A research of fusion image processing technique to data association algorithm

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ABSTRACT

Multiple-target tracking (MTT) is a prerequisite step for radar surveillance systems. Data association is the key technique in a radar multiple-target tracking system. A new approach to data association using both quantity data and image information is investigated in this dissertation. In order to combine two different attributes, a fusion algorithm based on the Competitive Hopfield Neural Network (CHNN) is developed to match between radar measurements and existing target tracks. When target maneuvering problems are occurred, an adaptive maneuvering estimator is applied. Based on the computation algorithm, we convince that this approach can successfully solve the multiple-target tracking problems and have better performance.

Keywords : Quantity data and image information、Data association technique、Competitive Hopfield Neural Network

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