P-HGRMS: A parallel hypergraph based root mean square algorithm for Image Denoising

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Motivation: Designing an appropriate algorithm for image neighbourhood hypergraph model to remove noise and compare its effectiveness with the existing model which had limitations such as expensive computation, existence of residual generation of noisy pixels.

Original Image

20 % noise

Denoised Image using P-HGRMS
The P-HGRMS model

Results:
• Maintains noise removal efficiency of the existing algorithm
• Outperforms the existing implementation by 6x-18x in terms computation efficiency.