عنوان مقاله:

Low Distance Airplanes Detection and Tracking Visually usingSpectral Residual and KLT Composition

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خلاصه مقاله:

This paper presents the method for detection and tracking airplanes which can be observed visually in low distances fromsensors. They are used widely for some reasons such as military or unmanned aerial vehicle (UAV) because of theirability to hide from radar signals; however they can be detected and viewed by human eyes. Vision based methods arelow cost and robust against jamming signals. Therefore, it is mandatory to have some visual approaches to detectairplanes. By this way, we propose spectral density for airplane detection and KLT algorithm for tracking. This approachis a hybrid of two distinct methods which have been presented by researchers and used widely in detection or trackingspecific objects. To have accurate detection, image intensity would be adjusted adaptively. Correct detected airplaneswould be achievable by eliminating some long optical flow trajectory in image frames. The proposed method would beanalyzed and evaluated by comparison with state of the art approaches. The experimental results show the power of ourapproach in detection of multiple airplanes unless they become too small in presence of other objects and multipleairplanes. We make some test by implementing our approach on an useful database presented by some researchers

کلمات کلیدی:

Airplane Detection; Spectral Density; KLT Method; Adaptive Image Adjusting

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