Comparisons of Different Approaches for Removal of Baseline Wander from ECG Signal

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Abstract
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Baseline wandering can mask some important features of the Electrocardiogram (ECG) signal hence it is desirable to remove this noise for proper analysis and display of the ECG signal. This paper presents the implementation and evaluation of different methods to remove this noise. The parameters i.e. Power Spectral density (PSD), average Power & Signal to noise ratio (SNR) are calculated of signals to compare the performance of different filtering methods. IIR zero phase filtering has been proved efficient method for the removal of Baseline wander from ECG signal. The results have been concluded using Matlab software and MIT-BIH arrhythmia database.

Reference

- Wikipedia.
- Matlab help, MATLAB MATHWORKS. http://www mathworks.com
- ‘Filters II – Filter Design with MATLAB’, Experiment 3, pp
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4-5., www.cas.mcmaster.ca/~lawford/.

Index Terms

Computer Science Wireless

Key words

Baseline wander
Filtering wavelet
Polynomial fitting
PSD