

论文

适于复杂信息融合系统的近似联合概率数据关联算法

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收稿日期 2002-3-18 修回日期 2002-11-14 网络版发布日期 2008-6-16 接受日期

摘要

文中在B. Zhou提出的直接概率计算(DC)和近似概率计算(AC)算法基础上提出了一种新的近似多传感器多目标联合概率数据关联算法。近似概率法是以一个目标为中心的近似聚为构造互联事件的起点,并在计算中将DC和AC结合得到的一种全邻的点迹-航迹关联算法。它能有效地提高目标点迹-航迹的关联正确率,在计算时耗上较完全联合概率法快得多,能满足工程中实时性的要求,将其在杂波下目标密集、航迹复杂的数据融合系统中进行实验,对关联正确率,关联耗时等与最近邻法进行了比较,效果较好。

关键词 [近似联合概率数据关联](#) [最近邻法](#) [数据融合](#)

分类号 [TP391](#)

Approximate multi-sensor multi-target joint probabilistic data association algorithm applicable to complex information fusion system

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Abstract

To reduce the incorrect association rate using NN (Nearest, Neighbor) algorithm in complex environment in clutter, a new plot-track association algorithm-Approximate Multi-Sensor multi-target Joint Probabilistic Data Association (AMSJPDA) is presented in the paper. It uses all the measurements in the tracking gate and every measurement has its own power, Added the measurements multiplied by their power the near optimal track estimation is achieved. AMSJPDA, based on the Approximate probabilistic Computing (AC) and Direct probabilistic Computing (DC) brought forward by B. Zhou, is the amelioration of MS JPDA and demands less time than MSJPDA. It meets the need of large scale plates and the real-time performance of data fusion system. At the end of the paper the comparison result of AMSJPDA and the NN is given.

Key words [AMSJPDA \(Approximate Multi-Sensor multi-target Joint Probabilistic Data Association\)](#) [NN \(Nearest Neighbor\)](#) [Data fusion](#)

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