

عنوان مقاله:

R-R Interval Simulation Based on Power Spectrum Curve Fitting

محل انتشار:

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خلاصه مقاله:

Analysis of heart rate variability (HRV) is one of the most important noninvasive methods of measuring autonomic nervous system (ANS) activities. Hence, simulation of a realistic sequence of HRV signal can have a significant impact on diagnosis of different diseases related to ANS. In this paper, the focus is on generating realistic R-R interval signals using frequency domain analysis. An algorithm was developed using power spectrum curve fitting. The proposed method was compared to two previously reported algorithms. Twenty different sequences of data were generated with each of the three techniques. The performances of the three methods were then evaluated by exerting a frequency domain classification method to the generated data of each technique and the results were compared to each other.

کلمات کلیدی:

HRV , R-R interval sequence , power spectrum density , short term variation , RSA , Mayer wave , data-fitting

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