A two-stage estimation approach for a radar system

Liu, W.-C. ; Chung, Yi-Nung; Lai, C.-W. ; Pan, T.-S. ; Hsu, C.-H.

Abstract

In a, radar surveillance system, both non-maneuvering and, maneuveringconditions are usually existed, during the tracking process. The computation ofa, radar system, is more complicated, to track multiple maneuvering targets inreal situations. In order to assure the tracking accuracy in a, tracking, a, newestimation approach for a, radar system, is developed, in this paper. The majorconcept of this approach is that the system, uses two-stage estimationalgorithm based on Kalman filter equations in a radar tracking system,. In thispaper, we convince that the new estimator can track maneuvering targets well.

Key words: Kalman filter; Maneuvering conditions;
Two-stage estimation algorithm