

Sarah F. Ackley

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Department of Epidemiology
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Education & Training

Postdoctoral Scholar, Department of Epidemiology, Boston University, 2023 - 2024

Postdoctoral Scholar, Department of Epidemiology and Biostatistics, UCSF, 2019 - 2023

Ph.D. Epidemiology & Translational Science, University of California, San Francisco, 2013 - 2018

Dissertation: "Mathematical Models of Vaccine-Preventable Disease in California"

Committee: Travis C. Porco (chair), M. Maria Glymour, James Lloyd-Smith,
& in collaboration with Jennifer Zipprich, Kathleen Harriman, and Erin Murray at the California Department of Public Health (CDPH)

B.S. Physics, Massachusetts Institute of Technology (MIT), 2004-2008

Research Experience

Research in Epidemiology

Postdoctoral Scholar, Maria Glymour's Research Group, Department of Epidemiology and Biostatistics, UCSF and Department of Epidemiology, BU, Jan. 2019 - Jun. 2024

Study Coordinator & Graduate Student Researcher, Travis Porco's Research Group, Proctor Foundation, UCSF, Mar. 2012 - Oct. 2018

Measles Surveillance Research Associate, California Department of Public Health (CDPH), Sept. 2012 - Aug. 2013

Collaborations with Gil Rabinovici (UCSF), Renaud La Joie (UCSF), María Corrada (UCI), Rachel A. Whitmer (UC Davis), Charles DeCarli (UC Davis), Roy Anderson (Imperial College London), Elizabeth Rose Mayeda (UCLA), Caitlin S. Pepperell (UW Madison), George Rutherford (UCSF), Jennifer Zipprich (CDPH), Thomas Lietman (UCSF), Erin Murray (CDPH), John W. Hargrove (University of Stellenbosch, South Africa)

Research in Physics & Physical Chemistry

Nergis Mavalvala's Research Group, LIGO, Undergraduate Student Researcher, MIT, Jan. 2007 - Jun. 2008

Andrei Tokmakoff's Research Group, Undergraduate Student Researcher, MIT, Jan. 2005 - Aug. 2007

Interests & Skills epidemiology, mathematical modeling, neuroimaging, dementia, statistics, causal inference, computer simulation, reproducible research, metascience

Awards & Grants

NIH NIA K99/R00 Transition to Independence Award, Mathematical Models of Tau-PET Measures and Cognitive Decline in Alzheimer's Disease Across the Lifespan, K99AG073454/R00AG073454, 2022 - 2027

NIH NIGMS F31 Individual Predoctoral Fellowship, Application of Branching Processes to Measles in California, F31GM120985, 2016 - 2018

Achievement Rewards for College Scientists (ARCS) Scholarship, 2016 - 2018

TICR Program Award for Excellence in Teaching the Methods of Clinical Research, 2016

Phi Beta Kappa of Northern California Scholarship, 2016

Research Exchange Scholar, International Clinic on Data, Disease, and Dynamics, 2014

Phi Beta Kappa, 2008

Sigma Pi Sigma, Physics Honor Society, 2008

Professional Memberships

MELODEM, Methods in Longitudinal Dementia Research, 2018 - *present*

ISTAART, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment, 2018 - *present*

Society of Epidemiologic Research, Member, 2013 - *present*

Teaching Experience

Course Instructor, Pharmacoepidemiology, Department of Epidemiology, UCSF, Fall 2025

Guest Lecturer, Sensitivity and Stability Analyses, Pharmacoepidemiology, Department of Epidemiology, UCSF, Fall 2024

Guest Lecturer, Instrumental-Variable Analyses, Database Seminar, Department of Epidemiology and Biostatistics, UCSF, Fall 2021

Guest Lecturer, Branching Processes & Hidden Markov Models, Mathematical Modeling of Infectious Disease, UCSF, Spring 2017 & 2018

Guest Lecturer, Novel Methods in Epidemiology: Mathematical Modeling of Infectious Disease, Global Health Seminar, UCSF, Spring 2018

Departmental Tutor, Epidemiologic Methods, Department of Epidemiology and Biostatistics, UCSF, Spring 2016 - Spring 2017

Teaching Assistant & Course Administrator, Mathematical Modeling of Infectious Disease, UCSF, Winter Quarters 2016 & 2017

Teaching Assistant, Statistical Methods for Causal Inference, UCSF, Spring Quarter 2016

Teaching Assistant, Epidemiologic Methods, UCSF, Fall Quarter 2015

Teaching Assistant, Meaningful Modeling of Epidemiologic Data, Muizenberg, South Africa, Summer 2014

Departmental Tutor, Vibrations and Waves, MIT, Fall Semester, 2006

Scientific Review Activities

2024 **Reviewer**, Special Emphasis Study Section, NIH NIA RFA-AG-25-016 “Multi-Scale Models Bridging Levels of Analysis in Aging and Alzheimer’s Disease (AD) and AD-Related Dementias (ADRD) (R01 Clinical Trial Not Allowed)”

Reviewer, *American Journal of Epidemiology*, *JAMA Neurology*, *Alzheimer’s & Dementia*, *Alzheimer’s & Dementia: Translational Research and Clinical Interventions*, *Nature Communications*

Professional Service at Brown

Faculty Advisory Committee, Brown University School of Public Health, At-large representative, 9/2025 - present

Committee Member, Epidemiology Department Curriculum Committee, 9/2025 - present

Publications

Under Review & Accepted Manuscripts

1. **Ackley SF**, Flanders M, Murchland A, Chen R, Wang J, Shah SJ, Huey ED, Glymour MM. Evaluation of Amyloid Removal as a Surrogate for Cognitive Decline: Pilot Analysis in Individual-Level Data from the A4 Study of Solanezumab. medRxiv. 2025:2025-07.
2. Zhang J, Soleimani-Meigooni D, Koeppe R, **Ackley SF**, Schonhaut D, Lin Z, Maiti P, Yballe C, Rocha S, Shankar R, Amuiri A, Bourgeat P, Dore V, Carrillo M, Dickerson B, Apostolova L, Harrison T, Grinberg L, Seeley W, Spina S, Rabinovici G, La Joie R, Ganna T. Exploring Centiloids’ robustness: impact of sample size and image resolution on Centiloid conversion accuracy. J Nucl Med. Accepted 2025.

Published Papers

Complete List of Published Work in MyBibliography

Google Scholar Profile

17 first-author publications & 2 senior-author publications.

58. **Ackley SF**, Andrews RM, Seaman C, Flanders M, Chen R, Wang J, Lopes G, Sims KD, Buto P, Ferguson E, Allen IE. Trends in the Distribution of P Values in Epidemiology Journals: A Statistical, P-Curve, and Simulation Study. *American Journal of Epidemiology*. 2025 Aug 21.
57. **Ackley SF**, Wang J, Chen R, Hill-Jarrett TG, Rojas-Saunero LP, Stokes A, Shah SJ, Glymour MM, Alzheimer’s Disease Neuroimaging Initiative. Methods to crosswalk between cognitive test scores using data from the Alzheimer’s Disease Neuroimaging Cohort. *Alzheimer’s & Dementia*. 2025 Feb;21(2):e14597.
56. Wang J, **Ackley SF**, Woodworth DC, Sajjadi SA, Decarli CS, Fletcher EF, Glymour MM, Jiang L, Kawas C, Corrada MM. Associations of amyloid burden, white matter hyperintensities, and hippocampal volume with cognitive trajectories in the 90+ Study. *Neurology*. 2024 Aug 13;103(3):e209665.
55. Almeida ML, Pederson AM, Zimmerman SC, Chen R, **Ackley SF**, Riley A, Eng CW, Whitmer RA, George KM, Peterson RL, Mayeda ER. The Association Between Physical Activity and Cognition in a Racially/Ethnically Diverse Cohort of Older Adults: Results From the Kaiser Healthy Aging and Diverse Life Experiences Study. *Alzheimer Disease & Associated Disorders*. 2024 Apr 1;38(2):120-7.
54. Hayes-Larson E, **Ackley SF***, Turney IC, La Joie R, Mayeda ER, Glymour MM, Alzheimer’s Disease Neuroimaging Initiative. Considerations for use of blood-based biomarkers in epidemiologic dementia research. *American Journal of Epidemiology*. 2024 Mar;193(3):527-35. *Co-first.

53. Wang J, Hill-Jarrett T, Buto P, Pederson A, Sims KD, Zimmerman SC, DeVost MA, Ferguson E, Lacar B, Yang Y, Choi M, Glymour MM, La Joie R, Chen R, **Ackley SF*** Comparison of approaches to control for intracranial volume in research on the association of brain volumes with cognitive outcomes. *Human Brain Mapping*. 2024 Mar;45(4):e26633. *Senior.
52. **Ackley SF**, Calmasini C, Bouteloup V, Hill-Jarrett TG, Swinnerton KN, Chêne G, Dufouil C, Glymour MM, MEMENTO Cohort Study Group and DPUK. Contribution of Global Amyloid-PET Imaging for Predicting Future Cognition in the MEMENTO Cohort. *Neurology*. 2024 Mar 26;102(6):e208054.
51. Buto PT, Wang J, La Joie R, Zimmerman SC, Glymour MM, **Ackley SF**, Hoffmann TJ, Yaffe K, Zeki Al Hazzouri A, Brenowitz WD. Genetic risk score for Alzheimer's disease predicts brain volume differences in mid and late life in UK biobank participants. *Alzheimer's & Dementia*. 2024 Mar;20(3):1978-87.
50. Wang J, Sims KD, **Ackley SF**, Chen R, Kobayashi LC, Hayes-Larson E, Mayeda ER, Buto P, Zimmerman SC, Graff RE, Glymour MM. Association of cancer history with structural brain aging markers of Alzheimer's disease and related dementias risk. *Alzheimer's & Dementia*. 2024 Feb;20(2):880-9.
49. **Ackley SF**, Wang J, Chen R, Power MC, Allen IE, Glymour MM. Estimated effects of amyloid reduction on cognitive change: A Bayesian update across a range of priors. *Alzheimer's & Dementia*. 2024 Feb;20(2):1149-55.
48. Chen R, Wang J, Pederson AM, Prather AA, Hirst AK, **Ackley SF**, Hokett E, George KM, Mungas D, Mayeda ER, Gilsanz P. Evaluation of racial and ethnic heterogeneity in the associations of sleep quality and sleep apnea risk with cognitive function and cognitive decline. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*. 2024 Jan;10(1):e12441.
47. Zimmerman SC, Ferguson EL, Choudhary V, Ranatunga DK, Oni-Orisan A, Hayes-Larson E, Folle AD, Mayeda ER, Whitmer RA, Gilsanz P, Power MC, Glymour MM, and **Ackley SF***. Metformin Cessation and Dementia Incidence. *JAMA Network Open*. 2023 Oct 2;6(10). *Senior author.
46. Wang J, Buto P, **Ackley SF**, Kobayashi LC, Graff RE, Zimmerman SC, Hayes-Larson E, Mayeda ER, Asiimwe SB, Calmasini C, Glymour MM. Association between cancer and dementia risk in the UK Biobank: evidence of diagnostic bias. *European Journal of Epidemiology*. 2023 Oct;38(10):1069-79.
45. Liu KY, Villain N, Ayton S, **Ackley SF**, Planche V, Howard R, Thambisetty M. Key questions for the evaluation of anti-amyloid immunotherapies for Alzheimer's disease. *Brain Communications*. 2023 Jun 2.
44. **Ackley SF**, Zimmerman SC, Flatt JD, Riley AR, Sevelius J, Duchowny KA. Discordance in chromosomal and self-reported sex in the UK Biobank: Implications for transgender-and intersex-inclusive data collection. *Proceedings of the National Academy of Sciences*. 2023 May 2;120(18).
43. Chen R, Calmasini C, Swinnerton K, Wang J, Haneuse S, **Ackley SF**, Hirst AK, Hayes-Larson E, George KM, Peterson R, Soh Y. Pragmatic approaches to handling practice effects in longitudinal cognitive aging research. *Alzheimer's & Dementia*. 2023 May 18.
42. Ospina-Romero M, Brenowitz WD, Glymour MM, Westrick A, Graff RE, Hayes-Larson E, Mayeda ER, **Ackley SF**, Kobayashi LC. Education, incident cancer, and rate of memory decline in a national sample of US adults in mid-to-later-life. *Journal of Geriatric Oncology*. 2023 Jun 1;14(5).
41. Duchowny KA*, **Ackley SF***, Brenowitz WD, Wang J, Zimmerman SC, Caunca MR, Glymour MM. Associations between handgrip strength and dementia risk, cognition, and neuroimaging outcomes in the UK Biobank cohort study. *JAMA Network Open*. 2022 Jun 1;5(6). *Co-first authors.
40. Zimmerman SC, Brenowitz WD, Calmasini C, **Ackley SF**, Graff RE, Asiimwe SB, Staffaroni AM, Hoffmann TJ, Glymour MM. Association of Genetic Variants Linked to Late-Onset Alzheimer Disease With Cognitive Test Performance by Midlife. *JAMA Network Open*. 2022 Apr 1;5(4).
39. Hayes-Larson E, Shaw C, **Ackley SF**, Zimmerman SC, Glymour MM, Graff RE, Witte JS, Kobayashi L, Mayeda ER. The role of dementia diagnostic delay in the inverse cancer-dementia association. *J Gerontol A Biol Sci Med Sci*. 2021 Nov 12; doi: 10.1093/gerona/glab341. PubMed PMID: 34788817.

38. Dang KV, Rerolle F, **Ackley SF**, Irish AM, Mehta KM, Bailey I, Fair E, Miller C, Bibbins-Domingo K, Wong-Moy E, Glymour MM, Morris MD. A Randomized Study to Assess the Effect of Including the Graduate Record Examinations Results on Reviewer Scores for Underrepresented Minorities. *Am J Epidemiol*. 2021 Sep 1;190(9):1744-1750. doi: 10.1093/aje/kwab075. PubMed PMID: 33738464; PubMed Central PMCID: PMC8408352.
37. Filshtein TJ, Li X, Zimmerman SC, **Ackley SF**, Glymour MM, Power MC. Proof of Concept Example for Use of Simulation to Allow Data Pooling Despite Privacy Restrictions. *Epidemiology*. 2021 Sep 1;32(5):638-647. doi: 10.1097/EDE.0000000000001373. PubMed PMID: 34183527; PubMed Central PMCID: PMC8338788.
36. **Ackley SF**, Lessler J, Glymour MM. Dynamical Modeling as a Tool for Inferring Causation. *Am J Epidemiol*. 2021 Aug 27;. doi: 10.1093/aje/kwab222. PubMed PMID: 34447984.
35. Ospina-Romero M, Brenowitz WD, Glymour MM, Mayeda ER, Graff RE, Witte JS, **Ackley SF**, Lu KP, Kobayashi LC. The Association Between Cancer and Spousal Rate of Memory Decline: A Negative Control Study to Evaluate (Unmeasured) Social Confounding of the Cancer-memory Relationship. *Alzheimer Dis Assoc Disord*. 2021 Jul-Sep 01;35(3):271-274. doi: 10.1097/WAD.000000000000398. PubMed PMID: 32568784; PubMed Central PMCID: PMC7749066.
34. **Ackley SF**, Hayes-Larson E, Brenowitz WD, Swinnerton K, Mungas D, Fletcher E, Singh B, Whitmer RA, DeCarli C, Maria Glymour M. Amyloid-PET imaging offers small improvements in predictions of future cognitive trajectories. *Neuroimage Clin*. 2021;31:102713. doi: 10.1016/j.nicl.2021.102713. Epub 2021 Jun 8. PubMed PMID: 34153689; PubMed Central PMCID: PMC8233225.
33. Peterson RL, George KM, Gilsanz P, **Ackley S**, Mayeda ER, Glymour MM, Mungas DM, DeCarli C, Whitmer RA. Racial/Ethnic Disparities in Young Adulthood and Midlife Cardiovascular Risk Factors and Late-life Cognitive Domains: The Kaiser Healthy Aging and Diverse Life Experiences (KHANDLE) Study. *Alzheimer Dis Assoc Disord*. 2021 Apr-Jun 01;35(2):99-105. doi: 10.1097/WAD.000000000000436. PubMed PMID: 34006727; NIHMSID:NIHMS1742467.
32. **Ackley SF**, Elahi F, Glymour MM. Instrumental variable meta-analysis of aggregated randomized drug trial data for evaluating proposed target mechanisms. *BMJ*. 2021 Feb 25;372:n346. doi: 10.1136/bmj.n346. PubMed PMID: 33632740.
31. **Ackley SF**, Zimmerman SC, Brenowitz WD, Tchetgen Tchetgen EJ, Gold AL, Manly JJ, Mayeda ER, Filshtein TJ, Power MC, Elahi FM, Brickman AM, Glymour MM. Effect of reductions in amyloid levels on cognitive change in randomized trials: instrumental variable meta-analysis. *BMJ*. 2021 Feb 25;372:n156. doi: 10.1136/bmj.n156. PubMed PMID: 33632704; PubMed Central PMCID: PMC7905687.
30. Gold AL, Meza E, **Ackley SF**, Mungas DM, Whitmer RA, Mayeda ER, Miles S, Eng CW, Gilsanz P, Glymour MM. Are adverse childhood experiences associated with late-life cognitive performance across racial/ethnic groups: results from the Kaiser Healthy Aging and Diverse Life Experiences study baseline. *BMJ Open*. 2021 Feb 5;11(2):e042125. doi: 10.1136/bmjopen-2020-042125. PubMed PMID: 33550246; PubMed Central PMCID: PMC7925876.
29. Leng Y, **Ackley SF**, Glymour MM, Yaffe K, Brenowitz WD. Genetic Risk of Alzheimer's Disease and Sleep Duration in Non-Demented Elders. *Ann Neurol*. 2021 Jan;89(1):177-181. doi: 10.1002/ana.25910. Epub 2020 Oct 5. PubMed PMID: 32951248; PubMed Central PMCID: PMC8048405.
28. Hayes-Larson E, **Ackley SF**, Zimmerman SC, Ospina-Romero M, Glymour MM, Graff RE, Witte JS, Kobayashi LC, Mayeda ER. The competing risk of death and selective survival cannot fully explain the inverse cancer-dementia association. *Alzheimers Dement*. 2020 Dec;16(12):1696-1703. doi: 10.1002/alz.12168. Epub 2020 Sep 3. PubMed PMID: 32881307; PubMed Central PMCID: PMC7902336.
27. Ospina-Romero M, Glymour MM, Hayes-Larson E, Mayeda ER, Graff RE, Brenowitz WD, **Ackley SF**, Witte JS, Kobayashi LC. Association Between Alzheimer Disease and Cancer With Evaluation of Study Biases: A Systematic Review and Meta-analysis. *JAMA Netw Open*. 2020 Nov 2;3(11):e2025515. doi: 10.1001/jamanetworkopen.2020.25515. PubMed PMID: 33185677; PubMed Central PMCID: PMC7666424.

26. Brenowitz WD, Filshtein TJ, Yaffe K, Walter S, **Ackley SF**, Hoffmann TJ, Jorgenson E, Whitmer RA, Glymour MM. Association of genetic risk for Alzheimer disease and hearing impairment. *Neurology*. 2020 Oct 20;95(16):e2225-e2234. doi: 10.1212/WNL.00000000000010709. Epub 2020 Sep 2. PubMed PMID: 32878991.
25. **Ackley SF**, Pilewski S, Petrovic VS, Worden L, Murray E, Porco TC. Assessing the utility of a smart thermometer and mobile application as a surveillance tool for influenza and influenza-like illness. *Health Informatics J*. 2020 Sep;26(3):2148-2158. doi: 10.1177/1460458219897152. Epub 2020 Jan 23. PubMed PMID: 31969046.
24. Peterson RL, Gilsanz P, George KM, **Ackley S**, Glymour MM, Mungas DM, Whitmer RA. Differences in association of leisure time activities and cognition in a racially/ethnically diverse cohort of older adults: Findings from the KHANDLE study. *Alzheimers Dement (N Y)*. 2020;6(1). doi: 10.1002/trc2.12047. eCollection 2020. PubMed PMID: 32607410; PubMed Central PMCID: PMC7317643.
23. Ospina-Romero M, Brenowitz WD, Glymour MM, Mayeda ER, Graff RE, Witte JS, **Ackley SF**, Lu KP, Kobayashi LC. The Association Between Cancer and Spousal Rate of Memory Decline: A Negative Control Study to Evaluate (Unmeasured) Social Confounding of the Cancer-memory Relationship. *Alzheimer Dis Assoc Disord*. 2020 Jun 19;. doi: 10.1097/WAD.0000000000000398. [Epub ahead of print] PubMed PMID: 32568784.
22. Worden L, **Ackley SF**, Zipprich J, Harriman K, Enanoria WTA, Wannier R, Porco TC. Measles transmission during a large outbreak in California. *Epidemics*. 2020 Mar;30:100375. doi: 10.1016/j.epidem.2019.100375. Epub 2019 Nov 10. PubMed PMID: 31735584; PubMed Central PMCID: PMC7211428.
21. Johansson MA, Apfeldorf KM, Dobson S, Devita J, Buczak AL, Baugher B, Moniz LJ, Bagley T, Babin SM, Guven E, Yamana TK, Shaman J, Moschou T, Lothian N, Lane A, Osborne G, Jiang G, Brooks LC, Farrow DC, Hyun S, Tibshirani RJ, Rosenfeld R, Lessler J, Reich NG, Cummings DAT, Lauer SA, Moore SM, Clapham HE, Lowe R, Bailey TC, García-Díez M, Carvalho MS, Rodó X, Sardar T, Paul R, Ray EL, Sakrejda K, Brown AC, Meng X, Osoba O, Vardavas R, Manheim D, Moore M, Rao DM, Porco TC, **Ackley S**, Liu F, Worden L, Convertino M, Liu Y, Reddy A, Ortiz E, Rivero J, Brito H, Juarrero A, Johnson LR, Gramacy RB, Cohen JM, Mordecai EA, Murdock CC, Rohr JR, Ryan SJ, Stewart-Ibarra AM, Weikel DP, Jutla A, Khan R, Poultney M, Colwell RR, Rivera-García B, Barker CM, Bell JE, Biggerstaff M, Swerdlow D, Mier-Y-Teran-Romero L, Forshey BM, Trtanj J, Asher J, Clay M, Margolis HS, Hebbeler AM, George D, Chretien JP. An open challenge to advance probabilistic forecasting for dengue epidemics. *Proc Natl Acad Sci*. 2019 Nov 26;116(48):24268-24274. doi: 10.1073/pnas.1909865116. Epub 2019 Nov 11. PubMed PMID: 31712420; PubMed Central PMCID: PMC6883829.
20. Deiner MS, Fathy C, Kim J, Niemeyer K, Ramirez D, **Ackley SF**, Liu F, Lietman TM, Porco TC. Facebook and Twitter vaccine sentiment in response to measles outbreaks. *Health Informatics J*. 2019 Sep;25(3):1116-1132. doi: 10.1177/1460458217740723. Epub 2017 Nov 17. PubMed PMID: 29148313; PubMed Central PMCID: PMC5930144.
19. **Ackley SF**, Lee RS, Worden L, Zwick E, Porco TC, Behr MA, Pepperell CS. Multiple exposures, reinfection and risk of progression to active tuberculosis. *R Soc Open Sci*. 2019 Mar;6(3):180999. doi: 10.1098/rsos.180999. eCollection 2019 Mar. PubMed PMID: 31031990; PubMed Central PMCID: PMC6458392.
18. Kelly JD, Worden L, Wannier SR, Hoff NA, Mukadi P, Sinai C, **Ackley S**, Chen X, Gao D, Selo B, Mossoko M, Okitolonda-Wemakoy E, Richardson ET, Rutherford GW, Lietman TM, Muyembe-Tamfum JJ, Rimoin AW, Porco TC. Projections of Ebola outbreak size and duration with and without vaccine use in Équateur, Democratic Republic of Congo, as of May 27, 2018. *PLoS One*. 2019;14(3):e0213190. doi: 10.1371/journal.pone.0213190. eCollection 2019. PubMed PMID: 30845236; PubMed Central PMCID: PMC6405095.
17. **Ackley SF**, Hacker JK, Enanoria WTA, Worden L, Blumberg S, Porco TC, Zipprich J. Genotype-Specific Measles Transmissibility: A Branching Process Analysis. *Clin Infect Dis*. 2018 Apr 3;66(8):1270-1275. doi: 10.1093/cid/cix974. PubMed PMID: 29228134; PubMed Central PMCID: PMC5889020.

16. Grantz KH, Chabaari W, Samuel RK, Gershon B, Blum L, Worden L, **Ackley S**, Liu F, Lietman TM, Galvani AP, Prajna L, Porco TC. Spatial distribution of leprosy in India: an ecological study. *Infect Dis Poverty*. 2018 Mar 27;7(1):20. doi: 10.1186/s40249-018-0402-y. PubMed PMID: 29580296; PubMed Central PMCID: PMC5870368.
15. **Ackley SF**, Mayeda ER, Worden L, Enanoria WTA, Glymour MM, Porco TC. Compartmental Model Diagrams as Causal Representations in Relation to DAGs. *Epidemiol Methods*. 2017 Dec;6(1). doi: 10.1515/em-2016-0007. Epub 2017 May 5. PubMed PMID: 30555771; PubMed Central PMCID: PMC6294476.
14. **Ackley SF**, Hargrove JW. A dynamic model for estimating adult female mortality from ovarian dissection data for the tsetse fly *Glossina pallidipes* Austen sampled in Zimbabwe. *PLoS Negl Trop Dis*. 2017 Aug;11(8):e0005813. doi: 10.1371/journal.pntd.0005813. eCollection 2017 Aug. PubMed PMID: 28854189; PubMed Central PMCID: PMC5576662.
13. Worden L, Schwartz IB, Bianco S, **Ackley SF**, Lietman TM, Porco TC. Hamiltonian Analysis of Subcritical Stochastic Epidemic Dynamics. *Comput Math Methods Med*. 2017;2017:4253167. doi: 10.1155/2017/4253167. Epub 2017 Aug 28. PubMed PMID: 28932256; PubMed Central PMCID: PMC5592420.
12. Deiner MS, Worden L, Rittel A, **Ackley SF**, Liu F, Blum L, Scott JC, Lietman TM, Porco TC. Short-term leprosy forecasting from an expert opinion survey. *PLoS One*. 2017;12(8):e0182245. doi: 10.1371/journal.pone.0182245. eCollection 2017. PubMed PMID: 28813531; PubMed Central PMCID: PMC5558979.
11. Ali FS, Stein JD, Blachley TS, **Ackley S**, Stewart JM. Incidence of and Risk Factors for Developing Idiopathic Macular Hole Among a Diverse Group of Patients Throughout the United States. *JAMA Ophthalmol*. 2017 Apr 1;135(4):299-305. doi: 10.1001/jamaophthalmol.2016.5870. PubMed PMID: 28208188; PubMed Central PMCID: PMC5470400.
10. Enanoria WT, Liu F, Zipprich J, Harriman K, **Ackley S**, Blumberg S, Worden L, Porco TC. The Effect of Contact Investigations and Public Health Interventions in the Control and Prevention of Measles Transmission: A Simulation Study. *PLoS One*. 2016;11(12):e0167160. doi: 10.1371/journal.pone.0167160. eCollection 2016. PubMed PMID: 27941976; PubMed Central PMCID: PMC5152814.
9. Enanoria WT, Worden L, Liu F, Gao D, **Ackley S**, Scott J, Deiner M, Mwebaze E, Ip W, Lietman TM, Porco TC. Evaluating Subcriticality during the Ebola Epidemic in West Africa. *PLoS One*. 2015;10(10):e0140651. doi: 10.1371/journal.pone.0140651. eCollection 2015. PubMed PMID: 26484544; PubMed Central PMCID: PMC4618845.
8. **Ackley SF**, Liu F, Porco TC, Pepperell CS. Modeling historical tuberculosis epidemics among Canadian First Nations: effects of malnutrition and genetic variation. *PeerJ*. 2015;3:e1237. doi: 10.7717/peerj.1237. eCollection 2015. PubMed PMID: 26421237; PubMed Central PMCID: PMC4586807.
7. Yam W, Davis E, **Ackley S**, Evans M, Mavalvala N. Continuously tunable modulation scheme for precision control of optical cavities with variable detuning. *Opt Lett*. 2015 Aug 1;40(15):3675-8. doi: 10.1364/OL.40.003675. PubMed PMID: 26258386.
6. Hargrove JW, **Ackley SF**. Mortality estimates from ovarian age distributions of the tsetse fly *Glossina pallidipes* Austen sampled in Zimbabwe suggest the need for new analytical approaches. *Bull Entomol Res*. 2015 Jun;105(3):294-304. doi: 10.1017/S0007485315000073. Epub 2015 Mar 25. PubMed PMID: 25804211; PubMed Central PMCID: PMC4838657.
5. Blumberg S, Worden L, Enanoria W, **Ackley S**, Deiner M, Liu F, Gao D, Lietman T, Porco T. Assessing Measles Transmission in the United States Following a Large Outbreak in California. *PLoS Curr*. 2015 May 7;7. doi: 10.1371/currents.outbreaks.b497624d7043b1aecfbfd3dfda3e344a. PubMed PMID: 26052471; PubMed Central PMCID: PMC4455058.
4. Liu F, Enanoria WT, Zipprich J, Blumberg S, Harriman K, **Ackley SF**, Wheaton WD, Allpress JL, Porco TC. The role of vaccination coverage, individual behaviors, and the public health response in the control of measles epidemics: an agent-based simulation for California. *BMC Public Health*. 2015 May 1;15:447. doi: 10.1186/s12889-015-1766-6. PubMed PMID: 25928152; PubMed Central PMCID: PMC4438575.

3. Gao D, Amza A, Nassirou B, Kadri B, Sippl-Swezey N, Liu F, **Ackley SF**, Lietman TM, Porco TC. Optimal seasonal timing of oral azithromycin for malaria. *Am J Trop Med Hyg.* 2014 Nov;91(5):936-942. doi: 10.4269/ajtmh.13-0474. Epub 2014 Sep 15. PubMed PMID: 25223942; PubMed Central PMCID: PMC4228890.
2. O'Brien KS, Blumberg S, Enanoria WT, **Ackley S**, Sippl-Swezey N, Lietman TM. Antibiotic use as a tragedy of the commons: a cross-sectional survey. *Comput Math Methods Med.* 2014;2014:837929. doi: 10.1155/2014/837929. Epub 2014 Jan 22. PubMed PMID: 24587818; PubMed Central PMCID: PMC3920666.
1. DeFlores LP, Ganim Z, **Ackley SF**, Chung HS, Tokmakoff A. The anharmonic vibrational potential and relaxation pathways of the amide I and II modes of N-methylacetamide. *J Phys Chem B.* 2006 Sep 28;110(38):18973-80. doi: 10.1021/jp0603334. PubMed PMID: 16986892.

Non-Peer-Reviewed Publications

1. **Ackley SF** Glymour MM. Comment on "Effect of reduction in brain amyloid levels on change in cognitive and functional decline in randomized clinical trials: An updated instrumental variable meta-analysis." *Alzheimer's & Dementia: the Journal of the Alzheimer's Association.* 2022 Nov 16.
2. Winter K, Klein NP, **Ackley S**, Cherry JD. Comment on "The impact of past vaccination coverage and immunity on pertussis resurgence". *Sci Transl Med.* 2018 Dec 19;10(472). doi: 10.1126/scitranslmed.aau0548. PubMed PMID: 30567926.
3. **Ackley, S.F.** "Construction and characterization of a universally tunable modulator." Massachusetts Institute of Technology, 2008.

Selected Talks, Oral Presentations, and Podcast

S. F. Ackley. *Evaluating the Presence of a Physiologic Ceiling in Amyloid Trajectories: Insights from the Sampled Iterative Local Approximation (SILA) Algorithm and Simulations.* Alzheimer's Imaging Consortium, AAIC. July 2025.

S. F. Ackley. *Reanalysis of the A4 Study to Formally Evaluate Amyloid Removal as a Surrogate for Cognitive Decline* MELODEM. June 2025.

S. F. Ackley. *Contextualizing Results from Trials Anti-Amyloid Antibody Drugs: A Data- and Simulation-Based Crosswalk from Cognitive Change to Dementia Hazard Ratios.* MELODEM. June 2023.

Guest hosts Michelle Caunca, MD, PhD, and **Sarah Ackley, PhD.** Free Associations Podcast, September 2021.

S. F. Ackley. *Instrumental variable meta-analysis of the effect of systolic blood pressure reduction on cognitive change: Evidence from randomized trials antihypertensive therapies.* Alzheimer's Association International Conference. July 2021.

S. F. Ackley. *Does amyloid-beta reduction improve cognitive outcomes? Integrated evidence from randomized trials of amyloid targeting therapies.* Society for Epidemiologic Research. December 2020. & Applied Biomath Conference. April 2021.

S. F. Ackley. *Assessing the Utility of a Smart Thermometer and Mobile Application as a Surveillance Tool for Influenza and Influenza-Like Illness.* MIDAS Meeting. May 2018.

S. F. Ackley. *Comparing Exponential, Powerlaw, and Lognormal Distributions for Predicting Vaccine-Preventable Disease Incidence Pre- and Post-Control.* Society for Epidemiologic Research Annual Meeting. June 2017.

S. F. Ackley. *A Branching Process Analysis of Measles in California: Strain Specific Differences and Lessons from the Disneyland Outbreak.* MIDAS Meeting. May 2016.

S. F. Ackley. *Causal Diagramming with Compartmental Model Diagrams: Illustrating a Parametric Alternative to DAGs.* Society for Epidemiologic Research Annual Meeting. June 2015.

S. F. Ackley. *Development of a Novel Method to Estimate Tsetse Fly Mortality.* National University of Science and Technology, Bulawayo, Zimbabwe, Biology Seminar Series. August, 2014. & South African Centre for Epidemiologic Analysis, Seminar Series. July 2014.

R Package

Ackley, S. F., & Gantenberg, J. (2025). cogxwalkr: Crosswalk Cognitive Measures (R package version 0.0.0.9000).

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