



# Colloquium



**JANUARY 26 , 2026**

**3:30 PM - 4:30 PM | 2048 CB**

**THREE STATISTICAL CHALLENGES  
IN HUMAN BIOLOGY**

**Speaker: Kerby Shedden**

## **Bio**

Kerby Shedden received his PhD in Statistics from UCLA in 1999 and joined the University of Michigan the same year. His research interests include genomics, genetics, and other areas of life science where large and complex data arise. He also is interested in computational statistics and statistical software development. He participates in many collaborative research efforts including biomarker screening for cancer and kidney disease outcomes, cell-based screening for understanding the behavior of chemical probes in cells, and genetic association analysis for longitudinal traits.

## **Abstract**

I will discuss three questions in human biology that provided the opportunity to employ modern and innovative statistical approaches for estimation and inference. All three arise in the study of longitudinal and epigenetic factors associated with human growth and development. First, I will discuss how large-scale, distribution-free and multi-way random effects analysis was used to understand how allele-specific gene expression facilitates intergenerational adaptive responses to environmental cues. Second, I will discuss how functional mediation regression allowed the relationship of early life nutrition and adult blood pressure to be decoupled from the dominant "tracking" effect of growth. Finally, I will discuss how dimension reduction regression can be used to nonparametrically identify and disentangle the roles of several early-life growth exposures that predict adolescent phenotypes.

**Refreshments will be provided!**