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Accelerated Multi-feature based Compressive Sensing Tracking

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Abstract

Based on the framework of multi-feature based compressive sensing tracking, a tracking algorithm with less recovery is designed to accelerate the tracking process. In the proposed framework, a multiple features composed target template and a trivial template which modules occlusion, interruption and noises are normalized to form a orthogonal dictionary. With this model, the sparsity is achieved via a compressive sensing approach without nonnegative constraints, then, instead of recovery, a residual between compressive sensed candidate and target is used to evaluate the likelihood of particle, the rationality of this replacement is proofed. To gain more robustness, the target template is adaptively updated according to the Bhattacharyya coefficients and the sparsity coefficients.

Keywords:

visual tracking, compressive sensing

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