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Outliers in integer-valued AR models : identification and estimation

par **Maria Eduarda Silva**

During the last decades there has been considerable interest in integer-valued time series models and a large volume of work is now available in specialized monographs. Motivation to include discrete data models comes from the need to account for the discrete nature of certain data sets, often counts of events, objects or individuals. Examples of applications can be found in the analysis of time series of count data in many areas. Among the most successful integer-valued time series models proposed in the literature are the INteger-valued AutoRegressive model of order 1 (INAR(1)). The statistical and probabilistic properties of the INAR(1) models have been studied by many authors. In this paper, we consider INAR models contaminated with additive and innovative outliers. We investigate the impact of outliers on the parameter estimation for integer-valued autoregressive models. The problem of identifying the time point of the outlier is also considered

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