

عنوان مقاله:

Evaluation and Analysis of QRS Complex in Electrocardiogram Signals for Athletes

محل انتشار:

اولین کنفرانس بین المللی مکانیک، برق، مهندسی هوافضا و علوم مهندسی (سال: 1400)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Iman Bagheri - *Department of Biomedical Engineering, Imam Reza International University, Mashhad, Iran*

Mahdi Bayat - *Department of Physical Activity and Health Promotion, University of Rome Tor Vergata, Italy*

Zahra Roudaki - *Department of Sports Sciences, Zand Institute of Higher Education, Shiraz, Iran*

Ebrahim Ebrahimi - *Department of Sports Sciences, Imam Reza International University, Mashhad, Iran*

خلاصه مقاله:

Many algorithms can be proposed for detecting QRS complex in ECG. This complex, which is composed of a total of three waves and collectively represents the depolarization of the ventricles, and since these three waves cannot be observed individually, therefore, the aforementioned three waves are considered as a combination entirely. In this research, we have tried to design several filters to eliminate noise and different artifacts in the form of low-pass and high-pass filters to determine the position of reference points used in the detection procedure. In the preprocessing section, we have used the derivative filter as well as least mean square filter. After identifying the complex and obtaining the algorithm parameters in three signals, ECGCA ۱۰۲، ۱۵۴ and ۱۹۲، we achieved the desired results

کلمات کلیدی:

Electrocardiogram (ECG), Signal Processing, QRS, Digital Filtering, Detection Algorithm, Athletes, Sports

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1359259>

