

工程与应用

## 机场目标毁伤评估算法及半物理仿真系统设计

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收稿日期 2008-10-28 修回日期 2008-12-25 网络版发布日期 2009-11-6 接受日期

**摘要** 给出了一种机场目标毁伤评估算法, 基于一套半物理的基于多传感器图像融合的毁伤评估仿真系统, 该系统较真实地描绘了各种地物特征, 包括山川、河流、海洋等自然地貌和桥梁、机场、建筑、道路、车辆、舰船等人工目标。并搭载了红外、可见光和全景相机, 可多角度地拍摄感兴趣目标, 模拟真实的地貌变化及毁伤情况, 为变化检测和毁伤评估提供了很好的研究素材。在详细描述半物理仿真平台的同时, 也给出了两个机场目标毁伤评估算法的实验, 验证了算法的优越性。

**关键词** [图像融合](#) [毁伤评估](#) [仿真系统](#)

**分类号** [TP391.4](#)

## Airport damage assessment algorithm and design of semi-physical simulation platform

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### Abstract

In this paper, a semi-physical simulation platform based on multi-sensor image fusion is established. On the platform, various of object features are delineated, including natural objects such as mountains, rivers, oceans and artificial objects such as bridges, airports, buildings, cars, ships and so on. On the platform, infrared camera, visible light camera and panoramic camera are installed and multi-angle images of interested objects can be easily caught. What's more, various of object damage models are covered, that supplied abundant materials for researches on change detecting and damage assessment. Despite of describing the semi-physical simulation platform in detail, experiments of damage assessment are presented in the paper that validated the superiority of the algorithm.

**Key words** [image fusion](#) [damage assessment](#) [simulation platform](#)

DOI: 10.3778/j.issn.1002-8331.2009.30.061

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