

عنوان مقاله:

Underwater Acoustic source tracking using teager kaiser energy operator and unscented kalman filter

محل انتشار:

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خلاصه مقاله:

In this paper, a novel real time passive underwater acoustic source tracking method based on the Teager-Kaiser energy operator and Unscented Kalman filter is proposed. The proposed algorithm will detect the acoustic events (whale clicks) using the Teager-Kaiser energy operator and, estimate the time difference of arrival of the acoustics received by at least four hydrophones. In addition, the localization and tracking will be done using the Unscented Kalman Filter. The proposed algorithm will be evaluated using real experimental data. The experimental results of the proposed method will be compared with results from other methods available in the literature on the same experimental data to validate the method. The experimental results demonstrate that the proposed method, being as precise as other methods, is robust against echoes and can gain considerable improvement in computational cost

کلمات کلیدی:

Time difference of arrival; Teager-Kaiser energy operator; Unscented Kalman Filter; Echo cancellation

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