[1]单剑锋,翟 波.基于小波变换的无线电引信目标识别研究[J].弹箭与制导学报,2009,6:288.
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Title: Wavelet Based Target Detection for Radio Fuze Signal

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关键词: 小波变换；无线电引信；特征提取

Keywords: wavelet transform（WT）；radio fuze; feature extraction

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摘要: 根据无线电引信回波多普勒信号功率主要集中在低频部分的特点，对淹没在噪声中的无线电引信回 波信号进行小波分解，提取低频段不同频带内信号能量作为特征，用Fisher判别方法对目标进行检测。针对 不同信噪比，对某典型无线电引信回波信号进行定量研究，实验结果表明该方法是有效的。

Abstract: Feature extraction of radio fuze signal using wavelet trans form is discussed in this paper. The signal is first de－ composed by wavelet transform, and on the basis, the decomposed coe fficicients are reconstructed to form a new time se－ ries, from which some energy parameters can be extracted by time－ domain analysis. The target signal is detected by Fisher discrimination criterion. The effectiveness of the method is verified by a typical radio fuze signals with different signal to noise ratio（ SNR）.

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参考文献/REFERENCES

［1］ Sherlock B G. Wavelet based feature extraction for target recognition and minefield detection, ADA401966［R］.National Technical Information Service, 2002.
［2］ Elif, Derya, beyli. Wavelet/mixture of experts’ network structure for EEG signals classification ［J］.Expert Systems with Applications.2008, 34 （3）:1954-1962.
［3］ 王小丹，王积勤. 基于小波分解及KCN的雷达目标 特征提取［J］.电波科学学报，2003，18（2）:32-37.
［4］ Serhat Seker, Emine Ayaz.Feature extraction re－ lated to bearing damage in electric motors by wave－ let analysis［J］.Journal of The Franklin Institute, 2003, 340（2）:125-134.
［5］ A Hossen, F Al－Wadahi, J A Jervase. Classifica－ tion of modulation signals using statistical signal characterization and artificial neural networks［J］. Engineering Applications of Artificial Intelligence, 2007, 20（4）:463-472.v
［6］ 单剑锋，崔占忠，贾永红.基于小波神经网络的无线 电引信目标识别［J］.弹箭与制导学报，2005，25 （4）:476-478.

［7］ Lin，jiang.Feature extraction of machine sound u－ sing wavelet and its application in fault diagnosis ［J ］.NDT and E internation，2001，34（1）:25-30.
［8］ YANG Xuezhi， PANG Grantham， YUNG Nelson. Discriminative training approaches to fabric defect classification based on wavelet transform ［J ］.Pat－ tern Recognition，2004，37（5）:889-899.
［9］ Cowling Michael，Sitte Renate.Comparison of tech－ niques for environmental sound recognition ［J ］. Pattern Recognition Letters，2003，24（15）:2895- 2907.
［10］ Chein－I Chang， Baohong Ji. Fisher’s linear spec－ tral mixture analysis ［J ］.Geoscience and Remote Sensing， IEEE Transactions on. 2006，44（8）: 2292-2304.

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