Small Area Prediction Under Transformation

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Abstract
Small area estimation based on linear mixed models can be inefficient when the underlying relationships are non-linear. In this talk we will discuss small area estimation techniques for variables that can be modelled linearly following a non-linear transformation. Different type of small area predictors and their mean squared error estimation will be described. Simulation results will be presented which show that the transformation-based estimators can lead to efficiency gains. An application to business survey data will also be discussed.