

AARON WOLFE SCHEFFLER

Department of Epidemiology & Biostatistics
University of California, San Francisco
550 16th Street, San Francisco, CA 94158

tel: (415) 476-2300
web: ucsf.profile.com/aaron.scheffler
email: aaron.scheffler@ucsf.edu

Education

2019	Biostatistics, University of California, Los Angeles	Ph.D.
2015	Biostatistics, University of California, Los Angeles	M.S.
2011	Biochemistry, Columbia University	B.A.

Employment

Current

2026-present	Associate Professor in Residence, Department of Epidemiology & Biostatistics, UCSF
2021-present	Faculty Member, Computational Precision Health, UCSF & UC Berkeley
2019-present	Faculty Member, Bakar Computational Health Sciences Institute, UCSF
2019-present	Faculty Member, Center of Intelligent Imaging, UCSF
2019-2026	Assistant Professor in Residence, Department of Epidemiology & Biostatistics, UCSF

Previous

2015-2019	Graduate Student Researcher, Department of Biostatistics, UCLA
2014-2016	Graduate Student Researcher, Semel Institute, UCLA
2011-2013	Researcher, Healthy Communities Institute, Berkeley, CA

Research Interests

Disease Progression Models; Multimodal Neuroimaging; Functional Data Analysis; Bayesian Data Analysis; High-Dimensional Structured Data

Research Publications

Published: methodology

- [1] Guhaniyogi, R., & **Scheffler**, A. W. (2025). "Sketching in high-dimensional regression with big data using gaussian scale mixture priors." *Journal of Machine Learning Research*, 26(271), 1–28.
- [2] Gutierrez, R., **Scheffler**, A. W., Guhaniyogi, R., Gorno-Tempini, M. L., Mandelli, M. L., & Battistella, G. (2025). "Multi-object data integration in the study of primary progressive aphasia." *The annals of applied statistics*, 19(4), 3282.
- [3] Gutierrez, R., **Scheffler**, A. W., & Guhaniyogi, R. (2024). "A bayesian covariance based clustering for high-dimensional tensors." *Technometrics (accepted)*.
- [4] Jin, H., Kim, M.-O., **Scheffler**, A. W., & Jiang, F. (2023). "Bayesian adaptive design for covariate-adaptive historical control information borrowing." *Statistics in Medicine*, 42(29), 5338–5352.

Updated: July 28, 2026

- [5] Campos, E., Wolfe **Scheffler**, A. W., Telesca, D., Sugar, C., DiStefano, C., Jeste, S., Levin, A. R., Naples, A., Webb, S. J., Shic, F., et al. (2022). "Multilevel hybrid principal components analysis for region-referenced functional electroencephalography data." *Statistics in Medicine*, 41(19), 3737–3757.
- [6] **Scheffler**, A. W. W., Dickinson, A., DiStefano, C., Jeste, S., & Şentürk, D. (2022). "Covariate-adjusted hybrid principal components analysis for region-referenced functional eeg data." *Statistics and its interface*, 15(2), 209.
- [7] **Scheffler**, A. W., Telesca, D., Li, Q., Sugar, C. A., Distefano, C., Jeste, S., & Şentürk, D. (2020). "Hybrid principal components analysis for region-referenced longitudinal functional eeg data." *Biostatistics*, 21(1), 139–157.
- [8] **Scheffler**, A. W. W., Telesca, D., Sugar, C. A., Jeste, S., Dickinson, A., DiStefano, C., & Şentürk, D. (2019). "Covariate-adjusted region-referenced generalized functional linear model for eeg data." *Statistics in medicine*, 38(30), 5587–5602.
- [9] **Scheffler**, A. W., Hasenstab, K., Telesca, D., Sugar, C. A., Jeste, S., DiStefano, C., & Şentürk, D. (2017). "A multi-dimensional functional principal components analysis of eeg data." *Biometrics*, 73(3), 999–1009.

Submitted or working: methodology

- [1] Jeon, Y., **Scheffler**, A. W., & Guhaniyogi, R. (2026). "Uncertainty-aware neural multivariate geostatistics." *arXiv preprint arXiv:2602.16146*.
- [2] Wu, R., Tosun, D., Hausle, I., Heston, M., & **Scheffler**, A. W. (2026). "Bayesian threshold-aligned joint disease progression modeling for alzheimer's disease." *arXiv preprint arXiv:2606.18139*.
- [3] Jeon, Y., Guhaniyogi, R., & **Scheffler**, A. W. (2025). "Deep generative modeling with spatial and network images: An explainable ai (xai) approach." *arXiv preprint arXiv:2505.12743*.
- [4] Jeon, Y., Guhaniyogi, R., **Scheffler**, A. W., Francom, D., & Pasqualini, D. (2025). "Interpretable deep neural network for modeling functional surrogates." *arXiv preprint arXiv:2503.20528*.
- [5] Lei, B., Guhaniyogi, R., Chandra, K., **Scheffler**, A. W., & Mallick, B. (2024). "Inva: Integrative variational autoencoder for harmonization of multi-modal neuroimaging data." *arXiv preprint arXiv:2402.02734*.

Published: collaborative

- [1] Archibeck, E., Harris, N., Zheng, P., **Scheffler**, A. W., Mehling, W., O'Neill, C., Lotz, J., O'Connell, G., Bailey, J. F., Investigators, R., et al. (2026). "Comparing movement patterns and physical function between chronic low back pain patients with nociplastic and nociceptive pain categories." *JOR spine*, 9(1), e70166.
- [2] Eslami-Amirabadi, M., **Scheffler**, A. W., Kramer, J. H., Gorno-Tempini, M. L., Seeley, W. W., Rosen, H., Rabinovici, G. D., Miller, B. L., Chiong, W., & Rankin, K. P. (2026). "Additive effect of patient anosognosia and theory of mind deficit on dementia caregiver distress." *Frontiers in Neurology*, 17, 1724172.
- [3] Espinosa da Silva, C., Scheffler, A., Fatch, R., Muyindike, W., Emenyonu, N., Adong, J., Chamie, G., Ngabirano, C., Kekibiina, A., Tumwegamire, A., et al. (2026). "Lab tests can be used to predict phosphatidylethanol-measured high-risk alcohol use among people with hiv: A proof-of-concept using machine learning." *Alcohol and Alcoholism*, 61(1), agaf078.
- [4] Nagata, J. M., Bao, K., Murray, S. B., Nedelec, P., Richardson, R. A., Nayak, S., Li, E. J., Wong, J. H., Muller-Oehring, E. M., **Scheffler**, A. W., et al. (2026). "Social media use and early adolescent brain structure: Findings from the adolescent brain cognitive development (abcd) study." *NeuroImage*, 121860.

- [5] Nagata, J. M., Li, E. J., Huang, O. H., Ricklefs, C., Ganson, K. T., Testa, A., **Scheffler**, A. W., Sugrue, L., & Baker, F. C. (2026). "Cyberbullying and sleep disturbances in adolescents: An updated evidence review." *Academic Pediatrics*, 26(1), 103149.
- [6] Ortiz, B. L., **Scheffler**, A. W. W., Callahan, P., Shdo, S., Rijpma, M. G., Antoniou, R., Hirst, R., Brown, L. M., Rabinovici, G., Rosen, H. J., et al. (2026). "Unveiling discrepancies in depression detection among persons with dementia: A comparative analysis of caregiver and self-report." *Journal of Alzheimer's Disease*, 110(3), 1315–1327.
- [7] Weigand, A. J., Tsoy, E., Atkins, K. J., Jarrott, S., Farias, S. T., **Scheffler**, A. W. W., Brailow, T., Rankin, K. P., Kramer, J. H., & Possin, K. L. (2026). "Classifying cognitive status with tabcat match and uds executive function tests." *Alzheimer's & Dementia*, 22(3), e71299.
- [8] Archibeck, E., Strigo, I., **Scheffler**, A. W., Torres-Espin, A., Khattab, K., Silvestros, P., Matthew, R., Regan, C., Hodges, P., O'Neill, C., et al. (2025). "Sex-based differences in biomechanical function for chronic low back pain and how it relates to pain experience." *European Spine Journal*, 34(6), 2377–2386.
- [9] Bernardo, D., Kim, J., Cornet, M.-C., Numis, A. L., **Scheffler**, A. W., Rao, V. R., Amorim, E., & Glass, H. C. (2025). "Machine learning for forecasting initial seizure onset in neonatal hypoxic–ischemic encephalopathy." *Epilepsia*, 66(1), 89–103.
- [10] Breithaupt, A. G., Sideman, A. B., Goode, C., Hill-Sakurai, L., Premkumar, M., **Scheffler**, A. W. W., Chodos, A., Tsoy, E., Rankin, K. P., Kramer, J. H., et al. (2025). "Enhancing early detection of cognitive impairment in primary care with the tabcat-bha." *Alzheimer's & Dementia*, 21(7), e70437.
- [11] Cornet, M.-C., Kuzniewicz, M. W., **Scheffler**, A. W. W., Garabedian, C., Gaw, S. L., & Wu, Y. W. (2025). "Maternal fever during labor and the risk of neonatal encephalopathy: Duration and magnitude of hyperthermia." *American journal of obstetrics and gynecology*.
- [12] Cornet, M.-C., Numis, A. L., Wusthoff, C. J., Bernardo, D., Mietzsch, U., Thomas, C., Nataraajan, N., Ahmad, K. A., **Scheffler**, A. W., Juul, S. E., et al. (2025). "Automated eeg background analysis and 2-year outcomes in neonatal hypoxic-ischemic encephalopathy." *JAMA Network Open*, 8(12), e2548321.
- [13] Gano, D., Kuzniewicz, M. W., Montoya-Williams, D., **Scheffler**, A. W., Fuentes-Afflick, E., Wu, Y. W., & Cornet, M.-C. (2025). "Maternal social determinants of health and risk of perinatal hypoxic-ischemic encephalopathy." *JAMA neurology*, 82(8), 859–866.
- [14] George, E., Liu, J., Martin, M., Kuang, A., **Scheffler**, A. W., Christopher, L., Xu, D., McQuillen, P., & Peyvandi, S. (2025). "Effect of fetal brain oxygenation and volume on brain maturation and neurodevelopmental outcomes in congenital heart disease." *Radiology*, 317(1), e250651.
- [15] Hahn, J. A., Kane, J. C., Fatch, R., da Silva, C. E., Emenyonu, N. I., **Scheffler**, A. W., Chirayil, P., So-Armah, K., Kahler, C. W., Conroy, A. A., et al. (2025). "Alcohol interventions for persons with hiv: Meta-analysis of randomized controlled trials using phosphatidylethanol and self-report." *Drug and alcohol dependence*, 112879.
- [16] Joyce, S., Belmont, C., **Scheffler**, A. W. W., Ravi, K., Kim, H., Rubin-Saika, N., Elises, M., Soto, A., Mahesh, P. A., Chambers, H., et al. (2025). "Trends in uropathogenic escherichia coli genotype and antimicrobial resistance from 2019 to 2022 in a san francisco public hospital network." *Open Forum Infectious Diseases*, 12(9), ofaf579.
- [17] Khattab, K., Dziesinski, L. K., Ornowski, J., Zhou, J., Bonnheim, N. B., Crawford, R., **Scheffler**, A. W., Fields, A. J., O'Neill, C. W., Lotz, J. C., et al. (2025). "Spatial patterns of fat within the deep multifidus as a biomarker for chronic low back pain." *The Spine Journal*.
- [18] Khattab, K., Dziesinski, L. K., Zhou, J., **Scheffler**, A. W., Fields, A. J., O'Neill, C. W., Lotz, J. C., & Bailey, J. F. (2025). "Chronicity and physical activity levels independently associate

- with spatial patterns of multifidus fat infiltration in chronic low back pain patients.” *European Spine Journal*, 1–8.
- [19] Nagata, J. M., Wong, J. H., Kim, K. E., Richardson, R. A., Nayak, S., Potes, C., Rauschecker, A. M., **Scheffler**, A. W., Sugrue, L. P., Baker, F. C., et al. (2025). “Social media use trajectories and cognitive performance in adolescents.” *JAMA*, 334(21), 1948–1950.
 - [20] Ramalingam, K., Li, S., McKinley, M., Vanderpool, R. C., Nash, S. H., Shariff-Marco, S., **Scheffler**, A. W., Van Blarigan, E. L., & DeRouen, M. C. (2025). “Awareness and utilization of genetic testing for hereditary cancers in cancer survivors: A cross-sectional 2021 hints-seer study.” *Journal of cancer survivorship*, 1–9.
 - [21] Rodriguez Almaraz, E., Guerra, G. A., Al-Adli, N. N., Young, J. S., Dada, A., Quintana, D., Taylor, J. W., Oberheim Bush, N. A., Clarke, J. L., Butowski, N. A., et al. (2025). “Longitudinal profiling of idh-mutant astrocytomas reveals acquired ras-mapk pathway mutations associated with inferior survival.” *Neuro-Oncology Advances*, 7(1), vdaf024.
 - [22] Shih, J. J., Otero, M., Gandhi, S., Talbott, J., Zhou, B., Vitt, J. R., Singhal, N. S., Randazzo, D., **Scheffler**, A. W., Hemphill, J. C., et al. (2025). “Neurological injury in comatose patients following substance-use-related out-of-hospital cardiac arrest: A retrospective cohort study in a safety net hospital.” *Neurocritical Care*, 43(1), 27–35.
 - [23] Stewart, C. C., Reider, L., Thompson, A. R., **Scheffler**, A. W. W., Namiri, N. K., Agel, J., O’Toole, R. V., Karunakar, M. A., Potter, B. K., Bosse, M. J., et al. (2025). “Time-dependent limb assessment of high-energy lower extremity trauma improves prediction of amputation: A secondary analysis of the outlet study.” *JBJS Open Access*, 10(4), e25.
 - [24] Ulugut, H., Mandelli, M. L., Gilioli, A., Ezzes, Z., Pillai, J., Baquirin, D., Wallman-Jones, A., Gerenza, A., Palser, E. R., **Scheffler**, A. W., et al. (2025). “Network changes associated with right anterior temporal lobe atrophy: Insight into unique symptoms.” *Brain Communications*, 7(4), fcaf251.
 - [25] Vargas-Calixto, J., Wu, Y. W., Kuzniewicz, M., Cornet, M.-C., Forquer, H., Gerstley, L., **Scheffler**, A. W. W., Warrick, P. A., & Kearney, R. E. (2025). “Time-dependent association between cardiocographic features and hypoxic-ischemic encephalopathy.” *IEEE Access*, 13, 87562–87581.
 - [26] Zheng, P., **Scheffler**, A. W., Ewing, S., Hue, T. F., Berkeley, S. J., Morshed, S., Mehling, W., Torres-Espin, A., Galivanche, A., Lotz, J., et al. (2025). “Chronic low back pain causal risk factors identified by mendelian randomization: A cross-sectional cohort analysis.” *The Spine Journal*, 25(6), 1154–1166.
 - [27] Ziegeler, K., Gensler, L. S., Link, T. M., Roach, C., **Scheffler**, A. W. W., Fields, A. J., Bonenheim, N., Torres-Espin, A., Lotz, J. C., Hue, T., et al. (2025). “Association between mri findings and inflammatory symptoms in non-specific chronic low back pain.” *European Spine Journal*, 1–9.
 - [28] Cornet, M.-C., Kuzniewicz, M. W., **Scheffler**, A. W. W., Gaw, S. L., Yeh, P., Newman, T. B., & Wu, Y. W. (2024). “Epidural analgesia during labor and neonatal hypoxic-ischemic encephalopathy.” *JAMA Network Open*, 7(9), e2433730.
 - [29] Cornet, M.-C., Wu, Y. W., Forquer, H., Avalos, L. A., Sriram, A., **Scheffler**, A. W. W., Newman, T. B., & Kuzniewicz, M. W. (2024). “Maternal treatment with selective serotonin reuptake inhibitors during pregnancy and delayed neonatal adaptation: A population-based cohort study.” *Archives of Disease in Childhood-Fetal and Neonatal Edition*, 109(3), 294–300.
 - [30] Ramalingam, K., **Scheffler**, A. W., Van Blarigan, E., Li, S., Vanderpool, R. C., Nash, S. H., Shariff-Marco, S., Gomez, S., & Hebert-DeRouen, M. (2024). “Awareness and use of genetic

- testing among cancer survivors in the united states: A hints-seer study." *Cancer Research*, 84(6_Supplement), 768–768.
- [31] Sokolowski, A., Brown, J. A., Roy, A. R., Cryns, N., **Scheffler**, A. W., Hardy, E. G., Datta, S., Seeley, W. W., Sturm, V. E., Miller, B. L., et al. (2024). "Structural and functional correlates of olfactory reward processing in behavioral variant frontotemporal dementia." *Cortex*, 181, 47–58.
 - [32] Vargas-Calixto, J., Wu, Y. W., Kuzniewicz, M., Cornet, M., Forquer, H., Gerstley, L., **Scheffler**, A. W., Hamilton, E., Warrick, P., & Kearney, R. (2024). "Time-dependent association between fetal heart rate features and hypoxic-ischemic encephalopathy." *Available at SSRN 4808359*.
 - [33] Addante, A., Raymond, W., Gitlin, I., Charbit, A., Orain, X., **Scheffler**, A. W. W., Kuppe, A., Duerr, J., Daniltchenko, M., Drescher, M., et al. (2023). "A novel thiol-saccharide mucolytic for the treatment of muco-obstructive lung diseases." *European Respiratory Journal*, 61(5).
 - [34] Calabrese, E., Wu, Y., **Scheffler**, A. W. W., Wisnowski, J. L., McKinstry, R. C., Mathur, A., Glass, H. C., Comstock, B. A., Heagerty, P. J., Gillon, S., et al. (2023). "Correlating quantitative mri-based apparent diffusion coefficient metrics with 24-month neurodevelopmental outcomes in neonates from the heal trial." *Radiology*, 308(3), e223262.
 - [35] Cornet, M.-C., Kuzniewicz, M., **Scheffler**, A. W., Forquer, H., Hamilton, E., Newman, T. B., & Wu, Y. W. (2023). "Perinatal hypoxic-ischemic encephalopathy: Incidence over time within a modern us birth cohort." *Pediatric Neurology*, 149, 145–150.
 - [36] Cornet, M.-C., Wu, Y. W., Forquer, H., Avalos, L. A., Sriram, A., **Scheffler**, A. W. W., Newman, T. B., & Kuzniewicz, M. W. (2023). "Maternal treatment with selective serotonin reuptake inhibitors during pregnancy and delayed neonatal adaptation: A population-based cohort study." *Archives of Disease in Childhood-Fetal and Neonatal Edition*.
 - [37] Gibson, D., Ravi, A., Rodriguez, E., Chang, S., Oberheim Bush, N., Taylor, J., Clarke, J., Solomon, D., **Scheffler**, A. W., Witte, J., et al. (2023). "Quantitative analysis of mgmt promoter methylation in glioblastoma suggests nonlinear prognostic effect." *Neuro-Oncology Advances*, 5(1), vdad115.
 - [38] Kane, J. C., Allen, I., Fatch, R., **Scheffler**, A. W., Emenyonu, N., Puryear, S. B., Chirayil, P., So-Armah, K., Kahler, C. W., Magidson, J. F., et al. (2023). "Efficacy of alcohol reduction interventions among people with hiv as evaluated by self-report and a phosphatidylethanol (peth) outcome: Protocol for a systematic review and individual participant data meta-analysis." *BMJ open*, 13(6), e070713.
 - [39] Li, Y., **Scheffler**, A. W., Barkovich, A. J., Chang, T., Chu, C. J., Massey, S. L., Abend, N. S., Lemmon, M. E., Thomas, C., Numis, A., et al. (2023). "Neonatal brain mri and short-term outcomes after acute provoked seizures." *Journal of Perinatology*, 43(11), 1392–1397.
 - [40] Mandelli, M. L., Lorca-Puls, D. L., Lukic, S., Montembeault, M., Gajardo-Vidal, A., Licata, A., **Scheffler**, A. W., Battistella, G., Grasso, S. M., Bogley, R., et al. (2023). "Network anatomy in logopenic variant of primary progressive aphasia." *Human Brain Mapping*.
 - [41] Wilson, L., Zheng, P., Ionova, Y., Denham, A., Yoo, C., Ma, Y., Greco, C. M., Hanmer, J., Williams, D. A., Hassett, A. L., et al. (2023). "Caper: Patient preferences to inform non-surgical treatment of chronic low back pain: A discrete-choice experiment." *Pain Medicine*, pna038.
 - [42] Bailey, J. F., Nyayapati, P., Johnson, G. T., Dziesinski, L., **Scheffler**, A. W. W., Crawford, R., Scheuring, R., O'Neill, C. W., Chang, D., Hargens, A. R., et al. (2022). "Biomechanical changes in the lumbar spine following spaceflight and factors associated with postspaceflight disc herniation." *The Spine Journal*, 22(2), 197–206.

- [43] Cornet, M., Forquer, H., Scheffler, A., Yeaton-Massey, A., Newman, T., Kuzniewicz, M., & Wu, Y. (2022). "Neonatal encephalopathy following selective serotonin reuptake inhibitor exposure in the third trimester of pregnancy: A population-based study." *JOURNAL OF INVESTIGATIVE MEDICINE*, 70(1), 168–168.
- [44] Cornet, M., Kuzniewicz, M., Forquer, H., Hamilton, E., Newman, T., Scheffler, A., Murtha, A., & Wu, Y. (2022). "Neonatal encephalopathy treated with therapeutic hypothermia: Is absence of cord blood acidosis a marker for causes other than hypoxic-ischemic encephalopathy (hie)?" *ANNALS OF NEUROLOGY*, 92, S133–S133.
- [45] Cummins, D. D., Callahan, M., **Scheffler**, A. W., & Theologis, A. A. (2022). "5-year revision rates after elective multilevel lumbar/thoracolumbar instrumented fusions in older patients: An analysis of state databases." *Journal of the American Academy of Orthopaedic Surgeons*, 30(10), 476–483.
- [46] Halvorson, R. T., Castillo, F. T., Ahamed, F., Khattab, K., **Scheffler**, A. W., Matthew, R. P., Lotz, J., Vail, T. P., Feeley, B. T., & Bailey, J. F. (2022). "Point-of-care motion capture and biomechanical assessment improve clinical utility of dynamic balance testing for lower extremity osteoarthritis." *PLOS Digital Health*, 1(7), e0000068.
- [47] Li, Y., Wisnowski, J. L., Chalak, L., Mathur, A. M., McKinstry, R. C., Licon, G., Mayock, D. E., Chang, T., Van Meurs, K. P., Wu, T.-W., et al. (2022). "Mild hypoxic-ischemic encephalopathy (hie): Timing and pattern of mri brain injury." *Pediatric research*, 92(6), 1731–1736.
- [48] Peluso, M. J., Kelly, J. D., Lu, S., Goldberg, S. A., Davidson, M. C., Mathur, S., Durstenfeld, M. S., Spinelli, M. A., Hoh, R., Tai, V., et al. (2022). "Persistence, magnitude, and patterns of postacute symptoms and quality of life following onset of sars-cov-2 infection: Cohort description and approaches for measurement." *Open forum infectious diseases*, 9(2), ofab640.
- [49] Weidhaas, J., Marco, N., **Scheffler**, A. W. W., Kalbasi, A., Wilenius, K., Rietdorf, E., Gill, J., Heilig, M., Desler, C., Chin, R. K., et al. (2022). "Germline biomarkers predict toxicity to anti-pd1/pdl1 checkpoint therapy." *Journal for immunotherapy of cancer*, 10(2).
- [50] Bach, A. M., Fang, A. Y., Bonifacio, S., Rogers, E. E., **Scheffler**, A. W., Partridge, J. C., Xu, D., Barkovich, A. J., Ferriero, D. M., Glass, H. C., et al. (2021). "Early magnetic resonance imaging predicts 30-month outcomes after therapeutic hypothermia for neonatal encephalopathy." *The Journal of Pediatrics*, 238, 94–101.
- [51] Cornet, M., Forquer, H., Scheffler, A., Yeaton-Massey, A., Newman, T., Kuzniewicz, M., & Wu, Y. (2021). "Neonatal encephalopathy following ssri exposure in the third trimester of pregnancy: A population-based study." *ANNALS OF NEUROLOGY*, 90, S30–S31.
- [52] Gibson, D., Ravi, A., Rodriguez, E., Chang, S., Bush, N., Taylor, J., Clarke, J., Solomon, D., **Scheffler**, A. W., Witte, J., et al. (2021). "Ngma-6. quantitative mgmt promoter methylation index indicates non-linear, prognostic effect in glioblastoma." *Neuro-Oncology Advances*, 3(Supplement_2), ii5–ii5.
- [53] Jordan, K. M., Lauricella, M., Licata, A. E., Sacco, S., Asteggiano, C., Wang, C., Sudarsan, S. P., Watson, C., **Scheffler**, A. W. W., Battistella, G., et al. (2021). "Cortically constrained shape recognition: Automated white matter tract segmentation validated in the pediatric brain." *Journal of Neuroimaging*, 31(4), 758–772.
- [54] Tran, X. A., McDonald, N., Dickinson, A., **Scheffler**, A. W., Frohlich, J., Marin, A., Kure Liu, C., Nosco, E., Şentürk, D., Dapretto, M., et al. (2021). "Functional connectivity during language processing in 3-month-old infants at familial risk for autism spectrum disorder." *European Journal of Neuroscience*, 53(5), 1621–1637.
- [55] Levin, A. R., Naples, A. J., **Scheffler**, A. W. W., Webb, S. J., Shic, F., Sugar, C. A., Murias, M., Bernier, R. A., Chawarska, K., Dawson, G., et al. (2020). "Day-to-day test-retest reliability

- of eeg profiles in children with autism spectrum disorder and typical development." *Frontiers in integrative neuroscience*, 14, 21.
- [56] McDonald, N. M., Senturk, D., **Scheffler**, A. W., Brian, J. A., Carver, L. J., Charman, T., Chawarska, K., Curtin, S., Hertz-Piccioto, I., Jones, E. J., et al. (2020). "Developmental trajectories of infants with multiplex family risk for autism: A baby siblings research consortium study." *JAMA neurology*, 77(1), 73–81.
 - [57] Saravanapandian, V., Frohlich, J., Hipp, J. F., Hyde, C., **Scheffler**, A. W. W., Golshani, P., Cook, E. H., Reiter, L. T., Senturk, D., & Jeste, S. S. (2020). "Properties of beta oscillations in dup15q syndrome." *Journal of Neurodevelopmental Disorders*, 12(1), 1–15.
 - [58] Swendeman, D., Fehrenbacher, A. E., Roy, S., Ray, P., Sumstine, S., **Scheffler**, A. W., Das, R., & Jana, S. (2020). "A pilot randomized controlled trial (rct) of daily versus weekly interactive voice response calls to support adherence among antiretroviral treatment patients in india." *Mhealth*, 6.
 - [59] Levin, A. R., Naples, A. J., **Scheffler**, A. W. W., Webb, S. J., Shic, F., Sugar, C. A., Murias, M., Bernier, R. A., Chawarska, K., Dawson, G., et al. (2019). "Within visit test-retest reliability of eeg profiles in children with autism spectrum disorder and typical development." *bioRxiv*, 834697.
 - [60] Dickinson, A., DiStefano, C., Lin, Y.-Y., **Scheffler**, A. W. W., Senturk, D., & Jeste, S. S. (2018). "Interhemispheric alpha-band hypoconnectivity in children with autism spectrum disorder." *Behavioural brain research*, 348, 227–234.
 - [61] Rotheram-Fuller, E. J., Tomlinson, M., **Scheffler**, A. W., Weichle, T. W., Hayati Rezvan, P., Comulada, W. S., & Rotheram-Borus, M. J. (2018). "Maternal patterns of antenatal and postnatal depressed mood and the impact on child health at 3-years postpartum." *Journal of consulting and clinical psychology*, 86(3), 218.
 - [62] Arnold, E. M., Desmond, K. A., Rotheram-Borus, M. J., **Scheffler**, A. W., Comulada, W. S., Johnson, M. O., Kelly, J. A., & Group, H. L. P. (2017). "Drug use and emotional distress differentiate unstably-versus stably-housed adults living with hiv who engage in unprotected sex." *Journal of health psychology*, 22(3), 302–313.
 - [63] Rotheram-Borus, M. J., Tomlinson, M., **Scheffler**, A. W., Harris, D. M., & Nelson, S. (2017). "Adjustment of a population of south african children of mothers living with/and without hiv through three years post-birth." *AIDS and Behavior*, 21, 1601–1610.
 - [64] Tomlinson, M., Rotheram-Borus, M., Scheffler, A., & Le Roux, I. (2017). "Antenatal depressed mood and child cognitive and physical growth at 18-months in south africa: A cluster randomised controlled trial of home visiting by community health workers." *Epidemiology and psychiatric sciences*, 1–10.
 - [65] Tomlinson, M., Rotheram-Borus, M. J., Le Roux, I. M., Youssef, M., Nelson, S. H., **Scheffler**, A. W., Weiss, R. E., O'Connor, M., & Worthman, C. M. (2016). "Thirty-six-month outcomes of a generalist paraprofessional perinatal home visiting intervention in south africa on maternal health and child health and development." *Prevention Science*, 17(8), 937–948.
 - [66] Rotheram-Borus, M. J., Tomlinson, M., **Scheffler**, A. W., & Le Roux, I. M. (2015). "Re-engagement in hiv care among mothers living with hiv in south africa over 36 months post-birth." *AIDS (London, England)*, 29(17), 2361.
 - [67] Swendeman, D., Ramanathan, N., Baetscher, L., Medich, M., **Scheffler**, A. W., Comulada, W. S., & Estrin, D. (2015). "Smartphone self-monitoring to support self-management among people living with hiv: Perceived benefits and theory of change from a mixed-methods, randomized pilot study." *Journal of acquired immune deficiency syndromes (1999)*, 69(0 1), S80.

Book chapters

- [1] Senturk, D., & **Scheffler**, A. W. (2023). "Modeling longitudinal trends in event-related potentials."

Teaching

UCSF | Department of Epidemiology & Biostatistics

2023 - present *BIOSTAT 208: Biostatistical Methods for Clinical Research II*
Course Director and Lecturer
 This is a second course in biostatistics, focusing on multi-predictor variable methods, including multiple linear and multiple logistic regression. Emphasis is on the practical and proper use of statistical methodology and its interpretation.
Evaluation* (0-5), mean:
 2025, 4.61
 2024, 4.66
 2023, 4.87

UCSF | School of Medicine

2020 - present *Core Inquiry Curriculum 121A-C: Epidemiology, Biostatistics, and Population Sciences (EBPS) Curriculum*
Lecturer
 EBPS comprises tools that all Domains of Understanding rely upon, allowing for the interpretation of data and for researchers and clinicians to test hypotheses of complex questions.
Evaluation* (0-5), mean (sd):
 2022, 121A 4.0 (0.89)
 2021, 121A 4.33 (0.87); 121B 3.98 (0.82); 121C 4.31 (0.64)
 2020, 121B 3.95 (0.79)

UCSF | School of Pharmacy

2023 - 2024 *PharmIS 110, 111, 112: Epidemiology, Biostatistics, and Population Sciences (EBPS) Curriculum*
Lecturer
 Three lectures per year covering introductory biostatistics, regression analysis, and meta-analysis for first-year pharmacy students.

UCSF | Department of Epidemiology & Biostatistics

2019 - 2023 *BIOSTAT 202: Opportunities and Challenges of Complex Biomedical Data*
Course Director and Lecturer
 This course introduces the opportunities and challenges of using biological and health-related “big data” to perform biomedical research.
Evaluation* (0-5), mean (sd):
 2023, 4.97 (0.18)
 2022, 4.65 (0.63)
 2021, 4.95 (0.22)
 2020 4.93 (0.26)
 2019, 4.85 (0.37)

*Evaluations presented when available.

Grants**Ongoing: PI/MPI**

R01NS131604 (**MPI: Scheffler (contact), Guhaniyogi**) 04/01/2023 – 03/31/2028
 NIH/NINDS \$1,530,710

Title: Bayesian Object-Oriented Modeling of Multi-Modal Imaging Data

Clinical researchers collect brain images from multiple modalities to enhance diagnosis and treatment of neurodegenerative disorders (NDs), yet their impact is constrained due to a lack statistical methods that model information both within and across images. This proposal develops a new Bayesian framework to address the theoretical and computational challenges of jointly modeling structural and network brain images, exploiting their linkage to advance the study of ND. The goal is to provide imaging statisticians and practitioners with a set of inferential tools that harness the potential of existing multimodal imaging data to improve the study of cognitive theory, disease progression, and biomarker development.

Role: Principal Investigator

K12TR006125-01 (**MPI: Scheffler, Ackerman, Sarkar (contact)**) 07/2026 – 06/2031
 NIH/NCATS \$5,014,334

Title: CTSA K12 Program at UCSF

The UCSF K Scholars Program is designed to train and support early-career faculty in advancing translational science through interdisciplinary research and innovative thinking. The program aims to cultivate independent researchers by offering specialized training, mentorship, and protected time for research in three critical domains: artificial intelligence (AI), learning health systems (LHS), and community engagement strategies.

Role: Multiple Principal Investigator / Associate Program Director for Biostatistics and AI

Completed: PI

NSF 2113581 (**PI: Scheffler**) 06/01/2022 – 05/31/2026
 NSF \$110,000

Title: Collaborative Research: Use of Random Compression Matrices For Scalable Inference in High Dimensional Structured Regressions

The two important aspects of modern statistical learning approaches in the era of complex and

high dimensional data are accuracy and scale in inference. To offer a general solution for this challenge, we propose approaches based on data compression using a small number of random linear transformations. Our approach either reduces large number of records corresponding to each variable using compression in which case it maintains feature interpretation for adequate inference, or, it reduces dimension of covariate vector for each sample using compression in which case the focus is only on prediction of the response. In either case, data compression facilitates drawing storage efficient, scalable and accurate Bayesian inference/prediction in presence of high dimensional data with sufficiently rich parametric/nonparametric regression models.

Role: Principal Investigator

UCSF CTSI 2001449 (**PI: Scheffler**)

06/2020 – 05/2021

UCSF Clinical and Translational Science Institute \$39,037

Title: Efficacy and Impact of Contact Tracing in San Francisco and Beyond: An Open-Source Computational Study Using Agent-Based Models

Role: Principal Investigator

Ongoing: Co-I

R01 NS125404 (Peyvandi) 12/01/2021 – 11/30/2026

NIH \$2,116,614

Title: The Risk of Acquired Neonatal Significant Brain Injury during Perinatal Transition in Congenital Heart Disease: TRANSIT CHD study

Role: Co-Investigator

R01 (Bailey) 06/2023 – 03/2028

NIH/NIAMS \$1,100,000

Title: Mechanistic Structure-function relationships for paraspinal muscle fat infiltration in Chronic Low Back Pain patients

Role: Co-Investigator

P01AG019724-21A1 (Gorno-Tempini) 08/2023 – 04/2028

NIH/NIA \$3,438,736

Title: Frontotemporal Dementia: Genes, Images, and Emotions

Role: Co-Investigator

2 P30 AG062422-06 (Rabinovici) 04/2024 – 03/2029

NIH/NIA \$14,489,692

Title: New Approaches to Dementia Heterogeneity

Role: Co-Investigator

R01HL165400 (McQuillen) 03/2023 – 02/2028

NIH/NHLBI \$2,727,645

Title: Brain Injury and Dysmaturation in Newborns with Congenital Heart Disease Born Preterm

Role: Co-Investigator

Completed: Co-I

R01 AG071756-01 (Lee) 07/01/2021 – 06/30/2026

NIH \$496,679

Title: Neurodevelopment in children from families with genetic frontotemporal dementia and Alzheimer's disease

Role: Co-Investigator

1 R01 AA 029962-01 (Hahn) 05/2022 – 02/2026

NIH/NIAAA \$1,123,777

Title: The Biomarkers for Alcohol/HIV Research (BAHR) Study

Role: Co-Investigator

KL2TR001870 (Grandis) 07/01/2021 – 06/30/2026

NIH-NCRR \$1,138,181

Title: Clinical and Translational Science Institute (K Scholars Program)

Role: K Scholars Mentor

R01AG059794 (Perry) 03/01/2019 – 03/05/2024

NIH \$2,455,805

Title: Reward processing in genetic frontotemporal dementia and mood disorders

Role: Co-Investigator

U19AR076727 (Lotz) 09/2019 – 08/2024

NIH/NIAMS \$18,209,811

Title: UCSF Core Center for Patient-centric Mechanistic Phenotyping in Chronic Low Back Pain

Role: Key Personnel / Analytics Core Co-Director

2RFINS050915 (Gorno-Tempini) 09/2022 – 08/2025

NIH \$2,913,465

Title: Primary Progressive Aphasia: Cognition, Anatomy and Progression

Role: Co-Investigator

R01HD099216-01A1 (Wu) 05/2020 – 04/2025

NIH/NICHHD \$1,778,443

Title: Maternal Antecedents and Electronic Fetal Monitoring in Term Asphyxia (MAESTRA)

Role: Co-Investigator

Presentations

Invited Presentations

2025	Statistical Methods in Imaging, Houston, TX
2025	International Society for the Study of the Lumbar Spine Annual Meeting, Atlanta, GA
2025	Departments of Biostatistics and Statistics Seminar Series, UMass-Amherst, MA
2024	International Conference on Computational and Methodological Statistics, London, UK
2024	Western North American Region of the International Biometric Society Meeting, Fort Collins, CO (June)
2023	International Conference on Computational and Methodological Statistics, London, UK
2022	International Conference on Computational and Methodological Statistics, London, UK
2022	Joint Statistical Meetings, Washington D.C.
2022	Western North American Region of the International Biometric Society, Virtual
2022	Statistical Methods in Imaging, Virtual
2021	International Conference on Computational and Methodological Statistics, Virtual
2021	New England Conference on Statistics, Virtual
2021	Joint Statistical Meetings, Virtual
2020	Statistical Learning and Data Science Section Meeting - ASA, Virtual
2020	International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, Virtual
2019	International Conference on Computational and Methodological Statistics, London, UK
2019	Department of Population Health, Langone Health, New York University
2019	Department of Biostatistics, Mailman School of Public Health, Columbia University
2019	Department of Epidemiology & Biostatistics, School of Medicine, University of California, San Francisco
2019	Department of Biostatistics, College of Global Public Health, New York University
2019	Department of Biostatistics, Rollins School of Public Health, Emory University
2019	Department of Biostatistics, School of Medicine, Vanderbilt University
2017	Western North American Region of the International Biometric Society Meeting, Santa Fe, NM (June)

Contributed Presentations

- | | |
|------|--|
| 2020 | Eastern North American Region of the International Biometric Society Meeting, Virtual (March) |
| 2019 | Eastern North American Region of the International Biometric Society Meeting, Philadelphia, PA (March) |
| 2019 | International Biometric Society Meeting, Barcelona, Spain (June) |
| 2018 | Eastern North American Region of the International Biometric Society Meeting, Atlanta, GA (March) |
| 2016 | Western North American Region of the International Biometric Society Meeting, Victoria, BC (July) |

Honors and Awards

- | | |
|------|--|
| 2024 | Dean's Apple for Teachers Award, University of California, San Francisco, School of Pharmacy |
| 2024 | Excellence in Teaching, University of California, San Francisco, Training in Clinical Research Program
<i>*Given to a single instructor each year</i> |
| 2019 | Carolbeth Korn Award for most outstanding graduating student of the Fielding School of Public Health, UCLA (\$10,000) |
| 2018 | Dissertation Year Fellowship, Graduate Division, UCLA (\$35,000) |
| 2017 | Graduate Research Mentorship, Graduate Division, UCLA (\$35,000) |
| 2016 | Best Student Paper, Western North American Region of the Int'l. Biometric Society (\$500) |
| 2016 | Graduate Summer Research Mentorship, Graduate Division, UCLA (\$6,000) |

Professional Memberships

- | | |
|--------------|--|
| 2016-present | Member, Western North American Region of the International Biometric Society |
| 2015-present | Member, American Statistical Association |

Editorial Service

Reviewer for:

Human Brain Mapping
Neuroimage
American Journal of Neuroradiology
Statistics and its Interface
Statistics in Medicine
Journal of the American Statistical Association
Annals of Applied Statistics
Biometrics
Journal of the Royal Statistical Society - Series B
Journal of Biopharmaceutical Statistics