

# Large Deviations for Dependent Sums via Spectral Analysis

Miguel Natalio Abadi  
*Universidade de São Paulo, Brasil*

Large deviations for sums of independent random sequences, or equivalently product measures, is a relevant topic in Probability and Statistics given both, the theoretical information it brings, and its statistical applications in inference. The most important results are probably those seminal works of Bernstein, Chernoff and Hoeffding. The case of dependent processes is much more involving, and the literature exhibits results for specific cases. In this work we present a recent result which finds sharp bounds for the deviation of mixing sums. Our approach is via a new technique which includes the complex spectrum of recurrence of the underlying system.