ABSTRACT

This paper reviews the bootstrap and its use for statistical inference, especially in environmetric applications. The various bootstrap methods are classified by three factors: how confidence interval endpoints are chosen (e.g. percentile, basic, accelerated, BCA or studentized bootstrap), how the population is approximated (non-parametric or parametric bootstrap), and how bootstrap samples are selected (ordinary, balanced, or moving-blocks bootstrap). All of these techniques are described. Particular attention is given to techniques for non-iid data. Two data sets are used to illustrate the principles: heavy metal concentrations in ground water with some censored values and magnesium concentrations in blood.