

## 基于稀疏 K-SVD 字典的图像融合方法

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**摘 要:** 稀疏 K-SVD 算法是一种字典生成方法, 它将解析字典的结构性与学习字典的自适应性进行了有效的结合, 得到的字典对信号具有很好的稀疏表示能力, 理论上, 该字典的性能比其他字典更好. 为了进一步提高图像融合方法的性能, 提出了一种基于稀疏 K-SVD 字典的图像融合方法, 最后通过实验验证了该算法的有效性.

**关键词:** 稀疏 K-SVD; 解析字典; 学习字典; 图像融合

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## A Novel Image Fusion Method Based on The Sparse K-SVD Dictionary

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**Abstract:** The sparse K-SVD algorithm is a method that can produce a dictionary combined the structure of the analytical dictionaries and the adaption of the trained dictionaries effectively, resulting a dictionary that has a good sparse representation capability. Theoretically, this method can achieve better result than other methods. In order to further improve the efficiency of the image fusion method, we propose a novel image fusion method based on the sparse K-SVD dictionary. Finally, the experimental results prove the effectiveness of the algorithm.

**Key words:** sparse K-SVD; analytical dictionary; trained dictionary; image fusion

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