

An Adaptive Algorithm for Radar Multiple Target Tracking Systems

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ABSTRACT

The way to hold the target's kinematic quantities is an important subject in the multiple target radar tracking system. The key developments of this subject are data association techniques and maneuvering target detection algorithm. In the radar system, it usually has more measurement plots than the number of target tracks because of the complicated tracking environment and noise outside. This will cause the false data association and then lead to tracking error. Moreover, if there is a maneuvering target, this will cause the computation error of the system, finally the targets will lose. This paper will provide a data association technique, "1-step conditional maximum likelihood", and adaptive tracking algorithm to solve the maneuvering target tracking problems. We convince that the proposed approach will enhance the radar tracking performance and obtain better tracking results.

Keywords : Radar Tracking System ; Data Association ; Adaptive Tracking Algorithm

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