

Fig. 6.9. A Wavelet Tour of Signal Processing,  $3^{\rm rd}$  ed. The top image has  $N=128^2$  pixels. (a): Wavelet transform in the horizontal direction, with a scale  $2^j$  that increases from top to bottom:  $\{W^1f(u,2^j)\}_{-6\leqslant j\leqslant 0}$ . Black, grey and white pixels correspond respectively to negative, zero and positive values. (b): Vertical direction:  $\{W^2f(u,2^j)\}_{-6\leqslant j\leqslant 0}$ . (c): Wavelet transform modulus  $\{Mf(u,2^j)\}_{-6\leqslant j\leqslant 0}$ . White and black pixels correspond respectively to zero and large amplitude coefficients. (d): Angles  $\{Af(u,2^j)\}_{-6\leqslant j\leqslant 0}$  at points where the modulus is non-zero. (e): The wavelet modulus maxima support is shown in black.