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## 多特征相结合的带噪语音端点检测算法的研究

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**摘要** 提出了一种抗噪声的端点检测新方法。针对谱熵特征对清音的检测性能以及抗噪声性能较差的缺点, 结合对清音检测性能较好的短时过零率特征, 以及抗噪声性能良好的美尔倒谱距离特征, 实现了基于多种特征相结合的抗噪声的语音端点检测。仿真实验表明, 该方法能显著提高端点检测在高噪声环境下的检测性能。

**关键词** [高噪声](#) [美尔倒谱距离](#) [谱熵](#) [短时过零率](#) [端点检测](#)

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## Study on endpoint detection based on multi-characteristic jointed in noisy environment

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### Abstract

This paper proposes a new method of speech endpoint detection in high noisy environment. In order to solve the problem of the less effective detection of surd and the poor anti-noise performance in spectrum entropy characteristic, this paper combines short-time ZCR characteristic which has a better detection of surd with Mel cepstral distance characteristic which has a good anti-noise performance to realize the endpoint detection based on multi-characteristics in high noise environment. The simulation shows that the new method can significantly improve the detection performance in high noise environment.

**Key words** [high noise](#) [Mel cepstral distance](#) [spectral entropy](#) [short-time ZCR](#) [endpoint detection](#)

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