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Least Support Orthogonal Matching Pursuit (LS-OMP) Recovery Method for Invisible Watermarking Image

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Abstract : In this paper, first, we propose least support orthogonal matching pursuit (LS-OMP) algorithm to improve the performance, of the OMP (orthogonal matching pursuit) algorithm. LS-OMP algorithm adaptively chooses optimum L (least part of support), at each iteration. This modification helps to reduce the computational complexity significantly and performs better than OMP algorithm. Second, we give the procedure for the invisible image watermarking in the presence of compressive sampling. The image reconstruction based on a set of watermarked measurements is performed using LS-OMP.

Keywords : compressed sensing, orthogonal matching pursuit, restricted isometry property, signal reconstruction, least support orthogonal matching pursuit, watermark
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