



Fig. 4.3. A Wavelet Tour of Signal Processing, 3<sup>rd</sup> ed. The signal includes a linear chirp whose frequency increases, a quadratic chirp whose frequency decreases, and two modulated Gaussian functions located at  $t = 0.5$  and  $t = 0.87$ . (a) Spectrogram  $P_S f(u, \xi)$ . Dark points indicate large amplitude coefficients. (b) Complex phase of  $Sf(u, \xi)$  in regions where the modulus  $P_S f(u, \xi)$  is non-zero.