

## 一种改进的均匀直线自适应天线阵

王伟, 曹祥玉, 刘涛, 文曦

(空军工程大学 电讯工程学院, 陕西 西安 710077)

收稿日期 修回日期 网络版发布日期 2007-9-20 接受日期

**摘要** 针对常用的自适应算法都需要复杂的来波方向估计过程, 而且方向估计误差会使自适应阵性能恶化的问题, 以均匀直线阵为研究对象, 提出了一种改进的自适应算法。通过引入阵列导向矢量, 使自适应阵具有波束搜索能力, 避免了复杂的来波方向估计过程。提出了相应的系统实现方案, 通过对16元直线阵的仿真试验, 证明了该算法是有效的。

**关键词** [自适应阵列](#) [波束形成](#) [干扰抑制](#) [阵列天线](#)

**分类号** [TN91](#)

## Improved uniform linear adaptive array for interference cancellation

WANG Wei, CAO Xiang-yu, LIU Tao, WEN Xi

(The Telecommunication Engineering School, Air Force Engineering University, Xi'an 710077, China)

### Abstract

Aiming at the problem that the conventional adaptive algorithm generally needs to estimate the direction of arrival signal beam and that the error of direction estimation will worsen the performance of an adaptive array, an improved adaptive algorithm is proposed here, based on a uniform linear array. By introducing the array steering vector, the ability to search for the desired signal beam is obtained by the adaptive array, so the complicated process for direction estimate is avoided. Its system scheme is also presented here. Finally, the validity of the algorithm is verified by the simulation experiment on the 16-units linear array. <BR>

**Key words** [adaptive array](#) [beam forming](#) [interference cancellation](#) [antenna array](#)

DOI:

通讯作者

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(250KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [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](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

#### 相关信息

- ▶ [本刊中 包含“自适应阵列”的 相关文章](#)
- ▶ [本文作者相关文章](#)

- [王伟](#)
- [曹祥玉](#)
- [刘涛](#)
- [文曦](#)