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Join the Department of Biostatistics and Epidemiology for a Special Guest Lecture
on Tuesday, December 13ᵗʰ at 11:00am via Zoom

"Dimension Reduction in Observational Studies of Alzheimer's Disease"

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Epidemiology,
and Informatics
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Alzheimer's disease (AD) is a progressive brain disorder, affecting memory and cognitive function in over 6 million Americans. With an aging population, the public health and economic burden of AD continues to grow, leading to devastating consequences for patients and caregivers. In recent years, a number of large-scale research initiatives have led to new insights into the etiology and progression of AD by using neuroimaging. But some key statistical challenges remain in neuroimaging-based association studies and predictive models of AD. Specifically, given that these studies are often observational by design, confounders and other nuisance variables can pose threats to their generalizability and interpretability. In this talk, I will discuss recent work involving dimension reduction with built-in adjustment for nuisance variables to address these issues.

Sarah Weinstein is a Biostatistics PhD Candidate in the Department of Biostatistics, Epidemiology, and Informatics at the University of Pennsylvania. Her research is primarily motivated by statistical challenges in neuroimaging-based studies of Alzheimer's disease and neuropsychiatric disorders. She has made a number of methodological contributions in this area, including novel methods for dimension reduction, hypothesis testing, and spatial analysis of multi-modal neuroimaging data. She has also conducted methodological work in pragmatic clinical trial design and collaborative work across a variety of areas, including neurology, psychiatry, and anesthesiology. Her work has appeared in top journals, including *Biostatistics*, *NeuroImage*, and *Clinical Trials*.

Prior to joining Penn's Biostatistics PhD program, Sarah completed her BA in Statistics and Psychology from Columbia University and was a data analyst in anesthesiology research at the Hospital for Special Surgery in New York. She is a recipient of the National Science Foundation Graduate Research Fellowship.

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For questions contact Jennifer Zabala at: zabalaje@sph.rutgers.edu