



航空学报 » 2009, Vol. 30 » Issue (7) :1203-1207 DOI:

流体力学、飞行力学与发动机

最新目录 | 下期目录 | 过刊浏览 | 高级检索

<< Previous Articles | Next Articles >>

基于算法级联的飞机座舱语音增强系统

高谦¹, 刘马宝², 岳开宪³

1 西安交通大学 航天航空学院 2 西安交通大学 强度与振动教育部重点实验室 3 西北工业大学 自动化学院

Speech Enhancement in Cockpit Using Arithmetic Joining Method

Gao Qian¹, Liu Mabao², Yue Kaixian³

1 School of Aerospace, Xi'an Jiaotong University 2 MOE Key Laboratory for Strength and Vibration, Xi'an Jiaotong University 3 School of Automation, Northwestern Polytechnical University

摘要

参考文献

相关文章

Download: PDF (1804KB) HTML OKB Export: BibTeX or EndNote (RIS) Supporting Info

摘要 通过对飞机座舱环境下语音信号特征的分析, 提出了一种根据噪声分类逐类进行语音增强, 然后依一定次序级联各类算法的语音增强方法, 并讨论了级联次序对增强效果的影响。在分别实现脉冲噪声、周期噪声和宽带噪声消除算法的基础上, 依据此方法开发了基于MATLAB计算环境的交互式语音增强系统, 并利用该平台进行多种算法的级联实验, 取得了良好的语音增强效果。

关键词: 语音增强 短时傅里叶变换 噪声 算法级联 飞机座舱

Abstract: Through the analysis of the characteristics of speech signals and noises in the cockpit, a new speech enhancement method which can be called "arithmetic joining" is proposed based on the separate enhancement against classified noise, and the effect of the "arithmetic joining" order is also discussed in detail. Based on the separate reduction of pulse noise, periodic noise and broadband noise, an interactive speech enhancement system is developed in MATLAB GUI Builder using the M program language of MATLAB. Listening tests show that the speech enhancement result realized by this system is satisfactory.

Keywords: speech enhancement short-time Fourier transform noise arithmetic joining cockpit

Received 2008-05-15; published 2009-07-25

Corresponding Authors: 高谦

引用本文:

高谦;刘马宝;岳开宪. 基于算法级联的飞机座舱语音增强系统[J]. 航空学报, 2009, 30(7): 1203-1207.

Gao Qian;Liu Mabao;Yue Kaixian. Speech Enhancement in Cockpit Using Arithmetic Joining Method[J]. Acta Aeronautica et Astronautica Sinica, 2009, 30(7): 1203-1207.

Service

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ Email Alert
- ▶ RSS

作者相关文章

- ▶ 高谦
- ▶ 刘马宝
- ▶ 岳开宪