传感技术学报
中国微米纳米技术学会
全国高校传感技术研究会 主办

基于组合微惯性测量元件的人体动作检测系统设计

作　者：张继光, 羊彦, 李伟

单　位：西北工业大学电子信息学院

基金项目：航天科技创新基金

摘　要：

为满足士兵虚拟训练的需求，文章提出将捷联惯导技术运用于人体动作检测的思路，结合实际训练分析，结出了人体动作检测识别系统的总体方案，并就方案中涉及的捷联算法，姿态校准方法和动作识别方法做了具体的介绍，实验结果表明系统可以对士兵训练的动作进行准确检测，基本满足训练要求。文章的研究为虚拟训练软件提供了一种新型输入设备，具有一定的应用价值。

关键词：虚拟训练；动作识别；惯性测量；SINS；MEMS

Design of Human Motion Detection System Based on the combination of Micro Inertial

Author's Name:

Institution:

Abstract:

The system is designed to meet the soldiers' virtual training need. A new idea that the strapdown inertial navigation technology used in human motion detection is proposed for the first time at home. Realizing the training, the solution of the action detection system is put forward, and then the key algorithm involved which included the inertial algorithm, attitude calibration method and motion recognition method is provided. Experiments result shows that the soldiers' movement can be detected accurately. The research provides a new input device for the virtual training software and has a certain value.

Keywords: virtual training; motion recognition; inertial measurement; SINS; MEMS

投稿时间：**2009-09-24**

查看pdf文件