

论文

用于信号特征提取和重建的脊提取算法

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摘要

该文论述了以信号在连续小波变换域上形成的脊作为信号特征进行信号的特征提取和信号重建的方法, 并且将该理论应用到语音信号的处理中。仿真实验表明, 对于最高频率为4kHz的语音信号来说, 提取3~5条脊即可以很好地刻划信号的全部信息, 重建的信号在主观感觉上达到了较好的效果。

关键词 [连续小波变换](#) [脊提取](#) [信号重建](#)

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Characterization extraction and reconstruction of signals by the ridges of continuous wavelet transform

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Abstract

The theory of detecting ridges in the modulus of the continuous wavelet transform is presented as well as reconstructing signal by using information on ridges. Application of the theory on speech signal is discussed in detail. Experimental result shows that as for signals with highest frequency at 4kHz, 3~5 ridges is enough to describe all of the information contained in the signal. The reconstructed signal reserves most of the necessary information of the original signal.

Key words [Continuous wavelet transform](#) [Ridge extraction](#) [Signal reconstruction](#)

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