

عنوان مقاله:

ECG noise cancelling using adaptive linear prediction method: A comparison between LMS and RLS algorithms

محل انتشار:

کنفرانس بین المللی سیستمهای غیر خطی و بهینه سازی مهندسی برق و کامپیوتر (سال: 1394)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Seyyed Jafar Fazeli Abelouei - *Young Researchers and Elite Club, Neka Branch, Islamic Azad University, Neka, Iran*

Vahid Amirpour - *Department of Electrical Engineering, Behshahr Branch, Islamic Azad University, Behshahr, IRAN*

Hamed Taheri Gorji - *Department of Biomedical Engineering, Hakim Sabzevari University*

خلاصه مقاله:

ECG is one of the most important of biomedical signals which precise analysis of this signal will help to cardiologist to diagnose heart normal or abnormal function. One of the most common problems in this field are noises. This paper deals with the linear prediction configuration for ECG noise cancelling and comparison between two of the most important adaptive filter algorithms that are known as LMS (Least Mean Square) and RLS (Recursive Least Square).. In the first step an attempt was made to generate a noisy ECG signal by the NI Labview biomedical toolkit and in the next step used Adaptive Linear Prediction Configuration for predicting added noise to the noise cancellation process. Comparison between filters outputs and calculated values for Mean Square Error (MSE) and Signal to Noise Ratio (SNR) shown Linear prediction configuration with RLS algorithm has better efficacy and more acceptable for ECG noise cancelling than LMS algorithm

کلمات کلیدی:

Adaptive filter; LMS; RLS; ECG; Adaptive Linear Prediction; Mean Square Error (MSE) and Signal to Noise Ratio (SNR)

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/383379>

