeneity. aRXiv:2102.01681. Forthcoming in ▶ *Biometrika*. 2022.

[5] Moreno A, Nagesh S, Chatterjee S, Wu Z, **Dempsey W‡**, Rehg‡. Kernel Deformed Exponential Families for Sparse Continuous Attention. ▶ *Neurips*. 2022; **35**.

[6] Du J, Beesley L, Lee S, Zhou X, **Dempsey W**, and Mukherjee B. Optimal test allocation strategy for COVID-19. ▶ *Statistics in Medicine*. 2021; **41**: 310–327.

[7] Wang Y*, Hougen C, Oselio B*, **Dempsey, W‡**, Hero, A‡. A Geometry Driven Longitudinal Topic Model. ▶ *Harvard Data Science Review*. 2021; **3**.

[8] **Dempsey, W**, Oselio B*, Hero, A. Hierarchical edge exchangeable models for structured interaction networks. ▶ *Journal of the American Statistical Association*. 2021; **117**: 2056–2073.

[9] Moreno A*, Wu Z, Wetter D, Lam C, Nahum-Shani I, **Dempsey W‡**, Rehg J‡. A Functional EM Algorithm for Panel Count Data with Missing Counts. ▶ *Neural Information Processing Systems*. 2021; **33**.

[10] **Dempsey W**. Exchangeable Markov multi-state survival processes. ▶ *Statistica Sinica*. 2021; **31**: 1–22.

[11] Crane H†, **Dempsey W†**. A Statistical Framework for Modern Network Science. ▶ *Statistical Science*. 2020; **36**: 51–67.

[12] **Dempsey W**, Liao P, Kumar S, Murphy SA. The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments. ▶ *Annals of Applied Statistics*. 2020; **14**(2): 661–684.

[13] Crane H, **Dempsey W**. Relational exchangeability. ▶ *Journal of Applied Probability*. 2019; **56**: 192–208.

[14] Liao P†, **Dempsey W†**, Sarker H, Hossain S, al'Absi M, Klasnja P, Murphy SA. Just-in-Time but Not Too Much: Determining Treatment Timing in Mobile Health. ▶ *ACM International Joint Conference on Pervasive and Ubiquitous Computing*. 2018; **2**: 179.

[15] **Dempsey W**, McCullagh, P. Survival Models and Health Sequences. ▶ *Lifetime Data Anaysis*. 2018; **24**: 550–584.

[16] **Dempsey W**, McCullagh, P. Rejoinder to "Survival Models and Health Sequences". ▶ *Lifetime Data Anaysis*. 2018; **24**:550–584.

[17] Crane H†, **Dempsey W**.† Edge exchangeable models for interaction networks. ▶ *Journal of the American Statistical Assocation*. 2018; **113**: 1311–1326.

[18] **Dempsey W**, McCullagh P. Weak continuity of predictive distribution for Markov survival processes. ▶ *Electronic Journal of Statistics*. 2017; **11**: 5406-5451.

[19] **Dempsey W**, Moreno A, Scott C, Dennis M, Gustafson D, Rehg J, Murphy SA. iSurvive: An Interpretable, Event-time Prediction Model for mHealth. ▶ *International Conference on Machine Learning*. 2017; **70**.

[20] **Dempsey W**, Liao P, Klasnja P, Nahum-Shani I, Murphy SA. Randomized trials for the fitbit generation. ▶ *Significance*. 2015; **12**: 20–23.

[21] Kondor R., **Dempsey W**. Multiresolution analysis on the symmetric group. ▶ *Advances in Neural Information Processing Systems*. 2012; **25**.

Collaborative Papers

[22] Potter L, Yap J, **Dempsey W**, Wetter D, Nahum-Shani I. Integrating Intensive Longitudinal Data (ILD) to Inform the Development of Dynamic Theories of Behavior Change and Intervention Design: a Case Study of Scientific and Practical Considerations. ▶ *Prevention Science*. 2023; **1**: 1–13.

[23] Nahum-Shani I, Dziak J, Walton M, **Dempsey W**. Hybrid Experimental Designs for Intervention Development: What, Why and How. ▶ *Advances in Methods and Practices in Psychological Science*. 2022; **25**: 1-15.

[24] Wang J, Fang Y, Frank E, Walton M, Burmeister M, Tewari A, **Dempsey W**, NeCamp T, Sen S, Wu Z. Effectiveness of gamified team competition in the context of mHealth intervention for medical interns: a micro-randomized trial. ▶ *NPJ Digital Medicine*. 2022; **1**: 4.

[25] Horwitz A, Czyz E, Al-Dajani N, **Dempsey W**, Zhao Z, Nahum-Shani I, Sen S. Utilizing daily mood diaries and wearable sensor data to predict depression and suicidal ideation among medical interns. ▶ *Journal of Affective Disorders* . 2022; **313**: 1–7.

[26] Coppersmith D, **Dempsey W**, Kleiman E, Bentley K, Murphy SA, Nock M. Just-in-Time Adaptive Interventions for Suicide Prevention: Promise, Challenges, and Future Directions. ▶ *Psychiatry*. 2022; **85**: 317–333.

[27] Jeganathan V, Golbus J, Gupta K, Luff E, **Dempsey W**, Boyden T, Rubenfire M, Mukherjee B, Klasnja P, Kheterpal S, Nallamothu B. Virtual AppLication-supported Environment To INcrease Exercise (VALENTINE) during cardiac rehabilitation study: Rationale and design. ▶ *American Heart Journal*. 2022; **248**: 53–62.

[28] Fang Y, Bohnert A, Pereira-Lima K, Cleary J, Frank E, Zhuo Z, **Dempsey W**, Sen S. Trends in Depressive Symptoms and Associated Factors During Residency, 2007 to 2019: A Repeated Annual Cohort Study. ▶ *Annals of Internal Medicine*. 2022; **174**: 56-64.

[29] Low D, Zuromski K, Kessler D, Ghosh S, Nock M, Dempsey W. It's quality and quantity: the effect of the amount of comments on online suicidal posts. ▶ *Proceedings of the First Workshop on Causal Inference and NLP*. 2021; 95–103.

[30] Nahum-Shani I, Potter L, Lam C, Yap J, Moreno A, Stoffel R, Wu Z, Wang N, **Dempsey W**, Kumar S, Ertin E, Murphy S, Rehg J, Wetter D. The Mobile-Assistance for Regulating Smoking (MARS) Micro-Randomized Trial Design Protocol. ▶ *Contemporary Clinical Trials*, 2021; (110): 106513.

[31] Battalio S, Conroy D, **Dempsey W**, Menictas M, Nahum-Shani I, Qian T, Murphy SA, Kumar S, Spring B. Sense2Stop: A Micro-randomized Trial Using Wearable Sensors to Optimize a Just-In-Time-Adaptive Stress Management Intervention for Smoking Relapse Prevention. ▶ *Contemporary Clinical Trials*. 2021; **109**: 106534.

[32] Nock M, Kleiman E, Abraham M, Bentley K, Brent D, Buonopane R, Castro-Ramirez F, Cha C, **Dempsey W**, Draper J, Glenn C, Hollander H, Harkavy-Friedman J, Huffman J, Lee H, Millner A, Mou D, Onnela JP, Picard R, Quay H, Rankin O, Sewards S, Torous J, Wheelis J, Whiteside U, Siegel G, Ordonez A, Pearson J. Consensus Statement on Ethical & Safety Practices for Conducting Digital Monitoring Studies with People at Risk of Suicide and Related Behaviors. ▶ *Psychiatric Research and Clinical Practice*. 2021; **3**:57–66.

[33] Golbus J, **Dempsey W**, Jackson E, Nallamothu B, Klasnja P. Micro-Randomized Trial Design for Evaluating Just-In-Time-Adaptive-Interventions Through Mobile Health Technologies for Cardiovascular Disease. ▶ *Circulation: Cadiovascular Quality and Outcomes*. 2020; **14**:e006760.

[34] Wang SB, Coppersmith DDL, Kleiman EM, Bentley K, Millner A, Fortgang R, Mair P, **Dempsey W**, Huffman J, Nock M. A Pilot Study Using Frequent Inpatient Assessments of Suicidal Thinking to Predict Short-Term Postdischarge Suicidal Behavior. ▶ *JAMA Network Open*. 2020; **4**:e210591.

Refereed Letters, Communications, Book Chapters, Proceedings, Technical Reports, Other

35 Wang S, **Dempsey W**, Nock M. Machine learning for suicide prediction and prevention: Advances, challenges, and future directions. To appear in ▶ *Advances in Child and Family Policy and Practice*. 2021.

Pre-print Articles

36 Zhang, Y., **Dempsey W**. Community detection within edge exchangeable models for interaction processes. aRXiv:2005.10425. Major Revision at ▶ *Journal of the American Statistical Association*.

37 **Dempsey W**. Recurrent event analysis in the presence of functional covariates via random subsampling. aRXiv:2005.10425. Major Revision at ▶ *Journal of the Computational and Graphical Statistics*.

38 Shi, Y., **Dempsey W**. A meta-learning method for estimation of causal excursion effects to assess time-varying moderation. To be submitted to ▶ *Journal of the Royal Statistical Society, Series B*.

39 Shi, Y., Wu Z, **Dempsey W**. Incorporating auxiliary variables to improve the efficiency of time-varying treatment effect estimation. To be submitted to ▶ *Journal of the American Statistical Association*.

40 Abbott, Y., Nahum-Shani I, Lam C, Wetter D, Taylor J, **Dempsey W**. A Continuous-Time Dynamic Factor Model for Intensive Longitudinal Data Arising from Mobile Health Studies. To be submitted to ▶ *Biometrics*.

41 Abbott, M., Nahum-Shani I, Lam C, Wetter D, **Dempsey W**. A latent variable approach to jointly modeling longitudinal and cumulative event data using a weighted two-stage approach. To be submitted to ▶ *Statistics in Medicine*.

42 Huch E, Shi J, Abbott M, Moreno A, **Dempsey W**. Debiased Machine Learning and Network Cohesion for Doubly-Robust Differential Reward Models in Contextual Bandits. Submitted to ▶ *Conference on Neural Information Processing Systems (Neurips)*

Invited Commentaries

1 **Dempsey W**, Mukherjee B. Reflecting on "A Statistician in Medicine" in 2020. ▶ *Statistics in Medicine*. 2020; **40**: 42–48.

CURRICULUM VITAE
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Part II

ACADEMIC ADVISING

Post-doctoral Advisor

1 Brandon Oselio, Biostatistics, University of Michigan, 2019–2021.

Doctoral Student Thesis Advisees

1 Easton Huch (with Fred Feinberg), Statistics, University of Michigan, 2022–

2 Madeline Abbott (with Jeremy Taylor), Biostatistics, University of Michigan, 2020– (F31 Grant Recepient, Best Presentation at MSSISS 2023)

3 Jieru Shi (with Zhenke Wu), Biostatistics, University of Michigan, 2020–2023 (Honorable Mention for Best Presentation at MSSISS 2023)

4 Yuhua Zhang (with Sebastian Zollner), Biostatistics, University of Michigan, 2019–2023.

Other Student Advising

Research Assistant

1 Hanna Venera, Biostatistics, University of Michigan, 2021-2023

Thesis Committee

1 Soumik Purkayastha, Biostatistics, University of Michigan, 2022–

2 Margaret Banker, Biostatistics, University of Michigan, 2022–

3 Yibo Wang, Biostatistics, University of Michigan, 2022–

4 Peter MacDonald, Statistics, University of Michigan, 2022–2023

5 Jangwon Choi, Quantitative Markiting, University of Michigan, 2021–2023

6 Emily Roberts, Biostatistics, University of Michigan, 2021–2022

7 Wayne Wang, Statistics, University of Michigan, 2020–2022

8 Yumu Liu, Statistics, University of Michigan, 2020–2020

9 Alexander Moreno, Computer Science, Georgia Tech University, 2019-2021

10 Joseph Naiman, Biostatistics, University of Michigan, 2019–2020

11 Brandon Oselio, Electrical Engineering and Computer Science, University of Michigan, 2018–2019

TEACHING

Classroom Instruction

University of Michigan, School of Public Health

○ BIOS 617. Theory and Methods of Sample Design (2020–2023), Instructor.
○ BIOS 627. Case Studies in Health Big Data (2021–2023), Instructor.

Harvard University

○ STAT 234 Sequential Decision Making (2019), Guest Lecturer.

Workshops

○ Mobile Training Institute: Faculty and Mentor, Los Angeles, California. May–June, 2023. Talk on "Experimental Design and Analytic Strategies for Adaptive Behavioral Interventions" and a week-long mentoring session of a mHealth team with capstone project.

○ Mobile Training Institute: Faculty and Mentor, Los Angeles, California. June, 2022. Talk on "Data Missingness in mHealth Research" and a week-long mentoring session of a mHealth team with capstone project.

○ International Society for Research on Internet Interventions (ISRII). Pittsburgh, USA. Postponed to 2021 due to COVID. "Introduction to optimization of just-in-time adaptive interventions (JITAIs) and other digital interventions using the multiphase optimization strategy (MOST)"

○ Neural Information Processing System. Vancouver, Canada. December, 2020. "Machine Learning for Mobile Health"

○ AI for Health Summer School in Paris, Paris, France. January, 2020. "Micro-randomized trials and real-time decision making in mobile health"

○ Workshop on "Causal inference in the presence of dependence and network structure." Montreal, Canada. June, 2018. Invited Presentation titled "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

○ Training for Optimization of Behavioral and Biobehavioral Interventions, Bethesda, Maryland. May, 2016. Workshop Facilitator. "Adaptive Interventions,", "Sequential, Multiple Assignment, Randomized Trials (SMARTs)," "Just In-Time Adaptive Interventions (JITAIs)," and "Microrandomized Trials."

○ Workshop on Flexible Models for Longitudinal and Survival Data with Applications in Biostatistics. Coventry, England. (2015). Invited presentation. "Survival models and health sequences"

RESEARCH GRANT PARTICIPATION

Ongoing Research Support

○ *Mobile Technology to Optimize Depression Treatment (R01 MH131617)*
Dates: 09/01/2022–08/01/2027. Principal Investigator: Srijan Sen
Responsibility: Co-Investigator.

○ *Pragmatic Trials of Cannabidiol and Tailored Cannabis Coaching to Improve Chronic Pain Symptoms among Veterans*
Dates: 09/01/2022–08/01/2027. Principal Investigator: Kevin Boehnke, Amy Bohnert, and Rachel Bergmans
Responsibility: Co-Investigator.

A Just-In-Time Adaptive Mobile Application Intervention To Reduce Sodium Intake And Blood Pressure In Hypertensive Patients (R61 HL155498)
Dates: 07/01/2021 — 06/30/2026. Principal Investigator: Mike Dorsch
Responsibility: Co-Investigator.

○ *Center for Methodologies for Adapting and Personalizing Prevention, Treatment and Recovery Services for SUD and HIV (MAPS Center, P50 DA054039)*
Dates: 07/01/2021–06/30/2026. Principal Investigator: Inbal Nahum-Shani and Daniel Almirall (MPIs)
Responsibility: Co-Investigator.

○ *Novel Longitudinal Methods for SMART Studies of Drug Abuse and HIV (R01 DA039901)*
Dates: 08/01/2020 – 05/31/2025. Principal Investigators: Nahum-Shani, Inbal, Almirall, Daniel–MPIs
Responsibility: Co-Investigator.

○ *Wearables in Reducing Risk and Enhancing Daily Life-style (WIRED-L)*
Dates: 04/01/2020 — 03/31/2024. Principal Investigator: Brahmajee Nallamothu and Lesli Skolarus (MPIs)
Responsibility: Co-Investigator.

Pending Research Support

○ *Center for Suicide Research and Prevention*
Dates: 12/01/2023 – 11/30/2026. Principal Investigator: Smoller, Jordan and Nock, Matthew
Responsibility: MPI on R34 subcomponent.

○ *Evaluating the Validity and Utility of an Al-based prediction model for Continuous Smoking Lapse Risk.*
Dates: 09/01/2023 — 08/01/2028. Principal Investigators: Vinci, Christine
Responsibility: Co-Investigator.

○ *Leveraging ML algorithms and data integration techniques to improve efficiency of causal moderation analyses of micro-randomized trial data*
Dates: 09/01/2023 — 08/01/2028. Principal Investigator: Walter Dempsey
Responsibility: Principal Investigator.

○ *Scalable Methods with Statistical Guarantees for Complex, Dynamic Interaction Data Structures*
Dates: 06/01/2023 — 06/01/2026. Principal Investigator: Walter Dempsey
Responsibility: Principal Investigator.

PRESENTATIONS

Scientific Meetings (Invited)

1 Eastern North American Region (ENAR) Conference, Nashville, Tennessee (March 2023). "Improving the Efficiency of Time-Varying Causal Effect Moderation Analysis in Mobile Health." (Part of session "Statistical Methods for the analysis of mobile health data")

2 14th International Conference of the ERCIM WG on Computation and Methodological Statistics, (December, 2022). Invited talk on "Improving the efficiency of time-varying causal effect moderation analysis in mobile health" (Virtual seminar)

3 Joint Statistical Meeting, Washington, DC (August, 2022). Invited talk on "Assessing Time-Varying Causal Effect Moderation in the Presence of Cluster-Level Treatment Effect Heterogeneity"

4 Conference on Health, Information, and Learning (April, 2022). Invited tutorial on "Challenges in developing online learning and experimentation algorithms in digital health" (Virtual seminar)

5 Joint Statistical Meeting, (August, 2021). Invited talk on "Recurrent event analysis in the presence of real-time high frequency data via random subsampling" (Virtual seminar)

6 International Conference on Clnical Biostatistics, (August, 2021). Invited talk on "Micro-randomized trials and cluster-level treatment effect heterogeneity" (Virtual seminar)

7 13th International Conference of the ERCIM WG on Computation and Methodological Statistics, (December, 2020). Invited talk on "Recurrent event analysis in the presence of real-time high frequency data via random subsampling" (Virtual seminar)

8 Pacific Causal Inference Conference, (September, 2020). Invited talk on "Micro-randomized trials and cluster-level treatment effect heterogeneity" (Virtual seminar).

9 Spring Research Conference (May, 2020). Invited talk on "Recurrent event analysis in the presence of functional covariates via random subsampling" (Virtual Seminar).

10 Neural information processing systems (Neurips) conference, Vancouver, Canada (December, 2019). Invited talk on "Learning temporal point processes in mobile health and network analysis" (Part of session "Learning temporal point processes")

11 Society for Ambulatory Assessment's Annual Conference, Syracuse, NY (June, 2019). Invited talk on "Recurrent event analysis in the presence of functional covariates via random subsampling". (Part of session "Analytical methods for making sense of mobile health data in suicide research")

12 Spring Research Conference, Blacksburg, VA (May, 2019). Invited Session. "Statistical network modeling via exchangeable interaction processes" (Part of session "Novel Methods for Structured and Relational Data")

13 New England Statistical Society, Hartford, CT (May, 2019). "The stratified micro-randomized trial design: testing nested causal effects of time-varying treatments" (Part of session "Healthcare Data Analysis for Electronic Health Records")

14 Society of Behavioral Medicine, Washington, DC (March, 2019). "From JITAIs to AIs" (Part of session "The nuts and bolts of behavioral intervention development: study designs, methods, and funding opportunities").

15 Eastern North American Region (ENAR) Conference, Atlanta, Georgia (March, 2018). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments." (Part of session "Recent Innovations in Practical Clinical Trial Design")

16 Joint Statistical Meeting, Baltimore, Maryland (August, 2017). "Accounting for the Sampling Scheme in Network Modeling" (Part of session "Foundations of Network Analysis")

17 NIH BD2K Machine Learning Working Group Webinar Series, Virtual Seminar (January, 2017). "Sample size calculations for stratified micro-randomized trials.

18 Society of Behavioral Medicine, San Diego, California (April, 2017). "From JITAIs to AIs" (Part of session "The nuts and bolts of behavioral intervention development: study designs, methods, and funding opportunities").

19 9th International Conference of the ERCIM WG on Computational and Methodological Statistics, Seville, Spain (December, 2016). "Edge exchangeable models for interaction networks" (Part of session "Statistical network modeling")

20 Society of Behavioral Medicine, Washington, D.C. (April, 2016). Invited presentation. "From JITAIs to AIs" (Part of session "The nuts and bolts of behavioral intervention development: study designs, methods, and funding opportunities").

Scientific Meetings (Contributed)

1 Joint Statistical Meeting, Chicago, Illinois (August, 2016). Contributed presentation. "Sample size calculations for stratified micro-randomized trials."

2 Eastern North American Region (ENAR) Conference, Austin, Texas (March, 2016). "Sample size calculations for stratified micro-randomized trials."

Invited External Seminars

1 Seminar at Massachusetts General Hospital's Center for Digital Mental Health, Boston, MA (January, 2023). "Data-driven design of effective just-in-time adaptive interventions: promise, pitfalls, and perspective" (Virtual Seminar)

2 Colloquium at University of Pennsylvania's Department of Biostatistics, Philadelphia, PA (October, 2022). "Improving the Efficiency of Time-Varying Causal Effect Moderation Analysis in Mobile Health."

3 Colloquium at Columbia University's Department of Biostatistics, New York, NY (September, 2022). "Improving the Efficiency of Time-Varying Causal Effect Moderation Analysis in Mobile Health."

4 Colloquium at Ohio State University's Department of Biostatistics, Columbus, OH (September, 2022). "Improving the Efficiency of Time-Varying Causal Effect Moderation Analysis in Mobile Health."

5 Colloquium at Imperial College London's Department of Statistics, London, England (June, 2022). "Statistical network modeling via exchangeable interaction processes."

6 Colloquium at Duke University's Department of Biostatistics, Durham, NC (May, 2022). "Improving the efficiency of time-varying effect moderation estimates."

7 Colloquium at University of Pittsburgh's Department of Statistics, Pittsburgh, PA (December, 2021). "Statistical network modeling via exchangeable interaction processes."

8 Colloquium at Johns Hopkins University's Department of Biostatistics, Baltimore, Maryland (January, 2021). "Assessing Time-Varying Causal Effect Moderation in the Presence of Cluster-Level Treatment Effect Heterogeneity."

9 Colloquium at MD Anderson's Department of Health Disparities Research. Houston, TX (June, 2020). Invited talk on "Microrandomized trials for just-in-time adaptive intervention (JITAI) development" (Virtual seminar)

10 Webinar for Office of Disease Prevention's "Medicine: Mind the Gap Webinar Series." Virtual Seminar (November, 2019). "Joint Models of Longitudinal and Time-to-Event Data for Informing Multi-Stage Decision Making in mHealth"

11 Colloquium at University of California, Berkeley's Department of Statistics, Berkeley, CA (January, 2019). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

12 Colloquium at Harvard University's Department of Biostatistics, Cambridge, MA (January, 2019). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

13 Colloquium at Penn State University's Department of Statistics, State College, PA (January, 2019). "Statistical network modeling via exchangeable interaction processes."

14 Colloquium at Yale University's Department of Biostatistics, New Haven, CT (January, 2019). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

15 Colloquium at NC State University's Department of Statistics, Raleigh, NC (December, 2018). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

16 Colloquium at Cornell University's Department of Statistics and Data Science, Ithaca, NY (December, 2018). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

17 Colloquium at McGill University's Department of Biostatistics, Montreal, Canada (December, 2018). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

18 Colloquium at Johns Hopkins University's Department of Biostatistics, Baltimore, Maryland (December, 2018). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

19 Colloquium at Johns Hopkins University's Department of Applied Mathematics and Statistics, Baltimore, Maryland (April, 2018). "Statistical network modeling via exchangeable interaction processes."

20 Colloquium at University of Minnesota's Institute for Translational Research. Minneapolis, MN (April, 2018). "Just-in-time interventions and micro-randomized trials in substance use and mental health."

Invited Internal Seminars

1 Seminar (Keynote Speaker) at the Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSISS), Ann Arbor, MI (March, 2023). "Using data to inform just-in-time adaptive interventions in mobile health: promise, pitfalls, and perspective."

2 Seminar at University of Michigan's Institute of Social Research, Ann Arbor, MI (May, 2022). "To treat and when to treat? The role of sequential decision making and mobile technologies in health disorder research."

3 Colloquium at University of Michigan's Department of Biostatistics, Ann Arbor, MI (December, 2019). "Statistical network modeling via exchangeable interaction processes."

4 Colloquium at University of Michigan's Institute for Social Research, Ann Arbor, MI (November, 2018). "The stratified micro-randomized trial design: sample size considerations for testing nested causal effects of time-varying treatments."

PROFESSIONAL SERVICE

Professional Memberships

○ Eastern North American Region (ENAR) (2018 – present).
○ American Statistical Association (ASA) (2007 – present).

Participation on Advisory Panels, Boards, and Committees

○ Member, Michigan Institute of Data Science Program Committee (2022 – present)
○ Member, ENAR Regional Advisory Board (2020 – present).
○ Member, CFE-CMStatistics 2021 Scientific Programme Committee (2021 – present).
○ Advisor, TalkLife (2019 – Present).

Program Development

Organizer

○ Session Organizer, Lifetime Data Science Conference (2023). Topic: *Causal inference and survival analysis*
○ Session Organizer, CFE-CMStatistics (2022). Topic: *Recent Statistical Advances for Mobile Health.*
○ Session Organizer, CFE-CMStatistics (2021). Topic: *Recent Statistical Advances for Mobile Health.*
○ Session Organizer, Joint Statistical Meetings (2021). Topic: *Recent Statistical Advances for Mobile Health.*
○ Session Organizer, Lifetime Data Science Conference (2020, cancelled due to COVID). Topic: *Causal inference and survival analysis*
○ Session Organizer, International Conference of the ERCIM Working Group on Computational and Methodological Statistics (2020). Topic: *Recent Statistical Advances for Mobile Health.*
○ Session Organizer, Neural Information Processing Systems Conference (2020). Topic: *Machine Learning for Mobile Health.*

Journal Peer Review Activities

○ **Journal**: Journal of the American Statistical Association (4), Journal of the Royal Statistical Society (2), Statistics in Medicine (2), Biometrics (6), Statistica Sinica (1), Journal of Complex Networks (2), Journal of Applied Statistics (1), Annales Henri Lebesgue (1).
○ **Book**: Chapman & Hall/CRC

Journal or Other Editorial Board Membership

○ Associate Editor, *Harvard Data Science Review* (2019 – present).

Proposal Reviews

○ Ad hoc member, CANSSI Collaborative Research Team Program (June 2019).

Academic Service

Committees

1 "Sharpening Our Competitive Edge" Working Group, School of Public Health, University of Michigan, 2022-2023

2 Bank of America-funded Health Equity Initiative, School of Public Health, University of Michigan, 2022-2023

3 Junior Faculty Search Committee, Department of Biostatistics, University of Michigan, 2022-2023

4 Faculty Search Committee, Department of Biostatistics, University of Michigan, 2021-2022

5 PhD qualifying exam committee, Department of Biostatistics, University of Michigan, 2021-2022

6 Seminars/Brown-bag committee (co-chair), Department of Biostatistics, University of Michigan, 2020-2022