Table 1. Comparative result of the proposed method with RANSAC algorithm

Image	Number of correspondence points extracted using SIFT feature matching algorithm	Number of Inliers pruned by RANSAC	Number of Inliers pruned by the proposed method
Test Image Pair	162	40	53

4. CONCLUSION

The proposed particle swarm based optimization algorithm is effective to estimate the epipolar geometry of the stereo image pair. The estimation of fundamental matrix is a challenging problem due to the noise, occlusion, geometric and radiometric distortion present in the stereo image. The proposed approach is robust to the proportion of outliers in the stereo correspondences. The fundamental matrix is used as a constraint for finding inliers in many computer vision and photogrammetry applications. The obtained inliers are a useful input as ground control points for remotely sensed images. The initialization of the swarm is as effective in improving the convergence accuracy as well as the convergence time.

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