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An image fusion algorithm based on polyharmonic local sine transform (PHLST)

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Keywords

image fusion, performance metric, polyharmonic local sine transform (PHLST)

Abstract

In this paper, we propose a novel image fusion algorithm based on polyharmonic local sine transform (PHLST). First, we apply PHLST to source image to decompose it into two components: polynomial p and residual r. Using the Laplace/Possion equation solver, we obtain polynomial p. Subtracting p from original image, we acquire r. In order to reduce noise, r is filtered in frequency domain. Next, we fuse p and r separately. Then we add the composite p and composite r directly to obtain the fused image. Experiments demonstrate outstanding performance of the method proposed.

331.3 kB

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