[打印本页] [关闭]

应用

基于稀疏分解的跳频通信跟踪干扰信号特征提取

闫云斌，全厚德，崔佩璋

军械工程学院信息工程系

摘 要：

针对跳频通信中跟踪干扰识别特征提取问题，提出了一种基于稀疏分解的跟踪干扰特征提取方法。简要介绍了稀疏分解的基本原理。根据跟踪干扰信号与跳频信号比较在时域存在时间延迟，在频域幅值大于跳频信号幅值的特点，通过对跳频信号和跟踪干扰信号进行重构，获得能表明两者之间显著差异的特征参数。仿真实验表明，该方法提取的特征参数，在信噪比大于5dB时，对跟踪干扰的识别率达到95%以上，验证了该方法的可行性和有效性。

关键词： 稀疏分解；跳频信号；跟踪干扰信号；特征提取；时间延迟；信号重构

Feature extraction of Follower Jamming Signals for Frequency-Hopping Based on Sparse Decomposition

YAN Yun-Bin, QUAN Hou-De, CUI Pei-Zhang

Information Engineering Department, Ordnance Engineering College, Shijiazhuang

Abstract:

A novel method is presented for feature extraction of follower jamming signals by using sparse decomposition technique. The basic principles of sparse decomposition are introduced. According to the difference of time delay in the time domain and amplitude in the frequency domain between the frequency hopping (FH) signals and follower jamming (FJ) signals, the marked difference feature extraction is obtained when the FH signals and FJ signals are reconstructed. The simulation results show that the recognition rate of FJ can achieve 95% when the SNR is greater than 5dB, and the feasibility and effectiveness of the method is verified.

Keywords: sparse decomposition   frequency-hopping signals   follower jamming signals   feature extraction   time delay estimation   signal reconstruction

通讯作者：

作者简介：

作者Email: zkjysyyb@163.com

参考文献：

本刊中的类似文章

文章评论

反馈人		邮箱地址	
反			

扩展功能

本文信息

- Supporting info
- PDF(2559KB)
- [HTML全文]
- 参考文献[PDF]
- 参考文献

服务与反馈

- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- 引用本文
- Email Alert
- 文章反馈
- 浏览反馈信息

本文关键词相关文章

稀疏分解；跳频信号；跟踪干扰信号；特征提取；时间延迟；信号重构

本文作者相关文章

- 闫云斌
- 全厚德
- 崔佩璋

PubMed

- Article by Yan, Y. B.
- Article by Quan, H. D.
- Article by Cui, P. Z.

馈标题		验证码	1768

Copyright by 信号处理