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Title:

Two topics in modeling for survey estimation: model selection and post-stratification

Abstract:

This talk provides answers to two survey estimation questions encountered in practice. The first question is how to select a model to construct regression estimators. After a brief discussion of the survey context, I propose a cross-validation type criterion and show that it is effective in both model selection and improved survey variance estimation. The second question is whether it is possible to use a sample-based model fit to post-stratify a survey. This question will be introduced in the context of a forestry survey, and I will show that it can be answered affirmatively at least in some cases.