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A hybrid algorithm for speckle noise reduction of ultrasound images

Karamjeet Singh , Sukhjeet Kaur Ranade , Chandan Singh

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Highlights

- A hybrid speckle noise reduction algorithm is proposed.
- It combines the advantages of Guided, Bilateral and rotation invariant NLM.
- Achieve an optimal balance between speckle noise reduction and feature preservation by proposed hybrid algorithm.
- The proposed hybrid algorithm is validated by both quantitative and qualitative measures.
- The hybrid algorithm provides excellent denoising performance on synthetic, simulated and real US images.
- Experimental results prove that the hybrid algorithm have better denoising capability than recently proposed speckle noise reduction filters.

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