

Bolfarine, Heleno; Zacks, Shelemyahu

Prediction theory for finite populations. (English) Zbl 0751.62003

Springer Series in Statistics. New York etc.: Springer-Verlag. xi, 207 p. (1992).

This book is a systematic treatment of prediction theory for finite populations based on superpopulation models, and brings together material scattered in papers during the last two decades. After a brief outline of ideas and principles, the following topics are dealt with in separate chapters:

Optimal predictors of population quantities; Bayes and minimax predictors; maximum likelihood predictors; classical and Bayes prediction intervals; the effects of model misspecification; conditions for robustness and Bayesian modelling; models with measurement errors; asymptotic properties in finite populations, design characteristics of predictors.

The emphasis is on the analysis of the data rather than on the design.

Reviewer: [J.Lillestøl \(Bergen\)](#)

MSC:

62D05 Sampling theory, sample surveys

62F15 Bayesian inference

Cited in **36** Documents

Keywords:

Bayes predictors; prediction theory; finite populations; superpopulation models; minimax predictors; maximum likelihood predictors; prediction intervals; model misspecification; robustness; Bayesian modelling; measurement errors; asymptotic properties; design characteristics