

论文

一种基于模板法的自适应雷达驻留调度算法

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摘要:

针对多功能相控阵雷达的波束驻留调度问题, 建立了可用于脉冲交错的合理驻留模型, 该模型的参数变化受目标状态影响较小, 使得离线情况下可预测驻留类型, 从而进行离线的驻留模板设计。在线调度算法综合考虑驻留的优先级和截止期两个参数, 在时间和能量约束条件下对模板进行选取。给出了算法的具体实现步骤。仿真结果表明, 与传统自适应驻留调度算法相比, 本文提出的算法对跟踪任务和搜索任务均有效地降低了驻留的丢失率。

关键词: 驻留调度 脉冲交错 驻留模板

A Template-Based Adaptive Radar Dwell Scheduling Algorithm

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Abstract:

This paper addresses the scheduling problem of radar dwells in multi-function phased array radar systems. A reasonable dwell model for pulse interleaving is built, and its parameter is little affected by target's state. Therefore the type of dwell can be predicted, and dwell templates can be designed off-line. The on-line scheduling algorithm takes both the priority and deadline into account, and schedules according to the chosen template under timing and energy constraints. Simulation results indicate that compared with the conventional algorithm, both for track and search, the one can decrease missed the ratio of dwell effectively.

Keywords: dwell scheduling pulse interleaving dwell template

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