

## **Subsampling Confidence Intervals for the Autoregressive Root**

Authors: **Joseph P. Romano and Michael Wolf**

Technical Report number (Dept. of Statistics, Stanford University): **1998-5**

Date: **May 1998**

Abstract:

In this paper, we propose a new method for constructing confidence intervals for the autoregressive parameter of an AR(1) model. Our method works when the parameter equals one, is close to one, or is far away from one and is therefore more general than previous procedures. The crux of the method is to recompute the OLS  $t$ -statistic for the AR(1) parameter on smaller blocks of the observed sequence, according to the subsampling approach of Politis and Romano (1994). Some simulation studies show good finite sample properties of our intervals.