

How to tune the BIC to find the best context tree

Nancy Lopes Garcia, *Universidade Estadual de Campinas.*

Abstract: It has been recently proved that the BIC selects in a consistent way the probabilistic context tree generating a sample. The problem is how to make an optimal choice based only on a finite sample. In this paper we propose an automatic tuning procedure to identify, out from a finite sample, the tree which would emerge asymptotically. This criterium is applied to a real linguistic dataset consisting of written texts of Brazilian and European Portuguese codified according to some basic rhythmic features.