JOINT BIOSTATISTICS/EPIDEMIOLOGY SEMINAR
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ALL ARE WELCOME

Abstract:
When laboratory assay costs are high, potential benefits associated with the pooling of biological specimens motivate statistical considerations to facilitate regression analysis involving group-level exposure measurements. However, the pooling of samples can introduce errors in measurement due to processing, possibly in addition to errors that may be present when the assay is applied to individual samples. We look into methods that might be applied to address this type of measurement error problem in common regression settings. As suggested by prior research addressing overall mean and variance estimation, hybrid designs consisting of individual as well as pooled samples facilitate the estimation of processing (or pooling) error, while further variation in pool sizes may be called for to identify a potential underlying measurement error variance. For continuous outcomes, one can consider maxifyi2(fum)5(on)-1(a)-9(k)-11(t)5lih(s oodc)5(a)-6( )-2ML)-2(e)-5(r)6(e)-5

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