



基于RGPO的编队ECAVs协同航迹欺骗

高彬, 毛士艺, 孙进平*

北京航空航天大学 电子信息工程学院, 北京 100191

Cooperative generation of phantom radar track using a team of ECAVS based on RGPO

Gao Bin, Mao Shiyi, Sun Jinping*

School of Electronics and Information Engineering, Beijing University of Aeronautics and Astronautics, Beijing 100191, China

摘要

参考文献

相关文章

Download: [PDF \(394KB\)](#) [HTML 1KB](#) Export: [BibTeX](#) or [EndNote \(RIS\)](#) [Supporting Info](#)

摘要 基于动力学模型分析了多机协同控制下的航迹欺骗技术,利用配备有电子欺骗技术的电子战飞行器(ECAVs, Electronic Combat Air Vehicles),对敌方的防空系统中的雷达网实施电子攻击行动来达到欺骗干扰效果.对搭载距离拖引干扰(RGPO, Range Gate Pull-Off)技术的ECAVs在防空雷达网中的作战运用及协同策略进行了研究,空间模型包括单架ECAV对单部雷达以及多架ECAV对雷达组网两种情形.基于ECAV、雷达和虚假航迹点三者共线关系,削减搜索空间,解决动力约束下ECAVs轨迹规划约束最优化难题,算法高效快捷,可实时完成ECAVs轨迹规划.

关键词: 电子战飞行器 距离拖引干扰 虚假航迹 路径规划

Abstract: The technology of track deception for cooperative control of multiple electronic combat air vehicles (ECAVs) was analyzed by kinetics model. ECAVs were used to generate phantom radar tracks in multiple radar air defense network. Two-dimensional analyses of scenarios were provided involving single ECAV deceiving single radar and multiple ECAVs deceiving an integrated network of radars using range gate pull-off (RGPO) deception. According to the collinearity constraint request for ECAV, radar and phantom track, and through reducing finite dimensional searches to one dimensional parameter searches, the proposed algorithms were computationally attractive, and the ECAVs track programming problem under kinematic constraints can be realized real time computations amenably.

Keywords: electronic combat air vehicle(ECAV) range gate pull-off(RGPO) phantom track path planning

Received 2010-06-29;

About author: 高彬(1977-),男,山东济南人,博士后,gaobin@ee.buaa.edu.cn.

引用本文:

高彬, 毛士艺, 孙进平. 基于RGPO的编队ECAVs协同航迹欺骗[J] 北京航空航天大学学报, 2011, V37(11): 1343-1346

Gao Bin, Mao Shiyi, Sun Jinping. Cooperative generation of phantom radar track using a team of ECAVS based on RGPO[J] JOURNAL OF BEIJING UNIVERSITY OF AERONAUTICS AND A, 2011, V37(11): 1343-1346

链接本文:

<http://bhxb.buaa.edu.cn//CN/> 或 <http://bhxb.buaa.edu.cn//CN/Y2011/V37/I11/1343>

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