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**A speech enhancement algorithm based on an improved wavelet threshold function.** (Chinese. English summary) [Zbl 1340.94035](#)

*J. Hunan Univ., Nat. Sci.* 42, No. 4, 136-140 (2015).

**Summary:** The aim of this paper is to address the limitations of the traditional wavelet threshold denoising functions, an improved wavelet threshold function is proposed. The improved threshold function not only has good continuity but also overcomes the lack of the non-negative dead zone threshold function and considers the characteristic of the attenuation of the noise wavelet modulus values. In addition, the use of spectral flatness function corrects the threshold values adaptively. The simulation results are showed that the improved wavelet threshold can eliminate ground noise effectively, maintain higher speech quality and definition while improving the signal to noise ratio (SNR) of the output.

**MSC:**

**94A12** Signal theory (characterization, reconstruction, filtering, etc.)

**42C40** Nontrigonometric harmonic analysis involving wavelets and other special systems

**Keywords:**

speech enhancement; wavelet transforms; threshold de-noising