## 异类传感器实时信息融合的**STMHM**算法

作　者：芦建辉,乔巍巍,陈东锋,卢永吉

单　位：空军航空大学

摘　要：

异类传感器实时信息融合由于两类设备的数据率不同和数据误差的限制，一直未得到有效解决，提出一种空时二维多假设模型（STMHM）算法来解决该问题。首先，设计的融合数据模型，将主、被动传感器的测量数据映射在二维直角坐标系下；其次，按照新的融合数据模型分别构建主、被动传感器的目标量测空间和融合空间；第三，设计量测空间时间初始化方法和目标实体空间的滤波算法；通过仿真验证表明：该算法能够实现异类传感器的信息融合，初次融合成功的确认时间在3～5个主动传感器扫描周期。

关键词：异类传感器;信息融合;空时二维多假设模型（STMHM）;目标量测空间；融合空间

### STMHM Algorithm of Heterogeneous Sensors Real-Time Data Fusion

**Author's Name:**

**Institution:**

**Abstract:**

Real time data fusion of airborne heterogeneous sensors was important approach which realized targets tract and recognition. The Spatial-Time Multiple Hypothesis Model (STMHM) algorithm was brought forward for solving the problem of real time data fusion. Firstly, according as measuring data, the data-model was respectively constructed for active and passive sensors. Secondly, the fusion space of STMHM was founded on the target observed spaces which were founded on the data-models. Thirdly, the method of time initialization and filtering algorithm were put forth. After simulation verification, the algorithm can realize real time data fusion of heterogeneous sensors, the time of fusion success for the first time need 3~5 scan periods of active sensor.

**Keywords:** Heterogeneous Sensors；Data Fusion；Spatial-Time Multiple Hypothesis Model；Target Observed Space；Fusion Space

投稿时间：**2012-02-10**

查看pdf文件