Abstract

Artifacts cause the error in reading of ECG signals. The artifacts like PLI, Baseline wander, Electromyogram are introduced and hence removal of these artifacts is an important task in biomedical science. Adaptive filtering algorithms are evolving rapidly to eradicate noise. In this paper, the RLS technique in comparison with the LMS technology to remove the noise from the ECG signal is proposed. RLS algorithm is applied to the real ECG signal, collected from the MIT BIH database. The comparison will be done based on minimum mean square error, PSNR and coefficient correlating factor. Since, the RLS algorithm shows typically fast convergence as compared to LMS algorithm. From the result it is concluded that RLS based algorithm performance is superior to that of LMS based algorithm.

References

Removal of Artifacts from ECG Signal using RLS based Adaptive Filter

3, pp 1-5

Index Terms
Computer Science

Signal Processing
Keywords

Adaptive filter, ECG, RLS, LMS, PSNR, MMSE, PLI