

ABSTRACT:

In this paper, a comparative analysis of preprocessing techniques for quantification of heart rate variability (HRV) were performed. These preprocessing techniques are used to transform the Electrocardiogram (ECG) to HRV so that appropriate for spectral and non linear analysis. A number of preprocessing techniques were investigated in this study. In order to evaluate the performance of the preprocessing methods, the differences between the frequency spectrum of the HRV were measured by contrasting the merit indices. Among the preprocessing techniques studied, the result indicate that the utilization of heart rate values instead of heart period values in the derivation of HRV results in more accurate spectrum. Furthermore, the result support that the preprocessing technique based on the convolution of inverse interval values with the rectangular window and the cubic interpolation of inverse interval values are efficient methods for quantification of HRV.