

论文

## 无源定位跟踪中修正协方差扩展卡尔曼滤波算法

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摘要

针对无源定位跟踪中EKF受初值、测量噪声影响大等缺点, 该文提出了一种新的修正协方差扩展卡尔曼滤波方法(MVEKF), 并将其与无源定位跟踪中常用的EKF, MGEKF, IEKF等滤波方法进行了仿真比较, 表明该方法比EKF方法更具稳定性; 而且无需寻找MGEKF方法中所需的观测量可修正函数, 因而可以应用于其它领域的非线性滤波中.

关键词 [无源定位](#) [卡尔曼滤波](#) [协方差](#) [非线性](#)

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## The Modified Covariance Extended Kalman Filter in Passive Location and Tracking

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Abstract

As the erratic performance of Extended Kalman Filter(EKF) method in passive location, a new filtering method called Modified covariance EKF(MVEKF) is put forward. It is also compared with several filtering methods mostly used in passive location and tracking, such as EKF, MGEKF, IEKF. Computer simulation shows that this method is robust and has short convergence time. Because it is not required by this method that the measurement equation is linear in MGEKF, it can be used in other non-linear filtering applications.

Key words [Passive location](#) [Kalman filtering](#) [Covariance](#) [Non-linear](#)

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