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### 一种多元核Logistic回归说话人辨别方法

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## Speaker identification based on multi-class kernel Logistic regression model

摘要

图/表

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#### 摘要

针对文本无关话者辨别多分类目标和大训练样本情况, 将经典Logistic 回归模型进行多元化变形, 并叠加L2 惩罚因子以提高模型泛化能力. 将最优目标负对数Logistic 公式对偶化, 并利用序列最小优化算法进行模型训练, 速率优于传统多元核Logistic 回归训练算法. 实验显示, 该模型构建简单, 训练算法快捷, 且识别率优于经典支持向量机与二元核Logistic 回归模型所生成的“一对一”多分类方法.

**关键词** : [logistic回归](#), [最小序列优化](#), [话者辨别](#), [核技巧](#)

#### Abstract :

The traditional Logistic regression model is transformed to multi-class kernel Logistic model applying for text-independent speaker identification, which is nonlinear and more than just two classes. The penalty factor is added for enhancing model generalization ability. Then an iterative algorithm is proposed based on the solution of a dual problem by using ideas similar to those of the sequential minimal optimization algorithm for support vector machines. Experiments show that the algorithm is robust and fast, and the recognition rate is as good as widely used methods such as SVM while being used in text-independent speaker identification.

**Key words** : [Logistic regression](#) [Sequential minimal optimization](#) [Speaker recognition](#) [Kernel trick](#)

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