Acceleration algorithm for constant-statistics method applied to the nonuniformity correction of infrared sequences

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Abstract:

Non−uniformity noise, it was, it is, and it will probably be one of the most non−desired attached companion of the infrared focal plane array (IRFPA) data. We present a higher order filter where the key advantage is based in its capacity to estimates the detection parameters and thus to compensate it for fixed pattern noise, as an enhancement of Constant Statistics (CS) theory. This paper shows a technique to improve the convergence in accelerated way for CS (AACS: Acceleration Algorithm for Constant Statistics). The effectiveness of this method is demonstrated by using simulated infrared video sequences and several real infrared video sequences obtained using two infrared cameras.